

**Astrotheology and Cosmotheology - Bridging the Chasm between Science and Theology**  
**with Robert John Russell, Ted Peters, and Joseph A. Bracken SJ (1930-2024):**  
*Creative Mutual Interaction and Comprehensive Worldview*

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**Abstract**

The history of science and theology includes “astrotheology” and “astro-theology” from William Derham’s *Astro-Theology* (1715) and “cosmotheology” from Immanuel Kant’s *Critique of Pure Reason* (1781). This history reveals that there are specifically religious theologies that require ‘bridging a chasm’ to interact with science, and that there are general natural philosophical theologies, including natural scientific theologies (natural scientific studies of *logos* about *theos*), on the science side of the chasm. Today, for the sake of advancing astrobiology, astrotheology, cosmotheology, scale-free biology, studies of diverse intelligence, including artificial intelligence, evolutionary bioethics, and global ecological civilization, we require a “*comprehensive worldview*” (Joseph A. Bracken) and “*creative mutual interactions*” (Robert John Russell, Ted Peters) among natural scientific disciplines, and between natural science (including natural scientific theology) and religious theology.

**Key words:** astro-theology, astrotheology, cosmotheology, comprehensive worldview, creative mutual interaction.

A CHASM BETWEEN SCIENCE AND THEOLOGY

In “Introducing Astrotheology” (chapter 1, pp. 3-26) in *Astrotheology: Science and Theology Meet Extraterrestrial Life* (2018) edited by Ted Peters, Martinez Hewlett, Joshua M. Moritz, and Robert John Russell, plus Foreword by Paul Davies, renowned Christian

astrotheologian Ted Peters invites us to imagine bridging a chasm between science and theology.

He says:

“If we can imagine a bridge over a **chasm**—perhaps the Golden Gate Bridge over the raging water pouring into San Francisco Bay from the Pacific Ocean – we will place **science on one side** and **theology on the other.**” [Bold added.]

(Peters 2018: 4)

“In this book,

**on the science side** of the bridge we will give special place to **astrobiology** along with SETI, the search for extraterrestrial intelligent life, and METI, messaging extraterrestrial intelligence.

**On the theology side**, we will give special place to **astrotheology**—that is, to theological topics that find the space sciences relevant for our understanding of God’s relation to the world.

When the traffic goes both directions, the result will be **creative mutual interaction** between science and theology.” [Breaks and bold added.]

(Peters 2018: 4-5)

Herein the chasm between science and theology is bridged by contributions from science to theology, and from theology to science. Peters appreciates co-editor Robert John Russell’s conception of “creative mutual interaction” in his book *Cosmology from Alpha to Omega: The Creative Mutual Interaction of Theology and Science* (Russell 2008 [and Russell 2012]) to describe mutually beneficial traffic between science and theology (Peters 2018: 20).

Russell's conception of *creative mutual interaction* is critically appreciated in a Festschrift—*God's Action in Nature's World: Essays in Honour of Robert John Russell* (2006) edited by Ted Peters and Nathan Hallanger.

[Contributors: Barbour, Clayton, Coyne, Davies, Herzfeld, Huyssteen, Kim, Murphy, Peacocke, Peters, Polkinghorne, Stoeger, Townes, Trost, Wegter-McNelly, and Wildman.]

Concerning recent dialogues and interactions between theology and science, in the Preface to *Astrotheology* (2018) Robert John Russell says:

“Over the past three decades, this dialogue and interaction has brought together Big Bang cosmology and the doctrine of creation, quantum mechanics and non-interventionist divine action, evolutionary biology and the problem of suffering in nature (‘natural theodicy’), the mind-brain problem in light of the neurosciences / cognitive sciences and the question of top-down causality, the future of the physical universe and its challenge to Christian eschatology, to name a few key fields of inquiry. It is the goal of our current research in Berkeley to engage the sciences as we explore the possibilities for life in the universe and ask what we can learn about being human only as we think through what extraterrestrial intelligent life might be like. Hence the subject of this volume.” (p. xvi)

(Russell 2018)

In agreement with Russell, and in agreement with the aims of the Francisco J. Ayala Center for Theology and the Natural Sciences (CTNS), the scientists and theologians who contributed to

*Astrotheology* (2018) were seeking a *creative mutual interaction* (Russell 2008) between science and theology.

Similarly, a science-inclusive *comprehensive worldview* is advanced by Catholic theologian Joseph A. Bracken, S.J. (1930-2024) who views “trinitarian panentheism” (Schaab 2012) “in light of a scientific worldview” (Edwards 2012). And like Russell’s *creative mutual interaction*, Bracken’s *comprehensive worldview* is critically appreciated in a Festschrift—*Seeking Common Ground: Evaluation and Critique of Joseph Bracken’s Comprehensive Worldview* (2012) edited by Marc A. Pugliese and Gloria L. Schaab.

[Contributors: Case-Winters, Clayton, Cobb, Delio, Duffy, Edwards, Faber, Gallaher, Keller, Lefebure, Neville, Padilla, Pugliese, Schaab, and Suchocki.]

On both sides of the chasm between science and theology, there are researchers who seek to bridge the chasm, such as Robert John Russell and Joseph A. Bracken, and there are researchers who do not.

## NOT BRIDGING THE CHASM

Resolutely *not* bridging the chasm (between science and theology) is advocated in “Scientific Cosmology and Theology: Two Separate Worlds” (The JOC v20, September 2012) by renowned historian of science Helge Kragh. According to Kragh, the world of science is separate from the world of theology insofar as science is grounded in observations, experiments, theories, and hypotheses with testable outcomes, plus “various simplicity principles such as the cosmological principle” (Kragh 2018: 1-2). He says, “As far as I can see, there is no way in

which theology can be part of physical or scientific cosmology as ordinarily understood” (Kragh 2012: 2). Given that theologians have “widely different ideas about God” and no consensus about what theology is; for “this reason alone” says Kragh, attending to theology would seem to yield “no advantage” for “the kind of cosmology cultivated by physicists and astronomers” (Kragh 2012: 3-4). Theology and scientific cosmology are said to be “so different in their methods, domains and aims that an integrated cosmo-theology will have nothing to offer either theology or cosmology. It would be a monstrous disaster, or perhaps just another sterile academic exercise” (Kragh 2012: 4).

## NATURAL SCIENTIFIC THEOLOGY

Literally, the word “theology” indicates *logos* about *theos*. Hence, logically, there can be a natural scientific study of *logos* about *theos*. And historically, there have been many such studies, including hundreds delivered as Gifford Lectures in Natural Theology (Whitehead 1927-28, Brunner and Barth 1946, Peacocke 1992-93, Hauerwas 2001, Witham 2005).

For historical example, natural scientific studies of *logos* about *theos* were produced by renowned church historian-scientist Adolf von Harnack (1851-1930). In addition to recognizing the study of history as a natural science, and in addition to promoting the natural sciences as a member of the prestigious Prussian Academy of Science, he advanced original contributions to natural “scientific theology” (Harnack 1923).

MIT historian of science Kenneth R. Manning reports that during the 1929-1930 academic year at the Kaiser-Wilhelm-Institut für Biologie in Berlin, the famous African-American cell

biologist Ernest Everett Just (1883-1941) spent “many evenings” with the more famous Adolf von Harnack discussing the necessity of bringing “science and religion into greater harmony” (Manning 1983: 190, Jenkins 2021). Just had studied Harnack’s work, and Harnack was his favorite theologian. In his Preface to *The Biology of the Cell Surface* (1939) Ernest Everett Just wrote:

“The conception upon which the book is built, though latent in my earlier researches, did not come fully awake until 1930 while I was enjoying the hospitality of the Kaiser-Wilhelm-Institut für Biologie at Berlin-Dahlem. There I fell under the inspiration of Adolf von Harnack’s personality. I like to feel that my work was influenced by the rich experience of personal contact with him.”

(E. E. Just 1939: ix)

This Preface suggests that Just’s natural scientific biology was influenced by Harnack’s natural “scientific theology.”

Another example is *A Scientific Theology, Volumes 1 Nature* (2006 [2002]) by Alister E. McGrath. Here McGrath says he “aims to examine, critically yet appreciatively, the way in which the working assumptions and methods of Christian theology and the natural sciences interact with and illuminate each other, and allow each other’s distinctive characteristics to be appreciated, as an interesting means to the greater end of achieving at least a partial synthesis of their insights” (p. 3). McGrath’s conception of Christian theology and the natural sciences interacting with and illuminating each other resembles Russell’s conception of *creative mutual interaction* between science and theology.

Similarly, in *Scientific Theology* (1997) Paul A. Giam says, “The thesis of this book is that science and theology have profound interactions with each other” (p. 12).

## SCIENCE-INCLUSIVE PHILOSOPHY

Before the 1834 creation of the word “scientist” (on analogy with the word “artist”) by William Whewell, persons doing natural scientific research were called “philosophers of nature” or “natural philosophers.” Philosophy of nature (natural philosophy) included the natural sciences, and more. Consequently, from long ago to the present, throughout the natural sciences, the terminal university degree continues to be the Doctor of Philosophy.

Doctors-of-Philosophy include “philosophers of nature” or “natural philosophers” recently called natural “scientists,” starting from 1834. Among university scholars who appreciate the longer-standing science-inclusive use of the word “philosophy,” a biology-inclusive philosophy is called “philosophical biology” (Jonas 1966).

Likewise, continuous with the history of science-inclusive philosophy, an independent (independent of special criteria, special revelations, and specific religious commitments) university-research-compliant critical and constructive study of the meaning, logic, and truth-value of *logos* about *theos* or ultimate reality [a scientific study of *logos* about *theos*] continues to be called “philosophical theology” (Ogden 2018).

## SCIENCE AND RELIGION

We should recognize that there are specifically religious theologies that require ‘bridging a chasm’ to interact with scientific inquiry, and that, already longstanding on the science side of the chasm, there are general natural philosophical theologies, including natural scientific theologies that appreciate scientific methods. Hence, the chasm between ‘science and theology’ is better described as a chasm between science and *religious* theology, or, as a chasm between “science and religion” (Barbour 1966, Haught 1995, Cavanaugh 1996, Barbour 2000, Peters and Bennett 2003, Witham 2013, Martin 2016).

From among religious theologies, a revised Christian theology such as advanced by Schubert M. Ogden (1928-2019) is fully able to interact with science because Ogden’s revision makes it clear “that ‘Christian’ and ‘true’ do not somehow imply each other” (Devenish 2022: 3). Similarly, with appreciation for Friedrich Schleiermacher’s *Brief Outline on the Study of Theology* (1811), in “Three Dimensions of Theology” (chapter III, pp. 37-55) in *Vision and Discernment: An Orientation in Theological Study* (1985) Charles M. Wood distinguishes [first dimension] “Is it truly Christian?” from [second dimension] Is it “really true?” (pp. 39-40).

## COSMOTHEOLOGY

Comprehensive cosmology meets theology where God is conceived to be “the one all-inclusive whole of reality” (Ogden 1984: 21; also, Hartshorne 1973 [1967]: 12, 16). Reference to the whole of reality (physical and spiritual) distinguishes properly comprehensive cosmology from exclusively “physical cosmology,” multiverse cosmology, and long-range astronomy. Because Alfred North Whitehead (1861-1947) was offering an organic account of the whole living *cosmos*, a comprehensive “philosophy of organism,” his *Process and Reality* (1927-28)



was subtitled *An Essay in Cosmology*. And this 413-page “essay in cosmology” includes theology.

Similarly, “a naturalistic cosmotheology” is advanced by former *NASA* Chief Historian Steven J. Dick. In “Astrobiology, Cosmotheology, and the Biological Universe: Implications for Religion and Theology” (2024) Dicks says:

“My personal take on astrotheology is what I call cosmotheology.[43] Cosmotheology is simply a theology that takes into account what we know about the universe based on science. It is therefore *a naturalistic cosmotheology*, but not coextensive with scientism because it does not imply that science is the only way to understand the world, especially when it comes to the question of values. Over the last quarter century, I have enunciated five principles of cosmotheology, and added a sixth on human destiny.[44] These principles are as follows ...”

(Dick 2024: 259 [Italics added].)

“43. The term cosmotheology originates with the philosopher Immanuel Kant, who referred to it in 1781 in his *Critique of Pure Reason* (without endorsing it) as a ‘transcendental theology’ method of ‘inferring the existence of a Supreme Being from general experience,’ rather than a natural theology method of inferring the nature of a Supreme Being from the particulars of nature. Both of these views, of course, are far from my own concept of a naturalistic cosmotheology, and in fact they are far even from the modern view of most nonnaturalistic astrotheologies.”

(Dick 2024: 277)

In a section on “Process Theology and Cosmotheology” (pp. 266-269) Dick concludes that his “naturalistic cosmotheology” (including his six principles) has “many points of commonality with process theology” (Dick 2024: 269).

Process theologian Andrew M. Davis offers a critical and constructive response to Dick’s cosmotheology. In his friendly amendment to natural scientific cosmotheology, Davis shows that “Whitehead’s metaphysical scheme can aid the deepening of Dick’s naturalistic cosmotheology” (Davis 2024: 289) by making explicit the otherwise implicit (and unexamined) metaphysical presuppositions of science, and thereby improving upon Dick’s six principles with “six alternative principles” (Davis 2024: 326).

Derham-Kant-Whitehead-inspired natural scientific “cosmotheology” is being advanced by *creative mutual interactions*, such as interactions between Dick and Davis. Furthermore, *creative mutual interaction* characterizes “Wesleyan and process theologies in dialogue” (Stone and Oord 2001), and in accordance with “John Wesley’s precedent for theological engagement with the natural sciences” (Maddox 2009), and in accordance with “John Wesley’s values” (Edwards 2012). Similarly, creative mutuality has been characteristic of feminist and womanist process-relational interactions with biology, ecology, physics, and cosmology (Hartshorne 1948, Davaney 1981, McFague 1993, Thandeka 1995, Ruether 1996, Suchocki 1997, Baker-Fletcher 1998, Holmes 2002, Moore 2006, Barad 2007, Holmes 2008, White 2009, Coleman, Howell and Russell, 2011, Keller 2012, Rubenstein 2014, Keller 2015, Harris 2017, Keller and Rubenstein 2017, White 2017, O’Donnell 2023, Suchocki 2023).

## DIVERSE INTELLIGENCE

Consider the William James-inspired field of “diverse intelligence” and “scale-free cognition” that reaches “beyond brains” (Devenish 1981, R. Sheldrake 1981, Levin 2019, Rouleau and Levin 2023). Beyond “understanding the brain” (Eccles 1973, also Eccles 1970, 1979, 1980; and McGilchrist 2009, 2018, 2023) and beyond focusing on intelligence in neural networks, there is now a growing multidisciplinary effort to learn how to recognize diverse “goal-directed” behaviors (Noble and Montefiore 1989), “biological scales and levels” (Noble 2017), “scale-free biology” (Fields and Levin 2020), “scaling of basal cognition” (Levin 2021, Levin, September 2022), possible “mind everywhere” (Levin, March 2022), “evolutionary scaling” (Levin 2023), “multiscale competency” (Levin 2023b), and “scaling of goals” (Pio-Lopez, Bischof, LaPalme, and Levin 2023). And there are various other studies of microbial intelligence, mycelial-fungal intelligence (Stamets 2014, M. Sheldrake 2023), plant intelligence, artificial intelligence (AI), hybrid intelligence, and searches for extraterrestrial intelligence. Plus, there have been inquiries into “larger-scale intelligence” (Hoyle 1957: 193) and cosmic-universal intelligence (Hoyle 1984, Voskuil 1999, Penrose and Hameroff 2011, Segall 2021).

In a 2010 Afterword to Fred Hoyle’s science fiction novel *The Black Cloud* (1957), Richard Dawkins quotes Arthur C. Clarke’s “‘Third Law’ that ‘any sufficiently advanced technology is indistinguishable from magic,’” and he proposes that the problem of distinguishing an interstellar “super-intelligence”—such as Hoyle’s black cloud—from “a god” could yield “a new discipline of Scientific Theology” (Dawkins 2010: 213-214). In the movie *Star Trek V: The Final Frontier* (1989), such sci-fi-related scientific theology could have prevented Spock’s

brother Sybok from mistaking an alien intelligence for God. Any star ship theologian could have reported that said alien is not all-inclusive, and therefore not God.

## MINIMAL SCALE INTELLIGENCE

Rather than being restricted to neural networks and brains, intelligence is hugely diverse. “The field of diverse intelligence seeks deep invariants across agents of widely differing composition and provenance” (Rouleau and Levin 2023: 1), and this “scale-free” seeking makes it “worth contemplating the *minimal* scale at which subjective experiences are possible” (Rouleau and Levin 2023: 4 [Italics added]). Seeking such “deep invariants” (Rouleau and Levin 2023) can be helped by studying “deep empiricism” (Malone-France 2007). For example, unlike the empirical and falsifiable claim that *creative mutual interaction* is happening now, ‘Something is happening now’ is a deeply empirical claim affirmed by every experience and never falsifiable. Explicating the deeply empirical content implied by any contingently empirical claim can help with the search for deep invariants.

## MAXIMAL SCALE INTELLIGENCE

In addition to contemplating the *minimal* scale, and various *intermediate* scales, the field of “diverse intelligence” and “scale-free cognition” should also include contemplating the *maximal* scale. When contemplating the *maximal* scale at which cognition is possible, scale-free cognitive science meets a cosmotheology (an affirmation of cosmic-universal divine intelligence) that is presupposed by the religious conviction that God is all-knowing (omniscient). Hence, for the sake of advancing the field of “diverse intelligence” and “scale-free cognition,” we will need

a *comprehensive worldview* and *creative mutual interactions* among various natural sciences (including natural scientific theology) and between natural science and religious theology.

Again, the history of science and theology reveals many instances of *creative mutual interaction*. Biology has helped theology by providing a mind-body-“person-to-cell” analogue (Hartshorne 1984: 56, 59; also 1941: 174-211) that is helpful to “panentheism” (Göcke 2018, 2020). In biology a living human individual includes and exceeds (transcends) the sum of its cellular parts, and analogously, in panentheism the all-inclusive living individual (the comprehensive divine whole of reality) includes and exceeds (transcends) the sum of all parts of reality. And now, philosophical theology is helping the search for “deep invariants” of experience and cognition at all scales (Rouleau and Levin) by advancing “deep empiricism” (Malone-France 2007) and panentheism. Furthermore, philosophical theology is helping “cosmic biology” (Wickramasinghe and others, 2014, 2015), “cosmic evolution” (Tyson and Goldsmith 2004, Delio 2008, 2013), and “diverse intelligence” (Levin and others) by providing some of the *a priori* essentials for scaling all the way to maximal scale “competency” (Levin 2023b) and maximal scale “goals” (Pio-Lopez, Bischof, LaPalme, Levin 2023).

## A PRIORI ESSENTIALS

*A priori* essentials include the transcendental-metaphysical panentheism inferred from logical and mereological study of necessary existential and strictly general-universal truths (Kant 1781, Hartshorne 1970, Ogden 1975, Rescher 1996b, Meyer 2010). By contrast, *a posteriori* methods depend upon a contingent-factual empiricism (distinct from deep empiricism), and upon “a natural theology method of inferring the nature of a Supreme Being from the particulars of

nature” (Dick 2024: 277) such as for examples: the survey particulars demonstrating divine being and attributes in *Astro-Theology: or, A Demonstration of the Being and Attributes of God, from a Survey of the Heavens* (1715) by William Derham (1657-1735), and the anatomical particulars evidencing divine existence and attributes in *Natural Theology; or, Evidences of the Existence and Attributes of the Deity. Collected from the Appearances of Nature* (1802) by William Paley (1743-1805), and the celestial particulars illustrating divine perfections in *Celestial Scenery: or, The Wonders of the Planetary System Displayed; Illustrating the Perfections of the Deity and a Plurality of Worlds* (1838) by Thomas Dick (1774-1857). While no doubt inspiring illustrations, contingent particulars (*a posteriori* data) fail to demonstrate-prove theological claims (Hartshorne 1967: x, 52, 66-89; Steven J. Dick 2018: 238). But where astronomy and cosmology add attention to logically and mereologically necessary universals (*a priori* data), astronomy and cosmology must meet theology. And *creative mutual interaction* yields natural scientific cosmotheology, such as Whitehead’s “essay in cosmology” (1927-28), Hartshorne’s *Natural Theology for Our Times* (1967), and Steven J. Dick’s “naturalistic cosmotheology” (2018).

Scaling all the way up requires more than merely particular empirical data, In addition to requiring *a posteriori* empiricism, maximal scaling of cognition requires “deep empiricism” (Malone-France), *a priori* reasoning, logical and mereological analysis, transcendental metaphysics (not paranormal metaphysics), and a comprehensive philosophy of organism, plus panentheism and panpsychism.

## EVOLUTION IN ETHICS

Increasingly, day after day, through science and technology, especially computer science and synthetic bioengineering, we are discovering and creating many various intelligences, including previously unrecognized biological intelligences, and recently created hybrid and artificial intelligences. Recognizing, creating, and interacting with (*creative mutual interactions with?*) a rapidly increasing plurality of cognitive agents and intelligences is demanding of us the following:

- \* that we develop a “richer account of evolution” (Cobb 2008),
- \* that we advance “beyond humanism” (Hartshorne 1937), “beyond homocentrism” (Ogden 1979), and achieve evolutionary advances in moral theory and ethics (Just and Just 1941: 16, 176, 213; Levin 2022, Levin 2024), and
- \* that our evolutionary advances include global abolition of poverty and war (King 1967), global “abolition of dirty energy” (Griffin 2015), and global “evolution of an ecological civilization” (Yue 2006, also: Lee 2006, Yang 2006, Yue 2008, Liu 2014, Henning 2015, Koutroufinis 2020).

Concerning astro-ethics: see Part 5 “Astroethics and Space Policy” in *Astrotheology* (2018).

As with bridging the chasm between science and religion, for achieving richer accounts of evolution and evolutionary advances in moral theory and ethics, including evolution toward global ecological civilization, a *comprehensive worldview* (Joseph A. Bracken) and *creative mutual interactions* (Robert John Russell) will be essential.

## Sources

Baker-Fletcher, Karen. (1998). *Sisters of Dust, Sisters of Spirit: Womanist Wordings on God and Creation*. Minneapolis: Fortress Press.

Barad, Karen. (2007). *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Durham, NC: Duke University Press.

Barbour, Ian G. (1966). *Issues in Science and Religion*. Englewood Cliffs, New Jersey: Prentice-Hall.

Barbour, Ian G. (2000). *When Science Meets Religion*. New York: HarperCollins.

Barbour, Ian. (2006). "Indeterminacy, Holism and God's Action" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Bertka, Constance, editor. (2009). *Exploring the Origin, Extent, and Future of Life: Philosophical, Ethical, and Theological Perspectives*. New York: Cambridge University Press.

Bracken, Joseph A. (c1995). *The Divine Matrix: Creativity as Link Between East and West*. Maryknoll, New York: Orbis Books.

Bracken, Joseph A., and Marjorie Hewitt Suchocki, editors. (1997). *Trinity in Process: A Relational Theology of God*. New York: Continuum.

Bracken, Joseph A. (2004). "Panentheism: A Field-Oriented Approach" (pages 211-221) in *In Whom We Live and Move and Have Our Being: Panentheistic Reflections on God's Presence in a Scientific World*, edited by Philip Clayton and Arthur Peacocke. Grand Rapids, Michigan: William B. Eerdmans Publishing Company.

Bracken, Joseph A. (2009). *Subjectivity, Objectivity, and Intersubjectivity: A New Paradigm for Religion and Science*, Foreword by William R. Stoeger. West Conshohocken, Pennsylvania: Templeton Foundation Press.

Bracken, Joseph A. (2012). *Does God Roll Dice? Divine Providence for a World in the Making*. Collegeville, Minnesota: Liturgical Press.

Bracken, Joseph A., SJ. (2012) "Response to Contributors" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Bracken, Joseph A., SJ. (June 2012). "Whiteheadian Actual Entities and String Theory" in *The Journal of Cosmology*, volume 19 pp. 8605-8621, online at <[thejournalofcosmology.com/indexVol20CONTENTS.htm](http://thejournalofcosmology.com/indexVol20CONTENTS.htm)>.

Bracken, Joseph A., SJ. (September 2012). "An Unscientific Postscript to 'Whiteheadian Actual Entities and String Theory'" in *The Journal of Cosmology*, volume 20, pp. 8635-8644, online at <[thejournalofcosmology.com/indexVol20CONTENTS.htm](http://thejournalofcosmology.com/indexVol20CONTENTS.htm)>.



Bracken, Joseph A. (Spring/Summer 2013). "Actual Entities and Societies, Gene Mutations and Cell Development: Implications for a New World View" in *Process Studies*, volume 42, issue 1, pp. 64-76.

Broadnax, Reginald David. (2003). *The Category of Freedom in the Thought of Charles Hartshorne*. Northwestern University.

Broadnax's argument for the centrality of "freedom" in Hartshorne's thought is supported by the content and subtitle of Hartshorne's previously unknown manuscript—*Creative Experiencing: A Philosophy of Freedom* (2011) by Charles Hartshorne, edited by Donald Wayne Viney and Jincheol O. Similarly, see *Faith and Freedom: Toward a Theology of Liberation* (1979) by Schubert M. Ogden.

Brunner, Emil, and Karl Barth. (2002 [1946]). *Natural Theology: Comprising "Nature and Grace" by Professor Dr. Emil Brunner and the reply "No!" by Dr. Karl Barth*, translated from German by Peter Fraenkel with an Introduction by The Very Rev. Professor John Baillie. Eugene, Oregon: Wipf and Stock Publishers.

Butler, Declan. (7 September 2006). "When Science and Theology Meet" in *Nature*, volume 443, issue 7107, pp. 10-11 [doi:10.1038/443010a].

Butler, Octavia E. (1993). *The Parable of the Sower*. New York: Warner Books.

Science fiction writers concerned with God typically consider nothing resembling process-relational/neoclassical theology. There is an exception, however. Octavia E. Butler (born 1947, died 2006) presents a change-oriented relational philosophy and theology in *Parable of the Sower*, where she says:

"All that you touch You Change. All that you Change Changes you. The only lasting truth is Change. God is Change." (Butler 2000 [c1993]: 3).

Butler, Octavia E. (1998). *The Parable of the Talents*. New York: Seven Stories Press.

Butler, Philip. (2020). *Black Transhuman Liberation Theology: Technology and Spirituality*. London: Bloomsbury Academic.

Byrnes, W. Malcolm. (1 October 2009). "Ernest Everett Just, Johannes Holtfreter, and the Origin of Certain Concepts in Embryo Morphogenesis" in *Molecular Reproduction & Development*, volume 76, issue 10, pages 912-921, online at <http://europepmc.org/article/PMC/3371230>.

Byrnes, W. Malcolm, and Stuart A. Newman. (June 2014 [Epub 24 March 2014]). "Ernest Everett Just: Egg and embryo as excitable systems" in the *Journal of Experimental Zoology, Part B, Molecular and Developmental Evolution*, volume 322, issue 4, pages 191-201, doi: 10.1002/jez.b.22567, PMID: 24665037; PMCID: PMC4277254, online at <https://pubmed.ncbi.nlm.nih.gov/24665037/>. [Dario Vargas, TC 8360, Summer 2020]

Cannato, Judy. (2010). *Field of Compassion: How the New Cosmology is Transforming Spiritual Life*. Notre Dame, Indiana: Sorin Books.

Case-Winters, Anna. (2012). “‘God Will Be All in All:’ The Fuller Implications of Incarnation” in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken’s Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Cavanaugh, Michael. (1996). *Biotheology: A New Synthesis of Science and Religion*, Foreword by Loyal Rue. New York: University Press of America.

Clayton, Philip, and Arthur Peacocke, editors. (2004). *In Whom We Live and Move and Have Our Being: Panentheistic Reflections on God’s Presence in a Scientific World*. Grand Rapids, Michigan: William B. Eerdmans Publishing.

Clayton, Philip. (2006). “‘Creative Mutual Interaction’ as Manifesto, Research Program, and Regulative Ideal” in *God’s Action in Nature’s World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Clayton, Philip. (2012). “In Praise of Limits: Exploring the Boundaries of Process Theology” in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken’s Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Cobb, John B., Jr. (Spring 1964). “From Crisis Theology to the Post-Modern World” in *Centennial Review*, volume 8, pages 209-220.

Cobb, John B., Jr. (1988). “Ecology, Science, and Religion: Toward a Postmodern Worldview” (pp. 99-114) in *The Reenchantment of Science: Postmodern Proposals*, edited by David Ray Griffin. Albany, New York: State University of New York Press.

Cobb, John B., Jr., editor. (2008). *Back to Darwin: A Richer Account of Evolution*. Grand Rapids, Michigan: William B. Eerdmans Publishing.

Cobb, John B., Jr. (2012). “Atomism & Societies” in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken’s Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Cobb, John B., Jr. and W. Widick Schroeder, editors. (1981). *Process Philosophy and Social Thought*. Chicago: Center for the Scientific Study of Religion.

Cobb, John B., Jr. and Franklin I. Gamwell. (1984). *Existence and Actuality: Conversations with Charles Hartshorne*. Chicago: University of Chicago Press.

Coleman, Monica A., with Nancy R. Howell and Helene Tallon Russell, editors. (2011). *Creating Women’s Theology: A Movement Engaging Process Thought*, with Foreword by Marjorie Hewitt Suchocki. Eugene, Oregon: Pickwick Publications.

Corey, M. A. (c1993). *God and the New Cosmology: The Anthropic Design Argument*. Lanham, Maryland: Rowman & Littlefield.

Coyne, George V. (2006). "Today's Playing Field - Theology and Science" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Daniels, Charles. (4 February 2024). *Scientific Theology*. Amazon.com eBook.

Darling, David J. (2001). *Life Everywhere: The Maverick Science of Astrobiology*. New York: Basic Books.

Davaney, Sheila Greeve, editor. (1981). *Feminism and Process Thought: The Harvard Divinity School / Claremont Center for Process Studies Symposium Papers*. New York: E. Mellen Press.

Davies, Paul. (2006). "How Many Universes?" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Davis, Andrew M. (2024). "From Negation to Exemplification: A Deeper Whiteheadian Cosmotheology" (chapter 9, pp. 287-344) in *Astrophilosophy, Exotheology, and Cosmic Religion: Extraterrestrial Life in a Process Universe*, Foreword by Timothy E. Eastman, edited by Andrew M. Davis and Roland Faber. New York: Lexington Books, 2024.

Dawkins, Richard. (1986). *Blind Watchmaker*, illustrations by Liz Pyle. New York: Norton.

Dawkins, Richard. (1989). *Selfish Gene*. New York: Oxford University Press.

Dawkin, Richard. (1990). Foreword to *The Evolution of Cooperation* (1990) by Robert M. Axelrod. New York: Penguin Books.

Dawkins, Richard. (October 2005). "From the Other Side: Richard Dawkins Responds." *Science and Theology News* 6.2: 38. (Peters 2018: 23)

Dawkins, Richard. (2010). "Afterword by Richard Dawkins" (pp. 211-215) in *The Black Cloud* (1957) by Fred Hoyle. London: Penguin Books, 2010.

Delio, Ilia. (2008). *Christ in Evolution*, Foreword by John F. Haught. Maryknoll, New York: Orbis Books.

Delio, Ilia, OSF. (2012). "The Evolving Human as Cosmotheandric Image" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Delio, Ilia. (c2013). *Unbearable Wholeness of Being: God, Evolution and the Power of Love*. Maryknoll, New York: Orbis Books.

Derham, William. (1713). *Physico-Theology: or, A Demonstration of the Being and Attributes of God from His Works of Creation*. London: Printed for William Innys.

Derham, William. (1715). *Astro-Theology: or, A Demonstration of the Being and Attributes of God, from a Survey of the Heavens*. London: Printed for William Innys.

Devenish, Philip E. (4 October 1981). "Mind, Brain, and Dualism" in *The Journal of Religion*, volume 61, number 4, pages 422-427.

Here is a critical response to Gifford Lectures in two books favoring "dualist interactionism" by brain researcher John C. Eccles: *The Human Mystery* (1979) and *The Human Psyche* (1980).

Devenish, Philip E, and George L. Goodwin, editors. (1989). *Witness and Existence: Essays in Honor of Schubert Ogden*. Chicago: University of Chicago Press.

Devenish, Philip E. (2022). Introduction (p. 3) to *Food for the Soul: The Recipes of Schubert Ogden*, with design and photography by Rebeca Howdeshell. Dallas, Texas: Bridwell Press.

Dick, Steven J. (1982). *Plurality of Worlds: The Origins of the Extraterrestrial Life Debate from Democritus to Kant*. New York: Cambridge University Press.

Dick, Steven J. (1996). *The Biological Universe: The Twentieth Century Extraterrestrial Life Debate and the Limits of Science*. New York: Cambridge University Press.

Dick, Steven J. (1998). *Life on Other Worlds: the 20th-Century Extraterrestrial Life Debate*. New York: Cambridge University Press.

Dick, Steven J. (c2000). *Many Worlds: The New Universe, Extraterrestrial Life and the Theological Implications*. Philadelphia: Templeton Foundation Press.

Dick, Steven J., and James E. Strick. (2005). *The Living Universe: NASA and the Development of Astrobiology*. New Brunswick, NJ: Rutgers University Press.

Dick, Steven J. and Mark Lupisella, editors. (2009). *Cosmos and Culture: Cultural Evolution in a Cosmic Context*. Washington, DC: National Aeronautics and Space Administration, Office of External Relations.

Dick, Steven J. (2018). "Toward a Constructive Naturalistic Cosmotheology" (pp. 228-244) in *Astrotheology: Science and Theology Meet Extraterrestrial Life* (Eugene, Oregon: Cascade Books, 2018) edited by Ted Peters, Martinez Hewlett, Joshua M. Moritz, and Robert John Russell, plus Foreword by Paul Davies.

Dick, Steven J. (2018b). *Astrobiology, Discovery, and Societal Impact*. New York: Cambridge University Press.

Dick, Steven J. (2024). "Astrobiology, Cosmotheology, and the Biological Universe: Implications for Religion and Theology" (chapter 8, pp. 249-286) in *Astrophilosophy, Exotheology, and Cosmic Religion: Extraterrestrial Life in a Process Universe*, Foreword by Timothy E. Eastman, edited by Andrew M. Davis and Roland Faber. New York: Lexington Books, 2024.

Dick, Thomas. (1838, 1842). *Celestial Scenery: or, The Wonders of the Planetary System Displayed; Illustrating the Perfections of the Deity and a Plurality of Worlds*. New York: Harper & Brothers.

Duffy, Kathleen, SSJ. (2012). "Creative Union & Chaotic Dynamics at the Evolutionary Front" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Dziadkowiec, Jakub, and Lukasz Lamza, editors. (29 August 2017). *Beyond Whitehead: Recent Advances in Process Thought* (Contemporary Whitehead Studies, an Interdisciplinary Book Series), edited by Roland Faber and Brian G. Henning. Lanham: Lexington Books.

Eastman, Timothy E. (25 September 2006). "Cosmic Agnosticism" is a paper presented at a conference on "Cosmology and Process Philosophy in Dialogue," 5-8 October 2006. Claremont, California: Claremont School of Theology.

Eastman, Timothy E. (26 December 2009). "Cosmic Agnosticism Revisited" in *The Journey of Cosmology*, January 2010, volume 4, number 2, pages 655-663.

Eastman, Timothy E. (2020). *Untying the Gordian Knot: Process, Reality, and Context* (Contemporary Whitehead Studies). Anoka, Minnesota: Process Century Press.

Eccles, John C. (1970). *Facing Reality: Philosophical Adventures by a Brain Scientist*. New York: Springer-Verlag.

Eccles, John C. (1973). *Understanding the Brain*. New York: McGraw-Hill.

Eccles, John C. (1975). *Wahrheit und Wirklichkeit: Mensch und Wissenschaft* [Truth and Reality: Human and Science]. Berlin: Springer-Verlag.

Eccles, John C. (1979). *The Human Mystery*. Gifford Lectures Delivered in the University of Edinburgh. Berlin: Springer-Verlag.

Eccles, John C. (1980). *The Human Psyche*. Gifford Lectures Delivered in the University of Edinburgh. Berlin: Springer-Verlag Books.

Edwards, Denis. (2012). "Trinity in Light of a Scientific Worldview: A Developing Tradition" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Edwards, Rem B. (1992). "God and Process" in *Logic, God, and Metaphysics*, edited by James Franklin Harris. Boston; Dordrecht, Netherlands: Kluwer Academic Publishers.

Edwards, Rem B. (Spring-Summer 2000). "How Process Theology Can Affirm Creation Ex Nihilo" in *Process Studies*, volume 20, number 1, pages 77-96.

Edwards, Rem B. (2001). *What Caused the Big Bang?* Amsterdam; New York: Rodopi Press.

Edwards, Rem B. (2012). *John Wesley's Values and Ours*. Lexington, Kentucky: Emeth Press.

Edwards, Rem B. (Spring/Summer 2013). "God as a Single Processing Actual Entity" in *Process Studies*, volume 42, number 1, pages 77-86.

Faber, Roland. (c2008). *God as Poet of the World: Exploring Process Theologies*, translated from 2003 German by Douglas W. Stott. Louisville, KY: Westminster John Knox Press.

Faber, Roland. (22 April 2010). "Theopoetic Justice: Towards an Ecology of Living Together" - Roland Faber Claremont School of Theology Inaugural Lecture, via Center for Process Studies on YouTube at <<https://www.youtube.com/watch?v=tdguJVZ9oWo&t=4800s>>.

According to Whiteheadian theopoetics, "... ethics is about the ecological character of the cosmos, a kind of virtue ethics ... [1:16/1:39] ...

Whitehead conceived of poetic justice arising out of the very nature of things ... [1:18] ... We cannot do without the recognition of some kind of cosmic virtue ..." [1:34] (Roland Faber 22 April 2020)

Faber, Roland, Brian G. Henning, and Clinton Combs, editors. (2010). *Beyond Metaphysics?: Explorations in Alfred North Whitehead's Late Thought*. Amsterdam; New York: Rodopi.

Faber, Roland. (2012). "The Mystical Whitehead" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Faber, Roland. (2014). *The Divine Manifold*. Lanham, MD: Lexington Books.

Faber, Roland. (2020). *Depths As Yet Unspoken: Whiteheadian Excursions in Mysticism, Multiplicity, and Divinity*, edited by Andrew M. Davis. Eugene, Oregon: Pickwick Publications.

Faber, Roland. (2021). *Cosmic Spirit: Awakenings at the Heart of All Religions, the Earth, and the Multiverse*. Eugene, Oregon: Cascade Books.

Fields, Chris, and Michael Levin. (14 June 2020). "Scale-Free Biology: Integrating Evolutionary and Developmental Thinking." *BioEssays*, volume 42, issue number 8: e1900228. [DOI: 10.1002/bies.201900228]

Forrington, Joseph H. (Cass). (October 2019). "Time Dilation Cosmology: An Eternally Evolving Model of an Infinite Space Time/Quantum Continuum" in *The Journal of Cosmology*, Volume 27, pp. 15110-15145.

Forrington, Joseph H. (Cass). (16 May 2023). "Time Dilation Cosmology" in *Journal of Modern Physics*, Volume 14, Number 6, pp. 839-864.

Forrington, Joseph H. (Cass). (18 March 2024). "Time Dilation Cosmology 2" in *Journal of Modern Physics*, Volume 15, Number 4, pp. 448-61.

Gallaher, Brandon. (2012). "The Problem of Pantheism in Sophiology of Sergii Bulgakov: A Panentheistic Solution in the Process Trinitarianism of Joseph A. Bracken" in *Seeking Common*

*Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Gamwell, Franklin I. (1984). *Beyond Preference: Liberal Theories of Independent Associations*. Chicago: University of Chicago Press.

In *Beyond Preference* (1984) Gamwell uses the phrase “partialist fallacy” to indicate “... partialism is a fallacy...” that produces parts-of-no-whole established liberalism and liberal political theories that cannot get beyond “solely preferential” private interests (p. 57) and “private-regarding-associations” (p. 154). For getting beyond private preferences, we need a reformed liberalism with theories that favor “maximal happiness and maximal public ideals” (p. 153) and “public-regarding-associations” (p. 154) by appealing to comprehensive reality, a “comprehensive variable for comparing choice alternatives” (p. 75) and “a comprehensive moral principle” (pp. 69, 74-77, 89-91).

In *The Divine Good* (1990) Gamwell shows that comparative appeals to the comprehensive “divine good” are necessary for adequate moral theory, and therefore atheistic modern moral theory is necessarily inadequate.

Similarly, in “Avoiding the Partialist Fallacy and Scaling Out to the All-inclusive Embodied Mind” (June 2024) T. Walker prescribes that Michael Levin and others (in the emerging field of “scale-free” biology and “diverse intelligence”) should avoid committing the partialist fallacy by recognizing (by cognitively scaling all the way out to) the comprehensive/all-inclusive life and intelligence.

Gamwell, Franklin I. (1990). *The Divine Good: Modern Moral Theory and the Necessity of God*. San Francisco: HarperSanFrancisco Publishing [reprint, Dallas: Southern Methodist University Press, 1996].

Gamwell, Franklin I. (2006). “Does Morality Presuppose God?” (pp. 5, 29-40) in *Whiteheadian Ethics: Abstracts and Papers from the Ethics Section of the Philosophy Group at the 6th International Whitehead Conference at the University of Salzburg, July 2006*, edited by Theodore Walker Jr. and Mihály Tóth. Cambridge: Cambridge Scholars Publishing, 2008.

Gibson, Carl H. (2009). *New Cosmology I and II: Cosmology Modified by Modern Fluid Mechanics*. The Journal of Cosmology.

Giem, Paul A. (1997). *Scientific Theology*. Riverside, California: La Sierra University Press.

Göcke, Benedikt Paul. (2018). *The Panentheism of Karl Christian Friedrich Krause (1781-1832) – From Transcendental Philosophy to Metaphysics*. New York: Peter Lang.

Göcke, Benedikt Paul. (2020). “Panpsychism and Panentheism” (pp. 37-63) in *Panentheism and Panpsychism: Philosophy of Religion Meets Philosophy of Mind Series: Innsbruck Studies in Philosophy of Religion, Volume: 2*, edited by Godehard Brüntrup, Benedikt Paul Göcke and Ludwig Jaskolla. Leiden, Netherlands: Brill, 2020.  
Online at <<https://brill.com/view/title/55646>>.

Graff, Harvey J. (2015). *Undisciplining Knowledge: Interdisciplinarity in the Twentieth Century*. Baltimore: Johns Hopkins University Press.

Griffin, David Ray, editor. (1988). *The Reenchantment of Science: Postmodern Proposals*. Albany, New York: State University of New York Press.

Griffin, David Ray. (1992). "Creativity and Postmodern Religion" (pp. 373-382) in *The Postmodern Reader*, edited by Charles Jencks. London: Academy Editions; New York: St. Martin's Press.

Griffin, David Ray. (2001). *Reenchantment without Supernaturalism: A Process Philosophy of Religion*. Ithaca: Cornell University Press

Griffin, David Ray. (2004). "Panentheism: A Postmodern Revelation" in *In Whom We Live and Move and Have Our Being: Panentheistic Reflections on God's Presence in a Scientific World*, edited by Philip Clayton and Arthur Peacocke. Grand Rapids, Michigan: William B. Eerdmans Publishing.

Griffin, David Ray. (2007). *Whitehead's Radically Different Postmodern Philosophy: An Argument for Its Contemporary Relevance*. Albany, New York: State University of New York Press.

Griffin, David Ray. (2015). "The Abolition of Dirty Energy" (chapter 18) in *Unprecedented: Can Civilization Survive the CO2 Crisis?* Atlanta: Clarity Press.

Harnack, Adolf von. (1904). *What is Christianity? - Sixteen lectures delivered in the University of Berlin during the winter-term, 1899-1900*, 3<sup>rd</sup> rev. ed., translated from German to English by Thomas Bailey Saunders. New York: G. P. Putnam's Sons.

Harnack, Adolf von. (1923). "Fifteen Questions to the Despisers of Scientific Theology" (pp. 85-87) in *Adolf von Harnack: Liberal Theology at its Height*, edited by Martin Rumscheidt. New York: Collins, 1989.

Harnack, Adolf von. (1930). "Stages of Scientific Knowledge" in *Adolf von Harnack: Liberal Theology at its Height*, edited by Martin Rumscheidt. New York: Collins, 1989.

Harris, Melanie L., editor. (2017). *Ecowomanism, Religion, and Ecology*. Boston: Brill.

Hartshorne, Charles. (1937, 1975). "The Cosmic Variables" (chapter VIII, pp. 111-124) in *Beyond Humanism: Essays in the Philosophy of Nature*. Chicago; New York: Willett, Clark & Company [Reprint with important new preface, Gloucester, Massachusetts: Peter Smith Books, 1975].

Hartshorne, Charles. (1941, 1964). "God and Righteousness" (chapter IV, pp. 142-173) and "The Theological Analogies and the Cosmic Organism" (chapter V, pp. 174-211) in *Man's Vision of God and the Logic of Theism*. Hamden, Connecticut: Archon Books, 1964 [New York: Willet, Clark & Company, 1941].



Hartshorne, Charles. (1941b). "Whitehead's Idea of God" (pp. 513-559) in *The Philosophy of Alfred North Whitehead, The Library of Living Philosophers, Volume 3*, edited by Paul Arthur Schilpp. La Salle, Illinois: Open Court Publishing Company, 1971 second printing, copyright 1941 and 1951.

Hartshorne, Charles (1948). *The Divine Relativity: A Social Conception of God*. New Haven, Connecticut: Yale University Press.

Hartshorne, Charles. (1953). *Reality as Social Process: Studies in Metaphysics and Religion*, Foreword by William Ernest Hocking. Boston: Beacon Press; Glencoe, Illinois: Free Press [Reprinted, New York: Hafner Press, 1971].

Hartshorne, Charles. (1967). "Chapter Three: Why There Cannot Be Empirical Proofs" [of the existence of God] (pp. 66-89) in *A Natural Theology for Our Time*. La Salle, Illinois: Open Court Publishing [second printing 1973].

Hartshorne, Charles (1970). "A Philosophy of Shared Creative Experience" (chapter 1, pp. 1-18) and "What Metaphysics Is" (chapter 2, pp. 19-42) in *Creative Synthesis and Philosophic Method*. La Salle, Illinois: Open Court Publishing.

Hartshorne, Charles. (1984). "The Physical and the Spiritual" (chapter 2, pp. 51-63) in *Omnipotence and Other Theological Mistakes*. Albany: State University of New York Press.

Hartshorne, Charles. (1987a). "A Metaphysics of Universal Freedom" (pages 27-40) in *Faith and Creativity: Essays in Honor of Eugene H. Peters*, edited by George Nordgulen and George W. Shields. St. Louis, Missouri: CBP Press.

Hartshorne, Charles (1987b). "Two Views of Metaphysics" (pages 63-78) in *Wisdom as Moderation: A Philosophy of the Middle Way*, edited by Robert C. Neville. Albany, New York: State University of New York Press.

Hartshorne, Charles. (1991). "An Open Letter to Carl Sagan" in *The Journal of Speculative Philosophy*, volume 5, pp. 227-232.

Hartshorne, Charles. (2011). *Creative Experiencing: A Philosophy of Freedom*, edited by Donald Wayne Viney and Jincheol O. Albany, New York: State University of New York Press.

The content and subtitle—*A Philosophy of Freedom*—supports the argument for the importance of *The Category of Freedom in the Thought of Charles Hartshorne* (2003) by Reginald David Broadnax. Similarly, see *Faith and Freedom: Toward a Theology of Liberation* (1979) by Schubert M. Ogden.

Hartshorne, Charles, and William L. Reese. (1953). *Philosophers Speak of God*. Chicago: University of Chicago Press [Reprints: Chicago: Midway Reprints, 1976; Amherst, New York: Humanity Books, 2000].

Herein, Whitehead's speech about God was classified as a "modern panentheism" (Hartshorne and Reese 1953: 273-285). However, since David Ray Griffin's appreciation of John B. Cobb Jr.'s uses of the phrases "post-modern world" (Cobb 1964) and "postmodern worldview" (Cobb 1988) to describe Whiteheadian views

of the world, along with Whiteheadian-Hartshornean process thought in general, Whiteheadian panentheism has been frequently labeled “postmodern” or “constructive postmodern” (Griffin 1988, 1992, 2004, 2007).

Hauerwas, Stanley. (2001). *With the Grain of the Universe: The Church's Witness and Natural Theology: Being the Gifford Lectures Delivered at the University of St. Andrews in 2001*. Grand Rapids, Michigan: Brazos Press.

Haught, John F. (c1995). *Science and Religion: From Conflict to Conversation*. New York: Paulist Press.

Haught, John F. (2000). *God after Darwin: A Theology of Evolution*. Boulder, Colorado: Westview Press.

Haught, John F. (c2012). *Science and Faith: A New Introduction*. New York: Paulist Press.

Haught, John F. (2017). *New Cosmic Story: Inside Our Awakening Universe*. New Haven: Yale University Press.

Haught, John F. (2021). *Cosmic Vision of Teilhard de Chardin*. Maryknoll, NY: Orbis Books.

Haught, John F. (2022). *God After Einstein: What's Really Going On in the Universe*. New Haven: Yale University Press.

Henning, Brian G. (2005). *The Ethics of Creativity: Beauty, Morality, and Nature in a Processive Cosmos*. Pittsburgh, Pa.: University of Pittsburgh Press.

Henning, Brian G. (2015). *Riders in the Storm: Ethics in an Age of Climate Change*. Winona, Minnesota: Anselm Academic.

Herzfeld, Noreen. (2006). “Bodies Matter: A New Fad and a Fallacy in the Name of Science” in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Holmes, Barbara A. (2002). *Race and the Cosmos: An Invitation to View the World Differently*. Harrisburg, Pennsylvania: Trinity Press.

Holmes, Barbara A. (2008). *Liberation and the Cosmos: Conversations with the Elders*. Minneapolis, Minnesota: Fortress Press.

Hoyle, Fred. (1955). *Frontiers of Astronomy*. London: Heinemann Publishing; New York: Harper and Brothers Publishers [reprinted in 1956, 1961, and 1963; Spanish version in 1960, and 1970].

Hoyle, Fred. (1956). *Man and Materialism*. New York: Harper and Brothers Publishers.

Hoyle, Fred. (1957). *The Black Cloud*, a 1957 sci-fi novel with a 2010 Afterword by Richard Dawkin. London: Heinemann Publishing; New York, 1957: Penguin Books, 2010.

Hoyle, Fred. (15 April 1980). *The Relation of Biology to Astronomy*. Wales, United Kingdom: University College Cardiff Press.

Hoyle, Fred. (1984 [c1983]). *The Intelligent Universe: A New View of Creation and Evolution*. New York: Holt, Rinehart and Winston Publishing.

Hoyle, Fred, and N. Chandra Wickramasinghe. (1981). “Convergence to God” (chapter 9, pp. 129-45) in *Evolution from Space: A Theory of Cosmic Creationism*. New York: Simon and Schuster.

Hoyle, Fred and N. Chandra [Nalin Chandra] Wickramasinghe. (1988). “The Concept of a Creator” (pp. 132-44) in *Cosmic Life-Force*. London, England: J. M. Dent & Sons; first American edition, New York: Paragon Books, 1990.

Huyssteen, J. Wentzel van. (2006). “‘Creative Mutual Interaction’ as an Epistemic Tool for Interdisciplinary Dialogue” in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

James, William. (1890). *The Principles of Psychology*. New York: Holt and Company.

James, William. (1901-1902). *The Varieties of Religious Experience: A Study in Human Nature*. Gifford Lectures Delivered in the University of Edinburgh During the Session 1901-1902. London: Longmans, Green, and Co., 1902.

Jenkins, Lillie R. (3 April 2021). “Black Apollo of Science: The Life of Ernest Everett Just - Summarizing Timeline, Sumitography and Concept Poster” [Alternative title: “E. E. Just: Administrative and Fund-seeking Pioneer”], online via *SMU Scholar* at [https://scholar.smu.edu/theology\\_research/27/](https://scholar.smu.edu/theology_research/27/).

Jonas, Hans. (1966). *The Phenomenon of Life: Toward a Philosophical Biology*, with Foreword by Lawrence Vogel. New York: Harper & Row.

Just, Ernest Everett. (1939). *The Biology of the Cell Surface*. Philadelphia: P Blakiston's Son.

Just, Ernest Everett, and Hedwig Schnetzler Just. (October 1941 [July 2020]). *The Origin of Man's Ethical Behavior*. [First titled “Ethics and the Struggle for Existence” in April 1941 (Manning 1983: 327, 385 n12)].

Originally unpublished book manuscript preserved at the Moorland-Spingarn Research Center at Howard University. A 251-page archival edition was transcribed and edited during 2018- 2020 by theological ethicist Theodore Walker Jr. and archival researcher Lillie R. Jenkins, with additional co-editing by Walker, Jenkins, and biochemist W. Malcolm Byrnes, in consultation with cell biologist Stuart Newman, historian of science Kenneth R. Manning, historian of religions Charles H. Long, and Moorland-Spingarn curator of manuscripts Joellen ElBashir, and published as *THE ORIGIN OF MAN'S ETHICAL BEHAVIOR* (1941) by ERNEST EVERETT JUST & HEDWIG SCHNETZLER JUST (via

Amazon.com, 2020). Also, see *Annotated Index and Bibliography to the 251-page archival edition of The ORIGIN OF MAN'S ETHICAL BEHAVIOR (1941) by Ernest Everett Just & Hedwig A. Schnetzler Just: Plus, historical notes and manifest* (Amazon.com, 25 July 2020) by Theodore Walker Jr.

Kant, Immanuel. (1755 [2008]). *Universal Natural History and Theory of the Heavens or An Essay on the Constitution of the Mechanical Origin of the Entire Structure of the Universe Based on Newtonian Principles* [Allgemeine Naturgeschichte und Theorie des Himmels oder Versuch von der Verfassung und dem mechanischen Ursprunge des ganzen Weltgebäudes, nach Newtonischen Grundsätzen abgehandelt], translated by Ian Johnston. Arlington, Virginia: Richer Resources Publications.

Kant, Immanuel. (1781). *Critique of Pure Reason* [Kritik der reinen Vernunft].

Kant, Immanuel. (1784). *What is Enlightenment?*

[“What is Enlightenment?” is included in the Lewis White Beck translation of Kant’s *Foundations of the Metaphysics of Morals* (Indianapolis: Bobbs-Merrill, 1976, ISBN: 0-672-60312-8).]

Kant, Immanuel. (1785). *Foundations of the Metaphysics of Morals*.

[Recommended translations by Lewis White Beck: Indianapolis: Bobbs-Merrill, 1976, ISBN: 0-672-60312-8.]

Kant, Immanuel. (1788). *Critique of Practical Reason* [Kritik der praktischen Vernunft].

Keller, Catherine. (2012). Afterword to *Seeking Common Ground: Evaluation and Critique of Joseph Bracken’s Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Keller, Catherine. (September 2012). “The Entangled Cosmos: An Experiment in Physical Theopoetics” in *The Journal of Cosmology*, volume 20, pp 8648-8666, online at <[thejournalofcosmology.com/indexVol20CONTENTS.htm](http://thejournalofcosmology.com/indexVol20CONTENTS.htm)>.

Keller, Catherine. (2015). *Cloud of the Impossible: Negative Theology and Planetary Entanglement*. New York: Columbia University Press.

Keller, Catherine, and Mary-Jane Rubenstein, editors. (2017). *Entangled Worlds: Religion, Science, and New Materialisms*. New York: Fordham University Press.

Kim, Heup Young. “The Sciences and the Religions: Some Preliminary East Asian Reflections on Christian Theology of Nature” in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

King, Jr. Martin Luther. (1967, 2010). *Where Do We Go From Here: Chaos or Community?* with 1968 Foreword by Coretta Scott King, and 2010 Introduction by Vincent Harding. Boston: Beacon Press, 2010 [copyrighted in 1968, first printed by Harper & Row in 1967].

Koutroufinis, Spyridon A., and René Pikarski, editors. (2020). *Unprecedented Evolution: Continuities and Discontinuities between Human and Animal Life and the Future of Humanity* (Toward Ecological Civilization Series). Anoka, Minnesota: Process Century Press.

Kragh, Helge. (September 2012). “Scientific Cosmology and Theology: Two Separate Worlds” - a commentary in the second of two Astro-Theology volumes in *The Journal of Cosmology*, volume 20, pp. 8697-8701, online at [[thejournalofcosmology.com/indexVol20CONTENTS.htm](http://thejournalofcosmology.com/indexVol20CONTENTS.htm)] and at [<https://thejournalofcosmology.com/kragh1%201.pdf>].

Kwok, Sun. (2008). Conference Paper: “Synthesis of Organic Compounds in the Late Stages of Stellar Evolution and Their Connection to the Solar System” in *Proceedings of the 10th Asian-Pacific Regional International Astronomical Union [IAU] Meeting (APRIM 2008)*, Kunming, China, 03-06 August 2008 [and in Faculty of Science: Conference Papers: HKU Scholars Hub, University of Hong Kong].

Kwok, Sun and Scott A. Sandford, editors. (2008b). *Organic Matter in Space: Proceedings of the 251st Symposium of the International Astronomical Union Held in Hong Kong, China, February 18-22, 2008*. Cambridge, England: Cambridge University Press.

Kwok, Sun. (September-October 2011). “From ‘Frontiers of Astronomy’ to Astrobiology” in *The Journal of Cosmology*, volume 16, number 13, pages 6643-6660.

Kwok, Sun. (2012). *Organic Matter in the Universe*. Weinheim, Germany: Wiley-VCH Publishing.

Kwok, Sun. (2013). *Stardust: The Cosmic Seeds of Life*. Springer.

Kwok, Sun. (2017). *Our Place in the Universe: Understanding Fundamental Astronomy from Ancient Discoveries*. Springer.

Kwok, Sun. (2021). *Our Place in the Universe –II: The Scientific Approach to Discovery*. Springer.

Lee, Seung Gap. (July 2006). “Hope for the Earth” A Process Eschatological Eco-ethics for South Korea” (pp. 12, 62-82) in *Whiteheadian Ethics: Abstracts and Papers from the Ethics Section of the Philosophy Group at the 6th International Whitehead Conference at the University of Salzburg, July 2006*, edited by Theodore Walker Jr. and Mihály Tóth. Cambridge: Cambridge Scholars Publishing, 2008.

Lefebure, Leo D. (2012). “The Infinite Ground & the Triune God in Interreligious Perspective: The Contribution of Joseph Bracken” in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken’s Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Levin, Michael. (December 2019). “The Computational Boundary of a “Self”: Developmental Bioelectricity Drives Multicellularity and Scale-Free Cognition” in *Frontiers in Psychology*,

Volume 10, Article 2688, pages 1-24.

[<https://www.frontiersin.org/journals/psychology/articles/10.3389/fpsyg.2019.02688/full>]

[Online at <https://doi.org/10.3389/fpsyg.2019.02688>.]

Levin, Michael. (15 September 2021). “26. Morphogenesis as a model for computation and basal Cognition” (Abstract, p. 45) in *Program of Plenary Sessions for IS4SI 2021 - 2021 Summit of the International Society for the Study of Information* [<https://summit-2021.is4si.org/>]

Levin, Michael. (March 2022). “Technological Approach to Mind Everywhere: An Experimentally-Grounded Framework for Understanding Diverse Bodies and Minds” in *Frontiers in Systems Neuroscience*, Volume 16, Article 768201, pages 1-43 [<https://www.frontiersin.org/articles/10.3389/fnsys.2022.768201/full>] [doi: 10.3389/fnsys.2022.768201]

Levin, Michael. (11 September 2022). “Intelligence Beyond the Brain: Morphogenesis as an Example of the Scaling of Basal Cognition” on YouTube at < <https://www.youtube.com/watch?v=RwEKg5cjkKQ> >.

Levin, Michael. (July 2023). “Discussing 3 Recently Published Papers with Michael Levin,” Carlos Farias interviews Michael Levin on YouTube at <<https://www.youtube.com/watch?v=KfrEDUv29r0&t=1587s>>.

Doctor, Thomas, with Olaf Witkowski, Elizaveta Solomonova, Bill Duane, and Michael Levin. (May 2022). “Biology, Buddhism, and AI: Care as the Driver of Intelligence.” *Entropy*, 24 (5), 710.

Levin, Michael. (2023). “Bioelectric Networks: The Cognitive Glue Enabling Evolutionary Scaling from Physiology to Mind.” *Animal Cognition* 26, no. 6, pp. 1865-1891.

Levin, Michael. (2023). “Darwin’s Agential Materials: Evolutionary Implications of Multiscale Competency in Developmental Biology.” *Cellular and Molecular Life Sciences* 80, no. 6 (2023): 142.

Levin, Michael. (2024). “AI: A Bridge toward Diverse Intelligence and Humanity’s Future.” <file:///C:/Users/00004523/Downloads/Essay%20on%20diverse%20intelligence%20and%20AI.pdf>.

Levin, Michael. (24 October 2024). “Michael Levin – Why intelligence Isn’t Limited to Brains” via Machine Learning Street Talk on YouTube at <<https://www.youtube.com/watch?v=6w5xr8BYV8M&t=353s>>.

Liu, Yanping. (Winter 2014). “Can Constructive Postmodernism Help the Chinese Dream?” in *Process Perspectives*, pp. 8-10.

Long, Charles H. (1963). *Alpha: The Myths of Creation*. Chico, California: Scholars Press.

[Here Long says, “We have reference to a new hermeneutical situation” (p. 3). “... a simplistic-evolutionary historical approach with its narrowly defined rational categories cannot give us the results we require ...” (p. 5).]

Long, Charles H. (1969). “Silence and Signification: A Note on Religion and Modernity” (pp. 141-150) in *Myths and Symbols: Essays in Honor of Mircea Eliade*, edited by Joseph M. Kitagawa and Charles H. Long, in collaboration with Jerald C. Brauer, and Marshall G. S. Hodgson. Chicago: University of Chicago Midway reprint, 1982.

Long, Charles H. (1991). “Matter and Spirit: A Reorientation” (pp. 345-347) in *Ellipsis ... The Collected Writings of Charles H. Long*. New York: Bloomsbury, 2018. [Originally in *Local Knowledge and Ancient Wisdom: Challenges in Contemporary Spirituality* (1991) edited by Steven Friesen.]

[According to our *modern* thinking about “matter” and “spirit,” natural science is the study of matter, and theology is the study of spirit. This sharp separation - of matter from spirit - distinguishes our modern orientation from pre-modern orientations (“primal” and “axial”). And sharply separating matter from spirit yields modern disorientation. Hence, Long calls for “a reorientation.”]

Lupisella, Mark. (July 2020). *Cosmological Theories of Value: Science, Philosophy, and Meaning in Cosmic Evolution*. New York: Springer.

Maddox, Randy. (2009). “John Wesley’s Precedent for Theological Engagement with the Natural Sciences” in *Divine Grace and Emerging Creation: Wesleyan Forays in Science and Theology of Creation*, edited by Thomas Jay Oord. Eugene, Oregon: Pickwick, 2009.

Malone-France, Derek. (2007). *Deep Empiricism: Kant, Whitehead, and the Necessity of Philosophical Theism*. Lanham, Maryland: Lexington Books/Rowman and Littlefield.

Manning, Kenneth R. (1983). *Black Apollo of Science: The Life of Ernest Everett Just*. Oxford: Oxford University Press.

Manning, Russell Re, editor. (2013). *The Oxford Handbook of Natural Theology*. Oxford: Oxford University Press.

Manning, Russell Re, and Michael Byrne, editors. (2013). *Science and Religion in the Twenty-First Century* (The Boyle Lectures). London: SMC Press.

Manson, Neil A., editor. (2003). *God and Design: The Teleological Argument and Modern Science*. New York: Routledge Books.

Martin, James G. (2016). *Revelation Through Science: Evolution in the Harmony of Science and Religion*, with original illustrations by James G. Martin Jr. Xlibris. [ISBN 978-1-5245-3609-1]

McFague, Sallie. (1993). *Body of God: An Ecological Theology*. Minneapolis: Fortress Press.

McGilchrist, Iain. (2009). *The Master and His Emissary: The Divided Brain and the Making of the Western World*. New Haven: Yale University Press.

McGilchrist, Iain. (2018). *Ways of Attending: How Our Divided Brain Constructs the World*. London: Routledge.

McGilchrist, Iain. (2023). *The Matter with Things: Our Brains, Our Delusions, and the Unmaking of the World, Volumes 1-2*. London: Perceptiva.

McGrath, Alister E. (2002). *A Scientific Theology: Volume 1 Nature*. New York: T & T Clark.

McGrath, Alister E. (2002). *A Scientific Theology: Volume 2 Reality*. New York: T & T Clark.

McGrath, Alister E. (2003). *A Scientific Theology: Volume 3 Theory*. Grand Rapids, Michigan: T&T Clark by William B. Eerdmans.

McGrath, Alister E. (c2004). *Science of God: An Introduction to Scientific Theology*. Grand Rapids, Michigan: William B. Eerdmans.

McGrath, Alister E. (2006). *Order of Things: Explorations in Scientific Theology*. Malden, MA: Blackwell Publication.

McMillen, Patrick, and Michael Levin. (28 March 2024). "Collective Intelligence: A Unifying Concept for Integrating Biology Across Scales and Substrates" in *Communications Biology*, Volume 7, Number 1, p. 378 [1-17].

Abstract - A defining feature of biology is the use of a multiscale architecture, ranging from molecular networks to cells, tissues, organs, whole bodies, and swarms. Crucially however, biology is not only nested structurally, but also functionally: each level is able to solve problems in distinct problem spaces, such as physiological, morphological, and behavioral state space. Percolating adaptive functionality from one level of competent subunits to a higher functional level of organization requires collective dynamics: multiple components must work together to achieve specific outcomes. Here we overview a number of biological examples at different scales which highlight the ability of cellular material to make decisions that implement cooperation toward specific homeodynamic endpoints, and implement collective intelligence by solving problems at the cell, tissue, and whole-organism levels. We explore the hypothesis that collective intelligence is not only the province of groups of animals, and that an important symmetry exists between the behavioral science of swarms and the competencies of cells and other biological systems at different scales. We then briefly outline the implications of this approach, and the possible impact of tools from the field of diverse intelligence for regenerative medicine and synthetic bioengineering.

Meyer, William J. (2010). *Metaphysics and the Future of Theology: The Voice of Theology in Public Life*. Eugene, Oregon: Pickwick.

Moore, Mary Elizabeth Mullino. (July 2006). "Compassion, Creativity, and Form: The Ethics of Institutions" (pp. 14, 83-100) in *Whiteheadian Ethics: Abstracts and Papers from the Ethics Section of the Philosophy Group at the 6th International Whitehead Conference at the University*



*of Salzburg, July 2006*, edited by Theodore Walker Jr. and Mihály Tóth. Cambridge: Cambridge Scholars Publishing, 2008.

Murphy, Nancey. (2006). “‘Creative Mutual Interaction’: Robert John Russell's Contribution to Theology and Science Methodology” in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Neville, Robert C. (1968). *God the Creator: On the Transcendence and Presence of God*, drawings by Beth Neville. Chicago: University of Chicago Press.

Neville, Robert C. (1974). *The Cosmology of Freedom*. New Haven, Connecticut: Yale University Press; new edition: Albany: State University of New York Press, 1995.

Neville, Robert C. (1995). *Creativity and God: A Challenge to Process Theology*, new edition. Albany, New York: State University of New York Press [originally, New York: Seabury Press, 1980].

Neville, Robert Cummings. (2012). “The Triune God & Creation Ex Nihilo, or, ‘The One & the Many Strikes Again’” in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Neville, Robert C. (2013). *Ultimates: Philosophical Theology*. Albany, New York: State University of New York Press.

Newman, Stuart A. (2013). “Evolution Is Not Mainly a Matter of Genes” (chapter 2, pp. 26-33) in *Genetic Explanations: Sense and Nonsense*, edited by Sheldon Krimsky and Jeremy Gruber. Cambridge, MA: Harvard University Press, <https://doi.org/10.4159/harvard.9780674067769.c4>.

Noble, Denis. (1975). *Initiation of the Heartbeat*. Oxford, UK: Clarendon Press.

Noble, Denis, and Alan Montefiore, editors. (1989). *Goals, No-Goals, and Own Goals: A Debate on Goal-Directed and Intentional Behaviour*. London; Boston: Unwin Hyman.

Noble, Denis, editor. (1993). *Logic of Life: The Challenge of Integrative Physiology*. Oxford, UK: Oxford University Press.

Noble, Denis. (2006). *The Music of Life: Biology Beyond the Genome*. Oxford University Press.

Noble, Denis. (2016). *Dance to the Tune of Life: Biological Relativity*. Cambridge University Press.

Noble, Denis. (2017). “Biological Scales and Levels” (chapter 2, pp. 30-68) in *Dance to the Tune of Life: Biological Relativity*. New York: Cambridge University Press.

Nobel, Denis. (2024). “#28 – Denis Noble – Why The Last 80 Years of Biology was Wrong” by The Innovation Civilization on YouTube

At <<https://www.youtube.com/watch?v=3cDtlqYbq14&t=417s>>.

O'Donnell, Eleanor. (2023). *The Relational Power of God: Considering the Rebel Voice*. Eugene, Oregon: Pickwick Publications.

Ogden, Schubert M. (1966). *The Reality of God and Other Essays*. New York: Harper and Row.

Ogden, Schubert M. (Spring 1975). "The Criterion of Metaphysical Truth and the Senses of Metaphysics" in *Process Studies*, volume 5, number 1, pages 47-48.

Ogden, Schubert M. (1979). "Beyond Homocentrism" (p. 102-114) in *Faith and Freedom: Toward a Theology of Liberation*. Nashville: Abingdon Press. Revised and enlarged edition, Eugene, Oregon: Wipf & Stock Publishers, 2005.

Ogden, Schubert M. (Spring 1984). "Process Theology and the Wesleyan Witness" in *Perkins School of Theology Journal*, volume 37, number 3, pages 18-33. [Reprinted with a collection of essays responsive to Ogden's essay in *Thy Nature and Thy Name Is Love: Wesleyan and Process Theologies in Dialogue* (Nashville: Abingdon Press, 2001) edited by Bryan P. Stone and Thomas Jay Oord.]

Ogden, Schubert M. (1986). "The Task of Philosophical Theology" (chapter 4, pp. 69-93) and "Theology in the University" (chapter 7, pp. 121-133) in *On Theology*. San Francisco: Harper & Row [Reprinted by SMU Press, 1992].

Ogden, Schubert M. (2018). "On Science and the Sciences" (no. 12, pp. 32-44) in *Notebooks* [of Schubert M. Ogden]. Eugene, Oregon: Cascade Books, 2018, compiled by Philip E. Devenish, Franklin I. Gamwell, George L. Goodwin, and Alexander F. Vishio; and in the Drew University "Schubert M. Ogden Notebooks" (2018) searchable database online at <https://uknow.drew.edu/confluence/display/ogden/Schubert+M.+Ogden+Notebooks>, edited by Philip E. Devenish, Franklin I. Gamwell, George L. Goodwin, Andrew D. Scrimgeour, and Alexander F. Vishio, created by Jennifer Heise.

O'Meara, Thomas F. O. (2024). *Toward a Cosmic Theology: Christian Revelation in a Vast Universe*. New York: Paulist Press.

Padilla, Elaine. (2012). "The Eros of Intersubjective Becomings: A Rereading of St. Thomas Aquinas's Notion of Divine Enjoyment via Alfred N. Whitehead & Joseph A. Bracken, SJ" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Paley, William, 1743-1805. ([1802] 1809). *Natural Theology; or, Evidences of the Existence and Attributes of the Deity. Collected from the Appearances of Nature*. London, Printed for J. Faulder, 1809.

Pannenberg, Wolfhart. (c1993). *Toward a Theology of Nature: Essays on Science and Faith*, edited by Ted Peters. Louisville, Ky: Westminster/ J. Knox Press.

Parkyn, Joel L. (2021). *Exotheology: Theological Explorations of Intelligent Extraterrestrial Life*. Eugene, Oregon: Pickwick Publications.

Peacocke, Arthur Robert. (1979). *Creation and the World of Science*. New York: Oxford University Press.

Peacocke, Arthur Robert. (1981). *The Sciences and Theology in the Twentieth Century*. Notre Dame, Indiana: University of Notre Dame Press.

Peacocke, Arthur Robert. (1990). *Theology for a Scientific Age: Being and Becoming—Natural and Divine*. Cambridge, Mass: Blackwell.

Peacocke, Arthur Robert. (1992-93). *Nature, God and Humanity: Towards a Christian Theology for a Scientific Age*. (Gifford Lectures Delivered at St. Andrews During the Session 1992-93).

Peacocke, Arthur. (2006). “Emergent Realities with Causal Efficacy – Some Philosophical and Theological Applications” in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Penrose, Roger, and Stuart Hameroff. (2011). “Consciousness in the Universe: Neuroscience, Quantum Space-Time Geometry and Orch OR Theory” in *The Journal of Cosmology*, volume 14, and in *Consciousness and the Universe: Quantum Physics, Evolution, Brain & Mind*. Cambridge, MA: Cosmology Science Publishers.

[“We conclude that consciousness plays an intrinsic role in the universe”  
(Abstract).]

Peters, Ted, editor. (c1989). *Cosmos as Creation: Theology and Science in Consonance*. Nashville: Abingdon Press.

Peters, Ted. (1992). *God—the World's Future: Systematic Theology for a Postmodern Era*. Minneapolis: Fortress Press.

Peters, Ted, editor. (c1998). *Science and Theology: The New Consonance*. Boulder, Colo: Westview Press.

Peters, Ted. (c2000). *God—the World's Future: Systematic Theology for a New Era*. Minneapolis: Fortress Press.

Peters, Ted, and Martinez Hewlett. (2003). *Evolution from Creation to New Creation*. Nashville: Abingdon Press.

Peters, Ted, and Gaymon Bennett, editors. (2003). *Bridging Science and Religion*. Minneapolis, MN: Fortress Press.

Peters, Ted. (c2006). *Anticipating Omega: Science, Faith, and Our Ultimate Future*, Foreword by Michael Welker. Gottingen: Vandenhoeck & Ruprecht.

Peters, Ted, and Nathan Hallanger, editors. (2006). *God's Action in Nature's World: Essays in Honour of Robert John Russell*. New York: Routledge.

Peters, Ted. (2006). "Robert John Russell's Contribution to the Theology & Science Dialogue" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Peters, Ted. (June 2010). "Is Craig Venter Playing God with Genetics and DNA?" is a commentary concerning "Artificial Life. Scientific Revolution? Or the End of Life as We Know It?" in *The Journal of Cosmology*, volume 8, online at <<https://thejournalofcosmology.com/ArtificialLife100.html>>, and at <<https://thejournalofcosmology.com/ArtificialLife100.html#12>>.

Peters, Ted. (2018). "Introducing Astrotheology" (chapter 1, pp. 3-26) in *Astrotheology: Science and Theology Meet Extraterrestrial Life*, edited by Ted Peters with Martinez Hewlett, Joshua M. Moritz, and Robert John Russell, plus Foreword by Paul Davies. Cascade Books: Eugene, Oregon, 2018.

Pio-Lopez, Léo, Johanna Bischof, Jennifer V. LaPalme, and Michael Levin. (14 April 2023). "The Scaling of Goals from Cellular to Anatomical Homeostasis: An Evolutionary Simulation, Experiment and Analysis" in *Interface Focus*, volume 13, number 3: 20220072. [<https://doi.org/10.1098/rsfs.2022.0072>]

Polkinghorne, John. (1995). "The Metaphysics of Divine Action" (pp. 147-56) in *Chaos and Complexity: Scientific Perspectives on Divine Action*, edited by Robert John Russell, Nancey Murphy, and Arthur R. Peacocke. Notre Dame, Indiana: University of Notre Dame Press, 1997.

Polkinghorne, John. (2006). "Quantum Theology" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Pugliese, Marc A. (2012). "Orthodoxy or Orthopraxy: Recent Developments in Physics & Joseph A. Bracken as Revisionist Whiteheadian" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulguese and Gloria L. Schaab. Marquette University Press.

Rescher, Nicholas. (1970). *Scientific Explanation*. New York: Free Press.

Rescher, Nicholas. (c1975). *Theory of Possibility: A Constructivistic and Conceptualistic Account of Possible Individuals and Possible Worlds*. Oxford, England: Blackwell.

Rescher, Nicholas. (1978). *Scientific Progress: A Philosophical Essay on the Economics of Research in Natural Science*. Pittsburgh: University of Pittsburgh Press.

Rescher, Nicholas. (c1982). *Coherence Theory of Truth*. Washington DC: University Press of America.

Rescher, Nicholas. (c1996). *Priceless Knowledge? Natural Science in Economic Perspective*. Lanham, Maryland: Rowman & Littlefield.

Rescher, Nicholas. (c1996b). *Process Metaphysics: An Introduction to Process Philosophy*. Albany, New York: State University of New York Press.

Rist, John M. (2002). *Rethinking the Foundations of Morality*. Cambridge: Cambridge University Press.

Rouleau, Nicolas, and Michael Levin. (14 November 2023). "The Multiple Realizability of Sentience in Living Systems and Beyond," a Cognition and Behavior Commentary in *eNeuro*, Volume 10, Issue 11, pp. 1-7.

[supporting "generalizability of cognitive function beyond brains" in "non-neural organisms ... artificially intelligent and bio-robotic hybrid systems ..."  
(Abstract)]

Rubenstein, Mary-Jane. (2014). *Worlds Without End: The Many Lives of the Multiverse ... in which are discussed pre-, early-, and postmodern multiple-worlds cosmologies: the sundry arguments for and against them: the striking peculiarities of their adherents and detractors: the shifting boundaries of science, philosophy, and religion: and the stubbornly persistent question of whether creation has been "designed."* New York: Columbia University Press.

Ruether, Rosemary Radford, editor. (1996). *Women Healing Earth: Third World Women on Ecology, Feminism, and Religion*. Maryknoll, NY: Orbis Books.

Russell, Robert John, with Nancey Murphy and Arthur R. Peacocke, editors. (1997). *Chaos and Complexity: Scientific Perspectives on Divine Action*. Notre Dame, Indiana: University of Notre Dame Press.

Russell, Robert John, and Carl S. Helrich, editors. (c2006). *Cosmology, Evolution, and Resurrection Hope: Theology and Science in Creative Mutual interaction: Proceedings of the Fifth Annual Goshen Conference on Religion and Science*. Kitchener, Ont.: Pandora Press; South Australia: ATF Press.

Russell, Robert John. (2008). *Cosmology from Alpha to Omega: The Creative Mutual Interaction of Theology and Science*, Foreword by Ian G. Barbour. Minneapolis: Fortress Press.

Russell, Robert John. (2009). "Quantum Physics and the Theology of Non-Interventionist Objective Divine Action" (chapter 34, pp. 579-595) in *The Oxford Handbook of Religion and Science*, edited by Philip Clayton. Oxford University Press.

Russell, Robert J. (c2012). *Time in Eternity: Pannenberg, Physics, and Eschatology in Creative Mutual Interaction*. Notre Dame, Indiana: University of Notre Dame Press.

Russell, Robert John. (11 May 2023). "Artificial Intelligence: What Can We Learn About Being Human from Non-Human Technological 'Life'?" *Theology and Science*, volume 21, issue 2, pp. 199-200.

Schaab, Gloria L., SSJ. (2012). "Trinitarian Panentheism & the Problem of Suffering" in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken's Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Schleiermacher, Friedrich. (1811, 1830). *Kurze Darstellung des Theologischen Studiums zum Behuf Einleitender Vorlesungen* [Brief Presentation of Theological Studies for the Purpose of Introductory Lectures]. *Brief Outline on the Study of Theology*, Translated with Introduction and Notes by Terrence N. Tice. Atlanta: John Knox Press, 1966, 1977.

Segall, Matthew David. (2021). *Physics of the World-Soul: Alfred North Whitehead's Adventure in Cosmology*. SacraSage Press.

Sheldrake, Merlin. (2023). *Entangled Life: How Fungi Make Our Worlds, Change Our Minds and Shape Our Futures*. London: The Bodley Head, 2020; New York: Random House, 2023.  
And see "Merlin Sheldrake - How Fungi Make our Worlds" by Bioneers on YouTube at <<https://www.youtube.com/watch?v=ZRFmCXBv5R4&t=317s>>.

Sheldrake, Rupert. (1981). *New Science of Life: The Hypothesis of Formative Causation*. London: Blond & Briggs. New York: St. Martin's Press, c1987.

Sheldrake, Rupert. (1988, c2012). *Presence of the Past: Morphic Resonance and the Habits of Nature*. Rochester, Vermont: Park Street Press. New York: Vintage Books, 1989.

Sheldrake, Rupert. (1990). *Rebirth of Nature: The Greening of Science and God*. London: Century; New York: Bantam Books, 1991; Rochester, Vermont: Park Street Press, 1994.

Sheldrake, Rupert. (c1995 [1981, 1985, 1987]). *A New Science of Life: The Hypothesis of Morphic Resonance*. Rochester, Vermont: Park Street Press.

Sheldrake, Rupert. (2003). *Sense of Being Stared At: and Other Aspects of the Extended Mind*. London: Hutchinson; New York: Crown Publishers.

Sheldrake, Rupert. (2009 [1995]). *Morphic Resonance: The Nature of Formative Causation*, A revised and expanded edition of *A New Science of Life: The Hypothesis of Morphic Resonance, 1995*. Rochester, Vermont: Park Street Press.

Sia, Santiago. (1985). *God in Process Thought: A Study in Charles Hartshorne's Concept of God*. Dordrecht, Netherlands; Boston: Martinus Nijhoff Publisher.

Sia, Santiago, editor. (1990). *Charles Hartshorne's Concept of God: Critical Responses*. Birmingham, UK: Kluwer Academic Publishers.

Sia, Santiago. (2004). *Religion, Reason and God: Essays in the Philosophies of Charles Hartshorne and A. N. Whitehead*. New York: Peter Lang Publishers.

Sia, Santiago. (2010). "Literary Insights, Philosophical Development and Ethical Reflections: An Exploration into their Interconnectedness" in *Ethical Contexts and Theoretical Issues: Essays in Ethical Thinking*. Newcastle upon Tyne, England: Cambridge Scholars Publishing.

Smith, Eric, and Harold J. Morowitz. (2022 [2016, 2018]). *The Origin and Nature of Life on Earth: The Emergence of the Fourth Geosphere*. Cambridge University Press.

Stamets, Paul. (2014). “Paul Stamets – Report from the Underground | Bioneers.” [A speech to the 2014 Bioneers Annual Conference] on YouTube at [https://www.youtube.com/watch?v=DAw\\_Zzge49c](https://www.youtube.com/watch?v=DAw_Zzge49c).

Concerning the intelligence of nature and mycelial intelligence, in addition to much else, Paul Stamets says approximately some of the following: “I believe nature is intelligent. ... I believe nature is a force of good. ... mycelium ... are soil makers ... resembles a neural net ... mycelial networks are intelligent ... I believe in the natural intelligence of this planet ... has led to astonishing breakthrough discoveries ... Fungal genome that gives nature the ability to respond to catastrophic weathers ... saprophytic fungi in particular are running after us as quickly as they can trying to repair the damage that we’re causing ... we need to recognize them ... the largest living organism on the planet is a mycelial matt 2200 acres a hundred and sixty-five ... in Oregon and Washington State ... a ...mycelium is a neural net of Guyon consciousness ... ecosystem is tied together by a mass of mycelium and they share information and knowledge ... they’re the reparative organisms in nature ... the internet is mycelial like in form ... an extension of biological model ... strings of dark matter resemble mycelial networks ... macro brain ... fungi are resident throughout the universe ...” (author notes from Paul Stamets)

Stoeger, William R. (2006). “Relating the Natural Sciences to Theology - Levels of Creative Mutual Interaction” in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Stone, Bryan P., and Thomas Jay Oord, editors. (2001). *Thy Nature and Thy Name Is Love: Wesleyan and Process Theologies in Dialogue*. Nashville: Abingdon Press.

Suchocki, Marjorie Hewitt. (1997). “God, Trinity, Process” (pp. 65-78) in *Trinity in Process: A Relational Theology of God*, edited by Joseph A. Bracken and Marjorie Hewitt Suchocki. New York: Continuum.

Suchocki, Marjorie Hewitt. (2012). “Creativity, Society, & Trinity” in *Seeking Common Ground: Evaluation and Critique of Joseph Bracken’s Comprehensive Worldview*, edited by Marc A. Pulgiese and Gloria L. Schaab. Marquette University Press.

Suchocki, Marjorie Hewitt. (2023). *21 Psalms for the 21st Century: A Process Meditation*, with Contemporary Psalm/Prayer by poet Blair Gilmer Meeks. Portland, Oregon: Process Century Press.

Thandeka. (1995). *Embodied Self: Friedrich Schleiermacher’s Solution to Kant’s Problem of the Empirical Self*. Albany: State University of New York Press.

Tilby, Angela. (1993). *Soul: God, Self, and the New Cosmology*. New York: Doubleday.

Torrance, Thomas F. (1985). *Reality and Scientific Theology*. Edinburgh: Scottish-Academic Press.

Townes, Charles H. (2006). "Basic Puzzles in Science and Religion" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Trost, Lou Ann. (2006). "Non-interventionist Divine Action - Robert Russell, Wolfhart Pannenberg, and the Freedom of the (Natural) World" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Tyson, Neil de Grasse, and Donald Goldsmith. (2004). *Origins: Fourteen Billion Years of Cosmic Evolution*. New York; London: W. W. Norton.

Viney, Donald Wayne, and George W. Shields. (2020). *The Mind of Charles Hartshorne: A Critical Examination*. Anoka, Minnesota. Process Century Press.

Vishio, Alexander F. (April 2005). Book Review: John M. Rist's *Real Ethics: Rethinking the Foundations of Morality* (Cambridge University Press, 2002) in *The Journal of Religion*, volume 85, number 2, pp. 336-338.

Voskuil, Duane. (Fall-Winter 1999). "Hartshorne, God and Metaphysics: How the Cosmically Inclusive Personal Nexus and the World Interact" in *Process Studies*, volume 28, number 3/4, pages 212-228.

Walker, Theodore, Jr. (2004). "Black Atlantic Views of Modernity: Charles H. Long and Paul Gilroy" (chapter 2, pp. 9-21) in *Mothership Connections: A Black Atlantic Synthesis of Neoclassical Metaphysics and Black Theology*. Albany: State University of New York Press.

Walker, Theodore, Jr. (Dec 2009). "Neoclassical Cosmology and Menas Kafatos's 'Cosmos and Quantum: Frontiers for the Future'" in *The Journal of Cosmology*, v3, Dec 2009; reprinted as a chapter in *Quantum Physics of Consciousness* (Cosmology Science Publishers, 2011), edited by Subhash Kak, Sir Roger Penrose, and Stuart Hameroff.

Walker, Theodore, Jr., and Chandra Wickramasinghe, with editing by Alexander Vishio. (2015). *The Big Bang and God: An Astro-Theology wherein an astronomer and a theologian offer a study of interdisciplinary convergences with natural theology both in the scientific researches of Sir Fred Hoyle and in the philosophical researches of Charles Hartshorne and Alfred North Whitehead, thereby illustrating a constructive postmodern trend*. New York: Palgrave Macmillan

Walker, Theodore, Jr. (2016). "Interdisciplinary Ethics: From Astro-Theology to Cosmo-Liberation Theology" (pp. 221-227) in *Entangled Worlds: Religion, Science, and New Materialisms*, edited by Catherine Keller and Mary-Jane Rubenstein. Bronx, New York: Fordham University Press.



Walker, Theodore, Jr. (9 January 2018). "Martin Luther King Jr. on Economy, Ecology, and Civilization: Toward a MLK Jr-Inspired Ecotheology" online via *SMU Scholar* at < [https://scholar.smu.edu/theology\\_research/10/](https://scholar.smu.edu/theology_research/10/) >.

[Abstract - This MLK Jr-inspired ecotheology [eco-theology] connects "economics," "ecology," and "ecological civilization" to the theological ethics of Rev. Dr. Martin Luther King Jr. Though we often remember King primarily as a domestic civil rights leader; attention to King's book—*Where Do We Go from Here: Chaos or Community?* (1967) reveals that he advanced a global ethics. King called for replacing recourse to war with nonviolent resistance to evil, and for abolishing poverty throughout "the world house." He prescribed that we "*civilize ourselves* by the total, direct and immediate abolition of poverty." King was concerned with civilizing "the world house" (house or household in Greek is "oikos;" and "oikos" is the root of the words "economy" and "ecology"). King's concern is consistent with some recent writings from China about "ecological civilization" (Pan Yue 2006, 2008; Jia Zhibang 2009). The most profound difference is that King recognized and strongly emphasized faith-based reasons for believing that we can and should advance toward a civilized world house (toward an ecological civilization). King's "audacious faith" in the future of civilization was based upon the reality of God, and related ethical realism. This improves upon cynical-pessimistic versions of Reinhold Niebuhr's political realism. Keywords: abolition of poverty, economics, ecology, ecological civilization, eco-theology, ecotheology, realism, world house]

Walker, Theodore, Jr. (2020). "Interdisciplinary Convergences with Biology and Ethics via Cell Biologist Ernest Everett Just and Astrobiologist Sir Fred Hoyle" (chapter 2, pp. 11-35) in *Panentheism and Panpsychism - Philosophy of Religion Meets Philosophy of Mind Series: Innsbruck Studies in Philosophy of Religion, Volume: 2*, edited by Godehard Brüntrup, Benedikt Paul Göcke, and Ludwig Jaskolla. Mentis Verlag; Leiden, Netherlands: Brill.

Walker, Theodore, Jr. (7 May 2024). "Critically appreciating Ernest Everett Just's *Biology of the Cell Surface* (1939) and related research: A literature review and annotated bibliography – with selected abstracts and notes concerning contributions to biology and evolutionary bioethics" in the *SCIREA Journal of Biology*, volume 9, issue 1, February 2024, pages 13-36 [DOI: 10.54647/biology180367].

Walker, Theodore, Jr. (5 June 2024). "Avoiding the Partialist Fallacy and Scaling Out to the All-inclusive Embodied Mind: A Mereological Supplement to Michael Levin's 'Experimentally-Grounded Framework for Understanding Diverse Bodies and Minds'" is a commentary in *Examines in Marine Biology and Oceanography*, volume 7, issue 1 [DOI: 10.31031/EIMBO.2024.07.000653].

Wegter-McNelly, Kirk. (2006). "Atoms May Be Small, But They're Everywhere: Robert Russell's Theological Engagement with the Quantum Revolution" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

White, Carol Wayne. (2009). *The Legacy of Ann Conway: Reverberations of a Mystical Naturalism*. Albany: State University of New York Press.

White, Carol Wayne. (2017). "Stubborn Materiality: African American Religious Naturalism and Becoming Our Humanity" (pp. 251-273) in *Entangled Worlds: Religion, Science, and New Materialisms*, edited by Catherin Keller and Mary-Jane Rubenstein. New York: Fordham University Press, 2017.

White, Morton. (1955). "Nature and Life: Alfred North Whitehead" (chapter VI, pp. 81-100) in *The Age of Analysis: 20<sup>th</sup> Century Philosophers, Selected, with Introduction and Interpretive Commentary*. New York: A Mentor Book.

Concerning Whitehead's *Science and the Modern World* (1925), *Process and Reality* (1927-28), and *Adventures of Ideas* (1933): Morton White says, "all of them" were "devoted to the exposition and application of his philosophy of organism" (p. 82).

Concerning Whitehead's *Nature and Life* (1934): Morton White says, "Whitehead protests against the view that parts of nature are dead, a point of view which he identifies with a scientifically discredited common-sense ..." and that Whitehead was "advancing a new view of the universe" (p. 84).

Similarly, at the beginning of *The Phenomenon of Life: Toward a Philosophical Biology* (1996) Hans Jonas says, "A Philosophy of Life comprises the philosophy of the organism and the philosophy of mind" (p. 1).

Whitehead, Alfred North. (1925). *Science and the Modern World* (Lowell Lectures, 1925). New York: Macmillan; Free Press, 1967.

Whitehead, Alfred North. (1927-28, 1978). *Process and Reality: An Essay in Cosmology* (Gifford Lectures Delivered in the University of Edinburgh During the Session 1927-28), *Corrected Edition* edited by David Ray Griffin and Donald W. Sherburne. New York: Free Press, 1978.

Whitehead, Alfred North. (1933). *Adventures of Ideas*. New York: Macmillan Publishing.

Whitehead, Alfred North. (1934). *Nature and Life*. Chicago: University of Chicago Press.

Whitehead, Alfred North. (1947). *Essays in Science and Philosophy*. New York: Philosophical Library.

Wickramasinghe, N. Chandra, with Gensuke Tokoro and Milton Wainwright. (September 2014). "Growing Evidence for Cosmic Biology" in the *Journal of Cosmology*, 2014, 24, 8, pp 12097-12101.

Wickramasinghe, Chandra [N. Chandra]. (2015). *Vindication of Cosmic Biology: Tribute to Sir Fred Hoyle (2015-2001)*. Hackensack, NJ: World Scientific.

Wildman, Wesley J. (2006). "Robert John Russell's Theology of God's Action" in *God's Action in Nature's World: Essays in Honour of Robert John Russell*, edited by Ted Peters and Nathan Hallanger. New York: Routledge. [eBook ISBN9781315585369]

Wilkinson, David. (2013). *Science, Religion, and the Search for Extraterrestrial Intelligence*. Oxford: Oxford University Press.

Witham, Larry. (2005). *The Measure of God: Our Century-Long Struggle to Reconcile Science and Religion*. New York: HarperCollins Publishers.

Wood, Charles M. (1985). "Three Dimensions of Theology" (chapter III, pp. 37-55) in *Vision and Discernment: An Orientation in Theological Study*. Atlanta: Scholars Press.

Yang, Guorong. (July 2006). "Problems and Perspectives in the Emerging Global Society" (pp. 24, 144-131) in *Whiteheadian Ethics: Abstracts and Papers from the Ethics Section of the Philosophy Group at the 6th International Whitehead Conference at the University of Salzburg, July 2006*, edited by Theodore Walker Jr. and Mihály Tóth. Cambridge: Cambridge Scholars Publishing, 2008.

Young, Henry. (1990). *Hope in Process: A Theology of Social Pluralism*. Minneapolis: Fortress Press.

Yue, Pan. (09 November 2006). "Evolution of an Ecological Civilization" in *Beijing Review, China's National English News Weekly*, volume 49, number 45, pages 18-19.

Yue, Pan. (November 2008). "Looking Forward to an Ecological Civilization" in *China Today*, volume 57, issue 11, pages 29-30.

Here Pan Yue identifies three stages of civilization: millions of years of Stone Age, 10,000 years of agricultural age, and 300 years of industrial civilization. Industrial civilization yields "global ecological crisis" and we are now "looking forward to a new form of civilization – an ecological society" (p. 29), "... deeply rooted in Chinese culture, philosophy, literature and art. For example ... Lost Books of the Zhou Dynasty ... Ritual of Zhou ... environmental consciousness of the ancients," and Yue says, "An 'ecological civilization' is one in which there are harmonious relations between people, between people and nature, and between people and society, in order to realize sustainable all-round prosperity. Many Chinese belief systems also advocate harmony between man and nature. Confucianism ... Taoism ... Buddhism ... An ecological civilization proposes to build an environmentally friendly and sustainable society, reducing the burden on nature. As well as being beneficial to the environment ... the most sound form of long-term economic and social development. An ecological civilization is based on thrift, consuming to meet basic needs, and the pursuit of more spiritual and cultural satisfactions" (p. 30).

□□□□

## Addendum

Peters, Ted, with Martinez Hewlett, Joshua M. Moritz, and Robert John Russell, plus, Foreword by Paul Davies. (2018). *Astrotheology: Science and Theology Meet Extraterrestrial Life*. Eugene, Oregon: Cascade Books.

Contributors: Steven J. Dick, José G. Funes SJ, Mark Graves, Peter M. J. Hess, Martinez Hewlett, Muzaffar Iqbal, Heidi Manning, Christopher McKay, Joshua M. Moritz, Ted Peters, Oliver Putz, Margaret S. Race, Robert John Russell, Norbert M. Samuelson, Jennifer Wiseman.

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