

## Critical Notice in **Science and Religion**

Holmes Rolston, III

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See separate file for critical notice of *Genes, Genesis, and God*.

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### Part 1. Critical notice of **Science and Religion: A Critical Survey**

Random House, 1987, Temple University Press, 1987, McGraw Hill, 1989, Harcourt Brace, 1997  
25th Anniversary Edition, with new Introduction, "Human Uniqueness and Human Responsibility: Science and Religion in a New Millennium," 2006, Templeton Foundation Press

The following five quotations are from Random House reviews, published on the rear cover of the book.

Ian G. Barbour (Physics, Religion, Carleton College) says of *Science and Religion: A Critical Survey*: "This is a remarkable book and I predict its widespread use. It is truly interdisciplinary, analyzing with integrity the methods and central themes of contemporary scientific and religious thought ... The author clearly and fairly surveys alternative viewpoints, discusses them carefully, and presents a creative position of his own. ... This first-rate book can be highly recommended to anyone seeking access to the best of recent thought."

Karl E. Peters (Editor, *Zygon: Journal of Religion and Science*, Philosophy, Rollins College) says of *Science and Religion*: "The best current comprehensive treatment of science and religion. ... Rolston's particular genius is his ability to offer careful and insightful philosophical critiques in his rich survey. ... An excellent text that should be studied by every seminary student and graduate student in religious studies who wishes to relate religious thinking to the contemporary sciences."

Frederick Ferré (Philosophy, University of Georgia) says of *Science and Religion*: "This book is a delight. I like best its emphatic recognition of real dynamism on *both* sides of the science and

religion dialogue. ... It is up to the minute on methodological developments in both areas, as well as clear and responsible in treating recent scientific developments. Everyone in the field will need to work with this text."

Robert Russell (Director, Center for the Study of Theology and the Natural Sciences, Graduate Theological Union, Berkeley) says of *Science and Religion*: "I value this work greatly for attempting and, by and large, succeeding at bringing science and religion into a meaningful and creative relationship. ... Its particular attractions are its scope and its free-flowing and invigorating style. ... Important reading for anyone wanting to wrestle seriously with science and religion."

Marvin Henberg (Philosophy, University of Idaho) says of *Science and Religion*: "Here is a well-written work with excellent organization, the product of scrupulous research. ... Rolston places himself directly at the eye of the contemporary storm. In the tradition of Maimonides' *Guide for the Perplexed*, the book is a sensitive contribution to the musings of human beings who must accept the insights of science but wish to maintain their faith."

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John F. Haught (Theology, Georgetown University) says, "Rolston, a professor of philosophy at Colorado State University, has written a monumental work, one deserving of widespread usage by theologians and scientists alike. Carefully organized and beautifully written, it appears to be the fruit of years of reflection by a deeply religious mind fully conversant with the best of modern science and theology. ... The book excels in its exposition of the explanatory inadequacies of naturalistic explanations of evolution. ... The book is truly outstanding. One may safely predict that it will enrich discussions of science and religion for many years to come." Review in *Theological Studies* 49(1988):368-370.

David Foxgrover (United Church of Christ, *Christian Century* reviewer) writes, "Rolston has written a superb and subtle book that will become a standard in the field. Yet this work by a professor of philosophy at Colorado State University is more than a textbook, a critical survey. Worthy of the scholar as well as the student, it stands on its own as a creative attempt to deal with one of the 20th century's central theological issues. ... Rolston's superb scholarship and subtle style will engage even the reader who finally dissents. But both the convinced and the unpersuaded will conclude that the reading was worthwhile." Review in *Christian Century* 105, no. 4 (February 3-10, 1988):132-133.

Donald W. Musser (Religion, Stetson University), in a critical review for the *International Journal for Philosophy of Religion*, says:

"Rolston ... has produced a book on the issues, problems, and prospects of the dialogue between science and religion that rivals Ian Barbour's *Issues in Science and Religion* (New York, 1966) as the best in the field. After a lucid introduction to the methods of inquiry in the two areas, Rolston discusses representative topics in the physical sciences, biological sciences, psychological sciences, sociological sciences, and historical sciences and delineates how these topics relate well to religious claims. He presents the relevant scientific material accurately and intelligibly and then critically assesses the theories; he is especially good at logical analysis of the scientific ideas. For example, in the chapter on religion and the social sciences he presents clearly Durkheim's theory of religion and then perceptively shows its limitation and deficiencies. One can say the same for his discussion of relativity theory and indeterminacy in physics and neo-Darwinian theory in biology.

...

I highly recommend this book as a classroom text. It will become the standard in the field." *International Journal for Philosophy of Religion* 26(1989):185-192.

Joseph Pickle (Religion, Colorado College) says, in a critical review for *Zygon: Journal of Religion and Science*, "This book is notable for its breadth and depth. It surveys a wide range of material and conducts a provocative dialogue between the perspectives of the natural and social sciences and a theoretical view of religion. It reminds one of Ian Barbour's magisterial *Issues in Science and Religion*. ... This book is filled with admirably argued and powerfully presented treatments of crucial issues in the discussion of religion and science. The great strength of the book is in the careful weaving of religious themes with scientific motifs. ... This book is the most substantial argument for a position on the relationship of science and religion that is eminently worth arguing. The presentation is finely nuanced and carefully developed." Review in *Zygon: Journal of Religion and Science* 23(1988):203-205.

E. J. McCullough (Philosophy, University of Saskatchewan) says:

"In an age of penetrating scientific and philosophical analysis, the ability to synthesize and to relate disciplines becomes a rare skill. The amount of information in each discipline is overwhelming; the risks in writing sketchy summaries are enormous. Most scholars, faced with these obstacles, avoid cross disciplinary work. Rolston is admirably suited in background and in scholarly work to take on the task of synthesis of distinct disciplines. His background in philosophy of science and in theology, added to his service in the field of environmental ethics has brought him into areas of science, economics, history and theology. In environmental ethics, specialization leads to conflicts of values which the specialist is ill equipped to handle. Similarly, the specialist in science or theology is ill equipped to handle conflicts which arise between science and religion. A person with Rolston's background does have the preconditions for the task. ...

Rolston has succeeded in bringing his own unique background into full play in this work. ... *Science and Religion* is a penetrating and provocative book. It can be read by both scientific and religious specialist and non-specialist with great profit. It is also accessible to a general audience. In making a case for the synthesis of scientific and theological truths, Rolston's aim is to combine the Greek insight that the unexamined life is not worth living with the Hebrew insight that the uncommitted life is not worth examining. In this quest, he merits his presence in long and distinguished philosophical company." *Canadian Philosophical Reviews* 7(1987):373-375.

John J. Compton (Philosophy, Vanderbilt University) says,

"This book marvelously combines the elements needed for any thoughtful examination of the intersections of science and religion today. It is comprehensive ... it is rich in scientific and theological detail. It is methodologically self-aware and circumspect at every point, both in respect of the sciences and religious thought and in respect to its own developing argument. And it *has* a developing argument, inspired by a powerful constructive vision of the wholeness of the human endeavor to understand, of which, it is argued, the sciences and religious reflection form complementary parts. And as sheer grace for the reader, the book is engagingly and trenchantly written, perfused with insightful epigram, a text to delight as well as to illumine. ... This is a robust challenge (made) with rare erudition and skill. ... This is a lovely book. It oversteps hallowed boundaries and stimulates fresh thought." Review in *Critical Review of Books in Religion: Annual Supplement to the Journal of the American Academy of Religion* 2(1989):425-427.

Ian Barbour (Physics, Religion, Carleton College) cites *Science and Religion* in his *Religion and Science: Historical and Contemporary Issues* (San Francisco: HarperSanFrancisco, 1997), citations on pp. 94-95, 186-187, 339, 342, 346, 350, particularly with reference to Rolston's "illuminating discussion" of methodology in both science and in religion, and his discussion of life as an interaction phenomenon between living organisms and the elementary matter out of which they are composed, with "downward causation complementing upward causation."

Ian Barbour (Physics and Religion, Carleton College) cites *Science and Religion* for its analysis of meanings and causes in religion and science. In *When Science Meets Religion* (San Francisco: HarperSanFrancisco, 2000), citation on p. 26, p. 183.

Ian G. Barbour (Physics, Religion, Carleton College) cites *Science and Religion* in "Ways of Relating Science and Theology," in Robert John Russell, William R. Stoeger, and George V. Coyne, eds., *Physics, Philosophy, and Theology* (Rome: Vatican Observatory and Notre Dame, IN: Notre Dame University Press, 1988), pp. 21-48, citations on p. 39, p. 48.

Ian Barbour (Physics, Theology, Carleton College) quotes and cites *Science and Religion* at various places in *Religion in an Age of Science: The Gifford Lectures*. Rolston's position on methodology in science and religion, on the relationship between biological processes and the underlying physics (interaction and downward causation), and on suffering in the animal world is incorporated into Barbour's argument. In *Religion in an Age of Science: The Gifford Lectures: 1989-1991*, vol. 1 (San Francisco: Harper and Row, 1990), pp. 23-24, 116-117, 171, 273, 275, 279, 283. These lectures were given at Aberdeen University, Scotland. An endorsement by Rolston is also featured on the book jacket.

Frank Brown (Religion, University of North Carolina, Chapel Hill) says: "Rolston achieved his objectives with this book in exploring how the mind accepts both scientific and nonscientific logic. Therefore I highly recommend this book for those interested in religious inquiry through the lens of the academic [scientific] disciplines." Review in *The Journal of Religion* 68 (1988):470-471.

Donald A. Henson (Philosophy, Wilkes College, Wilkes-Barre, PA) says:

"Most traditional courses in the philosophy of religion pay scant attention to the conflict between scientific and religious worldviews. Many of the most popular anthologies used in such courses ... offer nothing in the way of readings which explore these issues. The present volume by Holmes Rolston, *Science and Religion: A Critical Survey*, is not only an important scholarly contribution to these issues; it will also be welcomed by philosophers who wish to locate or develop curricular materials which would allow students to explore the connection and conflict between religious and scientific views of the world.

Rolston's study is an expansive, penetrating survey of the sciences, exploring not only their methodologies and implicit philosophical assumptions, but examining as well the particular claims within these disciplines which appear incompatible with Western theistic belief. ... Rolston explores the implications for religious beliefs of such diverse theories as relativity and quantum mechanics, Darwinian evolution and natural selection, behaviorism, and Freudian psychoanalysis. Given the breadth of such a survey, some unevenness might well be expected in the author's knowledge and treatment of these specialized disciplines. But Rolston displays a solid grasp of this complex material, and he carefully documents his study with extensive and illuminating references. ... The virtue of Rolston's study derives from the broad sweep of speculative insight, given that Rolston's purpose is to display such a bewildering variety of scientific claims and theories. ... Rolston's work is an insightful, thought-provoking study which should be read by serious students of religion and theology." *Newsletter on Teaching Philosophy*, American Philosophical Association. June 1988, pp. 16-17.

Arthur Peacocke (Biochemist and Director of the Ian Ramsey Centre, Oxford University) cites *Science and Religion* in an analysis of Rolston's account of "cruciform naturalism," incorporating Rolston's position into his own argument about the character of the biological world and its compatibility with theistic belief. In *Theology for a Scientific Age* (Oxford: Basil Blackwell, 1990), citations and discussion on pp. 62, 68-69, 194-195

R. Puligandla (Religious Studies, University of Toledo) says that *Science and Religion* is "commendable for its clarity and critical acumen." Review in the American Library Association's *Choice*, June 1987, p. 254.

*The Bulletin of Science, Technology and Society* (University Park, PA) says, in a booknote recommending important books in the field, that in *Science and Religion* "successive chapters evaluate in concrete and probing discussion physics and astronomy, molecular and evolutionary biology, psychoanalysis, behaviorism, humanistic psychology, and the social sciences." *Bulletin of Science, Technology and Society*, 3 July 1989, p. 237.

The Graduate Theological Union at Berkeley and the Center for the Study of Natural Sciences conducted a course, fall 1988, in exploration and critical appreciation of *Science and Religion: A Critical Survey*, led by John H. Wright assisted by experts from various disciplines who were invited to comment on issues the book discusses. *Center for Theology and the Natural Sciences Newsletter*, July-August 1988.

Donald G. Crosby (Philosophy, Colorado State University) cites and analyzes Rolston's discussion of suffering in the natural world in *Science and Religion*. In *The Specter of the Absurd* (Buffalo, NY: State University of New York Press, 1988), pp. 357-358, 412-413, 433.

John Neu (History of Science, University of Wisconsin) includes *Science and Religion* in "One Hundred Twelfth Critical Bibliography of the History of Science and its Cultural Influences," *Isis: An International Review Devoted to the History of Science and its Cultural Influences* 78(no. 295)(1987):5-244, citation on p. 33.

Christopher Southgate and Andrew Robinson (Theology, University of Exeter) cite and quote variously from Rolston, regarding evil in evolutionary natural history. In Nancey Murphy, Robert John Russell, and William R. Stoeger, eds., *Physics and Cosmology: Scientific Perspectives on the Problem of Natural Evil* (Rome: Vatican Observatory and Notre Dame, IN: Notre Dame University Press, 2007), citations and quotations on p. 73, p. 74, p. 75, pp. 84-87, p. 88, p. 90.

Charles Birch (Biology, University of Sydney, Australia) cites *Science and Religion* in "The Scientific-Environmental Crisis" in *The Ecumenical Review* 40(1988):185-193, citation on p. 193.

Jay B. McDaniel (Religious Studies, Henrix College, Conway AK) takes the title of his book *God and Pelicans: A Theology of Reverence for Life* (Philadelphia: Westminster / John Knox Press, 1989) from a discussion of Rolston's involving pelicans as a representative case in natural history in Chapter 3 of *Science and Religion*. He cites and quotes from Rolston a number of times. Citations Chapter 1, pp. 19-49 passim, p. 56, p. 159.

Langdon Gilkey (Theology, University of Chicago Divinity School) cites and quotes from *Science and Religion* in a discussion of limit questions in the physical world. In "Nature, Reality, and the Sacred: A Meditation in Science and Religion," *Zygon: Journal of Religion and Science* 24(1989):283-289, citations on pp. 287-288, 291, 298.

Jerry Gladson (Dean, Psychological Studies Institute, Atlanta, GA) and Ron Lucas (Loudoun County Mental Health Center, Leesburg, VA) cite the discussion of the transcendent in humanistic psychology in *Science and Religion* in "Hebrew Wisdom and Psychotheological Dialogue," in *Zygon: Journal of Religion and Science* 24(1989):357-376, citations on p. 366, 376.

George S. Bebis (Holy Cross Orthodox School of Theology, Hellenic College, Brookline,

Massachusetts) says of Rolston's *Science and Religion* "In an admirable and bold way, he deals with the critical dialogue and confrontation between science and religion. ... Professor Rolston has a brilliant mind and his book will provoke a great interest among those who study the relationship of secular science and religion." Review in *The Greek Orthodox Theological Review* 32(1987):432-433.

S. Mark Heim (Philosophy of Religion, Andover Newton Theological School, Newton Centre, Massachusetts) says:

"*Science and Religion* is a critical survey of the dialogue between religion and science, conceived on a very broad scale and carried through across a wide range of disciplines, from physics to psychology. The apparent superficiality of such a massive project is avoided by an impressive marshalling of specific cases, and by sustained attention to a few crucial questions. Since its publication in 1966, Ian Barbour's *Issues in Science and Religion* has served as a standard textbook in this area. Rolston's work provides a first rate alternative and supplement. ... The distinguishing feature of Rolston's book is the way in which he has organized the material around a sustained and nuanced argument. ... He views nature as a *storied reality*, playing upon the necessity to appreciate both its multi-leveled character and its openness to narrative of human meaning, if there is to be full understanding. This proves an especially fruitful perspective (and) functions unusually well, giving the reader a thick sense of the complexities involved in moving from one 'story' to another, and the variety of perspectives within science as it operates on these different levels. ... Rolston's study is careful, and yet freshly suggestive in the manner it probes the nature of scientific theory. ... The book deserves and will find wide use." Review in *Christian Scholar's Review* 17(1988):490-491.

L. Russ Bush (Theology, Southwestern Baptist Theological Seminary, Fort Worth, Texas) says that *Science and Religion* is an "unusually insightful book," though "the book is rather sophisticated and will take quite a bit of time if it is read and digested. ... Rolston brings a vast synthesis of information to the subject and even where I disagree I can learn from the discussion. Along with Ian Barbour, Frederick Ferré, and Robert Russell, I too commend this as important reading for advanced students in the field." Review in *Southwestern Journal of Theology* 30(1988):75.

Jeff Astley (School of Education, University of Durham, England) says that

*Science and Religion* "is likely to become the standard text on this subject: a valuable source of information and reflection suitable for both the 'A' level teacher and the undergraduate student of science and religion." It is "a good guide book containing an up-to-date, large-scale map. ... The arguments are clearly presented and the language is often pithy and memorable. ... What marks the author's thesis as a significant contribution to the science and religion debate are his stress on the category of 'story' (rather than 'law'), on the importance of the discernment of 'meanings' rather than just 'causes', and on the place of ('logically singular') historically explanation alongside ('logically plural') scientific explanations. ... The book is worth reading simply for its unflinching recognition that it is on the age-old battle ground of the problem of suffering that the warfare of science and religion is at its bloodiest."

"The theist will welcome the depth of the author's spirituality as well as his learning, and relish his out-flanking attacks on scientists, and their camp-followers, who have overreached themselves in their claims for the explanatory power of the theory of natural selection, the adequacy of certain psychological models of the mind, and the possibility of value-free social science." Review in *British Journal of Religious Education* 11(1989):49-50.

Willem B. Drees (Theology, Rijksuniversiteit Groningen, Netherlands) cites *Science and Religion* in *Beyond the Big Bang: Quantum Cosmologies and God* (London and LaSalle, Indiana: Open Court, 1990), p. 89, p. 310.

Karl Peters (Editor, *Zygon: Journal of Religion and Science*) uses a quotation from *Science and Religion* as an epigraph to a special issue of *Zygon* on novel ways of relating science and religion. The quotation is: "Science and religion share the conviction that the world is intelligible, susceptible to being logically understood, but they delineate this under different paradigms. In the cleanest cases we can say that science operates with the presumption that there are causes to things, religion with the presumption that there are meanings to things." *Zygon* 25(1990):3.

K. Helmut Reich (European Laboratory for Particle Research [CERN], Geneva, and Department of Education, University of Fribourg, Switzerland) cites and quotes from *Science and Religion* several times in a discussion of complementarity as a category for relating science and religion, taking *Science and Religion* as one of three of the most important contemporary examples of spelling out in detail what this complementarity means. "The Relation between Science and Theology: The Case for Complementarity Revisited," *Zygon* 25(1990):369-390, citations on p. 384, p. 388, p. 390.

Arthur Peacocke (Ian Ramsey Centre, Oxford University) cites *Science and Religion* for its arguments about the social sciences leaving room for religious faith, and religious explanations of society are as legitimate as sociological explanations of religion. In "A Map of Scientific Knowledge: Genetics, Evolution, and Theology." Pages 189-320 in Ted Peters, ed., *Science and Theology: The New Consonance* (Boulder, CO: Westview Press, 1998), citation on p. 205, p. 210.

Robert J. Russell (Director, Center for Theology and the Natural Sciences, Graduate Theological Union, Berkeley, CA) cites *Science and Religion* for its account of natural history as a "passion play." In "An Appreciative Response to Niels Henrik Gregersen's JKR Research Conference Lecture," *Theology and Science* 4(no.,2, 2006):129-135, citation on p. 132, p. 134.

Robin Attfield (Philosophy, University of Wales, Cardiff) cites *Science and Religion: A Critical Survey*. In *Creation, Evolution and Meaning* (Aldershot, Hants, UK: Ashgate, 2006), citation on p 145, p. 149, p. 150, p. 224.

Robert John Russell (Center for Theology and the Natural Sciences, Berkeley, CA) cites *Science and Religion*. In *Cosmology: From Alpha to Omega* (Minneapolis: Fortress Press, 2008), p. 263, p. 264, p. 270, p. 271.

#### Research Conference

The following papers appear in an issue of the *Center for Theology and Natural Sciences Bulletin*, vol. 11, no. 2, the proceedings of a research conference devoted to Rolston's work in the interrelations between biology and theology at the Center for Theology and Natural Sciences, Graduate Theological Union, Berkeley, CA, February 8-16, 1991.

Rolston, "Respect for Life: Christians, Creation, and Environmental Ethics," pp. 1-8.

Rolston, "Genes, Genesis, and God in Natural and Human History, pp. 9-23.

Commentaries in analysis of Rolston's published work and conference papers:

Robert T. Schimke, "Reflections from a Molecular Biologist," pp. 24-26.

Walter R. Hearn, "Science, Selves, and Stories," pp. 26-31.

Carol J. Tabler, "Value Vocabulary in Biology and Theology," pp. 32-33.

Ted Peters, "Beyond the Genes: Epigenesis and God, pp. 34-35.

Margaret R. McLean, "A Moral World `Red in Tooth and Claw'," pp. 36-38.

Richard Cartwright Austin (Appalachian Ministries, Presbyterian Church, U.S.A) cites *Science and Religion* in a review of Jay B. McDaniel's *Of God and Pelicans: A Theology of Reverence for Life*, where McDaniel takes his title and opening discussion in response to Rolston's analysis of the theology and biology. Review in *Environmental Ethics* 13(1991):361-365.

James W. Jones (Department of Religion, Rutgers University), in a discussion of systems theory, cites *Science and Religion* as providing "stunning examples of the theological use of such a systems perspective." In "Can Neuroscience Provide a Complete Account of Human Nature?" *Zygon: Journal of Religion and Science* 27(1992):187-202, citation on p. 201-202.

J. P. Moreland (Philosophy, Biola University) cites *Science and Religion* as providing useful examples of the role of observation in forming truth claims in religion. In *Christianity and the Nature of Science* (Grand Rapids, MI: Baker Book House, 1989, 1990), p. 31, p. 35, p. 40.

J. Painter (Religion, LaTrobe University, Victoria, Australia) reviews *Science and Religion*, *Australasian Journal of Philosophy* 67(3):369-371.

K. Helmut Reich (European Laboratory for Particle Research [CERN], Geneva, and Department of Education, University of Fribourg, Switzerland, cites the discussion of complementarity in *Science and Religion* as being important in the dialogue between science and religion. In "The Chalcedonian Definition: An Example of the Difficulties and the Usefulness of Thinking in Terms of Complementarity," *Journal of Psychology and Theology* 18(2)(1990):148-157, citation on p. 148, p. 156, p. 157.

M. Clarke (Philosophy, Concordia University, Montreal) cites *Science and Religion* in "Epistemic Norms and Evolutionary Success," *Synthese* 85(2)(1990):231-244.

C. F. Mooney (Religion, Fairfield University, Fairfield, CT) cites *Science and Religion* in "Theology and Science--A New Commitment to Dialog: The Intelligibility of Reality and a Common Sociology of Knowledge between Scientists and Theologians," *Theological Studies* 52(2)(1991):289-329.

Henry A. Regier (Institute for Environmental Studies, University of Toronto) cites Rolston's distinction between hard and soft naturalism in *Science and Religion* as important for understanding a tension within different approaches to environmental science. In "Ecosystem Integrity in the Great Lakes Basin: An Historical Sketch of Ideas and Actions," *Journal of Aquatic Ecosystem Health* 1(1992):25-37.

Murray Clarke (Philosophy, Concordia University, Montreal) cites *Science and Religion* for its "nonorthodox progressive alternative" to evolutionary theory as a random walk. In "Epistemic Norms an Evolutionary Success," *Synthese: An International Journal for Epistemology, Methodology, and Philosophy of Science* 85(1990)231-244, citation on p. 240, p. 242, p. 244.

Christopher F. Mooney (Religion, Fairfield University, Connecticut) cites *Science and Religion* for its discussion of the relationship of causes in science to meanings in religion. In "Theology and



Science: A New Commitment to Dialogue," *Theological Studies* 52(1991):289-329, citations on pp. 318-319, citing Rolston from pp. 22-26, 179-186, 219-224, 278-282, 311-317, and 326-336. He also cites Rolston on the complexity of the human brain, citation on p. 332.

Michael A. Corey (Claremont Graduate School) cites and quotes from *Science and Religion* on creation as an open process that permits integrity in the creatures. In *God and the New Cosmology* (Lanham, MD: Rowman and Littlefield, 1993), pp. 249-250.

Richard Hazelett (Engineer, Hazelett Corporation, Colchester, VT) and Dean Turner (Research, Evaluation, and Development, University of Northern Colorado, Greeley) cite and quote from *Science and Religion* repeatedly in *Benevolent Living* (Pasadena, CA: Hope Publishing House, 1990). "An incisive philosophical critique of the behavioral and social sciences is mounted by Holmes Rolston, III." (p. 320). Also on evolutionary theory, and see p. 58, p. 320, p. 323, p. 332, p. 335, p. 385.

J. P. Moreland (Theology, Biola University, LaMirada, CA) cites *Science and Religion* in a select bibliography in *Christianity and the Nature of Science: A Philosophical Investigation* (Grand Rapids, MI: Baker Book House, 1989), p. 252, also p. 35.

Harold H. Oliver (Philosophical Theology, Boston University School of Theology) says that in the contemporary dialogue between science and religion, "Any list of the most notable contributors in this field would include the names of Thomas F. Torrance, A. R. Peacocke, Ian Barbour, Ralph Burhoe, Stanley Jaki and Holmes Rolston, III." "The Neglect and Recovery of Nature in Twentieth-Century Protestant Thought," *Journal of the American Academy of Religion* 60 (No. 3, 1992):379-404, citations on p. 390, p. 403.

Philip Hefner (Theology, Lutheran School of Theology, Chicago) cites *Science and Religion* for its dealing with the large and complex question of discerning human purposes as they relate to the natural order. In *The Human Factor: Evolution, Culture, and Religion* (Minneapolis: Fortress Press, 1993). pp. 60-61, p. 302.

Svetlana Devyatova (Philosophy, Moscow State University) cites *Science and Religion* as presenting a concept of God consistent with science. In *Religiya i Nauka: Shag k Primireniyu? (Religion and Science: A Step toward Reconciliation)* (Moscow: Moscow University, 1993), citations on p. 31f, p. 48ff, p. 166.

Svetlana Devyatova (Philosophy, Moscow State University) cites *Science and Religion* as illustrating the influence of science on the concept of God in Western thought. In *Veru, Shtaby Znat (Faith in Order to Understanding)*, a special issue of *Chelovek i Obschestvo (Human Beings and Society)* (Moscow: Russian Academy of Sciences, Ministry of Education), March 1992, pp. 3-63, citations on pp 33-34. 33-34.

Sallie McFague (Theology, Vanderbilt Divinity School, Vanderbilt University) cites and quotes from *Science and Religion*. Rolston argues "with extreme subtlety" the claim "that no special entity, principle, or substance needs to be or should be introduced to explain the evolution of the universe from its simple beginning to its present outcome--on our planet, to human beings with brains or minds (and some would claim) spirits" (p. 47, p. 228), though a concept of "downward causation" is needed where "a prolife principle is overseeing the affairs of matter" (p. 234). Also p. 222. In *The Body of God: An Ecological Theology* (Minneapolis: Fortress Press, 1993).

M. A. Corey (Claremont Graduate School) cites and quotes from *Science and Religion*, building on

Rolston's model of a fundamental similarity between biological evolution and psychospiritual development, and of a striking resemblance between the intrinsic nature of human rationality and the trial and error characteristics prominent in biological evolution. In *Back to Darwin: The Scientific Case for Deistic Evolution* (Lanham, MD: University Press of America, 1994), citations on pp. 325-326, pp. 351-352, pp. 354, p. 424.

Stanton L. Jones (Psychology, Wheaton College, Wheaton, IL) cites *Science and Religion* as well documenting the use of psychological findings or theories to attempt to revise, reinterpret, redefine, supplant, or dismiss religion, and as working out in detail aspects of the relation between psychology and religion, as well as between science and religion in general. In "A Constructive Relationship for Religion Within the Science and Profession of Psychology," *American Psychologist* 49(1994):184-199, citations on p. 185, p. 188, p. 189, p. 199.

Linda Jarchow Jones (Grace Lutheran Church, La Grange, IL) cites *Science and Religion* as one of the principal books in the field. In "Wildflowers and Wonder: A Pastor's Wanderings in the Religion-Science Wilderness," *Zygon: Journal of Religion and Science* 29(1994):115-125, citation on pp. 124-125.

John Polkinghorne (Physics, Theology, Cambridge University) cites and quotes from *Science and Religion* in his Gifford Lectures, *The Faith of a Physicist* (Princeton: Princeton University Press, 1994; London: S. P. C. K., 1994), finding Rolston's cruciform naturalism especially striking, p. 28, p. 84, p. 192, p. 204.

John H. Wright (Jesuit School of Theology, Berkeley) calls *Science and Religion* "an extraordinarily complete basic treatment." In "Theology, Philosophy, and the Natural Sciences," *Theological Studies* 52(4)(1991):651-668, citation on p. 651, also p. 667.

Richard Speck (Unitarian-Universalist Fellowship, Vero Beach, Florida) cites *Science and Religion* for its arguments that science and religion can be complementary approaches to truth. In "Theological Education for the 21st Century," in *Religious Education* 87(3)(1992):380-394, citations on p. 382, 391.

Edward T. Oakes (Religious Studies, New York University) cites *Science and Religion* in "Final Causality--A Response," in *Theological Studies* 53(3)(1992):534-544, citation on p. 536.

Karl E. Peters (Philosophy and Religion, Rollins College) cites *Science and Religion* for its account of religion as the search for meanings and science as the search for causes. In "Empirical Theology in the Light of Science," *Zygon: Journal of Religion and Science* 27(1992):297-325, citations on p. 298, p. 313, p. 314, p. 325.

James B. Ashbrook (Religion and Personality, Garrett-Evangelical Theological Seminary, Evanston, IL) cites *Science and Religion* for its account of organic programming and embodied personality. In "Making Sense of Soul and Sabbath: Brain Processes and the Making of Meaning," *Zygon: Journal of Religion and Science* 27(1992):31-49, citation on p. 33, p. 48.

Christopher F. Mooney (Religious Studies, Fairfield College, Fairfield, CT) cites *Science and Religion* for its analysis of uncertainty in theology as a form of providence. In "Theology and the Heisenberg Uncertainty Principle. II," *Heythrop Journal* 34(no. 4, 1993):373-386, citation on p. 384, p. 386.

David W. Oxtoby (Chemistry, Director of the James Frank Institute, University of Chicago) cites

Rolston's discussion of the difference between novelty and the miraculous in evolutionary emergence. In "Catalysis of Change in the World," *Insights: Magazine of the Chicago Center for Religion and Science* 6 (no. 1, October, 1994):5-17, citation on p. 5.

Willem B. Drees (Theology, Philosophy, Vrije Universiteit, Amsterdam) cites *Science and Religion* for its acceptance of science, with criticism of scientism, in interpreting religion in the light of science. In *Taking Science Seriously: A Naturalist View of Religion* (Vrije Universiteit, Amsterdam, 1994; also in *Religion, Science, Naturalism*, Cambridge University Press, 1995), citation on p. 36, p. 280.

Ned Hettinger (Philosophy, College of Charleston) cites *Science and Religion* for its treatment in depth of the problem of suffering in natural history. In "Valuing Predation in Rolston's Environmental Ethics: Bambi Lovers versus Tree Huggers," *Environmental Ethics* 16(1994):3-20, citation on p. 16, p. 17.

Ian G. Barbour (Physics, Religion, Carleton College) cites *Science and Religion* for its argument that, over evolutionary time, "the dice seem to be loaded in favor of life and consciousness." In "Experiencing and Interpreting Nature in Science and Religion," *Zygon* 29(1994):457-487, citation on p. 467, p. 487.

Langdon Gilkey (Religion, Georgetown University and University of Chicago) cites *Science and Religion* for its discussion of the dialectic of life and death in nature, how "the Great Dying yields the Great Renewal." In "Nature as the Image of God: Reflections on the Signs of the Sacred," *Zygon* 29(1994):489-505, citation on pp. 500-501.

James E. Coufal and Charles M. Spuches (Environmental Sciences and Forestry, SUNY, Syracuse, NY) cite *Science and Religion* in *Environmental Ethics in Practice: Developing a Personal Ethic* (Syracuse, NY: SUNY College of Environmental Science and Forestry, 1995), Appendix D12.

Dieter Hessel cites *Science and Religion* for its discussion of the "cruciform" character of nature and history. In "Spirited Earth Ethics: Cosmological and Covenantal Roots," *Church and Society* July/August 1996, pages 16-36, citation on p. 26, p. 36.

W. Mark Richardson and Wesley J. Wildman cite *Religion and Science* in their select bibliography for the field. In W. Mark Richardson and Wesley J. Wildman, eds., *Religion and Science: History, Method, Dialogue* (London: Routledge, 1996), p. 430.

Robert A. Campbell (University College of Cape Breton) and James E. Curtis (University of Waterloo) cite *Science and Religion* as one of the leading studies to examine science and religion on a philosophical basis. In "The Public's Views on the Future of Religion and Science: Cross-National Survey Results," *Review of Religious Research* 37(no. 3, March, 1996):164-171, citation on p. 164, p. 171.

James F. Sennett (Philosophy, Palm Beach Atlantic College) cites *Science and Religion* on the rational approach to anomaly in scientific theory. In "Theism and Other Minds: On the Falsifiability of Non-theories," *Topoi* 14(1995):149-160, citation on p. 154, p. 155, p. 160.

Mikael Stenmark (Theology, University of Uppsala, Sweden) cites *Science and Religion* on comparisons and contrasts in the senses of intelligibility in scientific and in religious explanation. In "An Unfinished Debate: What Are the Aims of Religion and Science?" *Zygon: Journal of Religion and Science* 32(1997):491-514, citations on pp. 494-495, p. 512, p. 514.

Mikael Stenmark (Theology, University of Uppsala) cites *Science and Religion* for its analysis of similarities and differences in the rationality of science and of religion. In *Rationality in Science, Religion, and Everyday Life: A Critical Examination of Four Models of Rationality* (Notre Dame, IN: University of Notre Dame Press, 1995), citation on p. 268, p. 390.

Arthur Peacocke (Ian Ramsey Centre, Oxford University) cites *Science and Religion* for its conclusions regarding religion and the social sciences. In *God and Science* (London: SCM Press, Ltd., 1996), citations on pp. 62-63, p. 98.

Langdon Gilkey (Theology, Divinity School, University of Chicago) cites *Science and Religion*. Rolston is one of three "impresarios of religion-science events" whose "example and organizing talents have encouraged a great deal of my work in the field." In understanding the "four major categories in terms of which nature has been experienced and known, ... I am especially and vastly indebted to Micea Eliade, Lawrence Sullivan, and, for modern science, Holmes Rolston, III." Rolston makes a "fascinating, perceptive and (to me) very original exploration of the theme of the intertwining of energy and pain, life and suffering (and their common result: more life, new life, and new life forms)." "The great Dying yields the great Renewal." "No one has made this point more perceptively, clearly, and profoundly than Rolston." "This chapter is especially indebted to his thinking." In *Nature, Reality, and the Sacred: The Nexus of Science and Religion* (Minneapolis: Fortress Press, 1993), citations on pp. ix-x, p. 30, p. 84, p. 89, p. 90, p. 95, p. 137, p. 228, p. 229, p. 230, pp. 235-236.

John Polkinghorne (Physics, Theology, Cambridge University) cites *Science and Religion* for its "candid response to the problems represented by the cruciform nature of our world." In *Belief in God in an Age of Science* (New Haven: Yale University Press, 1998), citation on p. 79.

Clare Palmer (Philosophy, University of Stirling, UK) cites *Science and Religion: A Critical Survey*. In *Environmental Ethics* (Santa-Barbara, CA: ABC-CLIO, 1997), p. 42.

John A. Teske (Psychology, Elizabethtown College, Elizabethtown, PA) cites *Science and Religion* for its arguments about self-denial in religion in relation to self-actualizing in psychology, also that the integrity of a human self is dependent upon a community of selves in which it resides. In "The Spiritual Limits of Neuropsychological Life," *Zygon* 31(1996):209-234, citations on p. 228, p. 229, p. 233.

Paul Helm (History and Philosophy of Religion, King's College, London) cites *Science and Religion* in a selected bibliography of twentieth century works on hard science and religion. In Paul Helm, ed., *Faith and Reason* (Oxford: Oxford University Press, 1999), citation on p. 388.

Clement L. Valletta and Robert A. Paoletti (English, King's College, Wilkes-Barre, PA) cite *Science and Religion* for its analysis of the different interpretations of Heisenberg's indeterminacy principle. In "'In-determinacy' in Science and Discourse: A Rhetoric of Disciplinary Levels," *Journal of Technical Writing and Communication* 25 (no. 1, 1995):27-42, citation on p. 31, p. 40.

James B. Ashbrook (Garrett-Evangelical Theological Seminary, Evanston, IL) and Carol Rausch Albright (Center for Theology and Natural Science, Berkeley) cite *Science and Religion* for its analysis of meaning and cause in science and religion. In "Religion and Science Conversation: A Case Study," *Zygon: Journal of Religion and Science* 34(1999):399-418, citations on p. 411, p. 412, p. 417.

J. Wentzel Van Huyssteen (Theology and Science, Princeton Theological Seminary) cites *Science*

and Religion. In *The Shaping of Rationality* (Grand Rapids, MI: Eerdmans, 1999), citation on p. 184, p. 292.

Ursula Goodenough (Microbiology, Washington University, St. Louis) cites *Science and Religion* for its use of the term "religious naturalism." In *The Sacred Depths of Nature* (New York: Oxford University Press, 1998), citation on p. 176. Reprinted, *Sacred Depths of Nature: Excerpts*, *Zygon: Journal of Religion and Science* 35(2000):567-586, citation on p. 586.

Theodore W. Nunez (Philosophy and Religious Studies, Villanova University) cites *Science and Religion*. In *Holmes Rolston, Bernard Lonergan, and the Foundations of Environmental Ethics*, Ph.D. dissertation, 1999, Catholic University of America, Washington. This is published (in part) as:

"Rolston, Lonergan, and the Intrinsic Value of Nature," *Journal of Religious Ethics* 27 (no. 1, Spring, 1999):105-128.

Seppo Kjellberg (Religious studies, Abo Akademi University, Turku, Finland) cites *Science and Religion* for its account of religion as the search for meaning. In *Urban Ecotheology* (Utrecht, Netherlands: International Books, 2000), citations on p. 32, p. 72, p. 76, pp. 129-130, p. 138, p. 169.

Mikael Stenmark (Philosophy of Religion, Uppsala University, Sweden) cites *Science and Religion* for its discussion of the logic of science related to causes and the logic of religion related to meanings. In "An Unfinished Debate: What Are the Aims of Religion and Science?" *Zygon: Journal of Religion and Science* 32(1997):491-514, citation on p. 495. p. 512, p. 514.

Mark Wynn (Philosophy of Religion, Australian Catholic University), cites *Science and Religion* for its arguments about the predictive power of evolution. In *God and Goodness: A Natural Theological Perspective* (London: Routledge, 1999), citations on pp. 50-68, p. 107, pp. 202-205, p. 210, passim.

Ian Barbour (Physics, Religion, Carleton College) cites *Science and Religion* and its account of "cruciform naturalism." In "God's Power: A Process View," pages 1-20 in John Polkinghorne, ed., *The Work of Love: Creation as Kenosis* (London: SPCK Press, 2001 and Grand Rapids: Eerdmans Publishing Co., 2001), citation on p. 5.

Arthur Peacocke ((Director, Ian Ramsey Center, Oxford University) cites *Science and Religion* and its account of "cruciform naturalism." In "The Cost of New Life," pages 21-42 in John Polkinghorne, ed., *The Work of Love: Creation as Kenosis* (London: SPCK Press, 2001 and Grand Rapids: Eerdmans Publishing Co., 2001), citation on p. 31.

Donald E. Arther (Theology, Eden Theological Seminary, Webster Groves, MO) cites *Science and Religion*. In "Paul Tillich's Perspectives on Ways of Relating Science and Religion," *Zygon: Journal of Religion and Science* 36(2001):261-267, citation on p. 262, p. 267.

Eduardo R. Cruz (Religious Studies, Pontifical Catholic University of Sao Paulo) cites *Science and Religion*. "Any sophisticated description recognizes the ambivalence of the evolutionary process that has led to humankind ... more generally found in the tension between designlike and nonanthropomorphic (usually related to `disorder) traits in all evolutionary processes--see, for example, the excellent account given by Holmes Rolston, III." In "Paul Tillich's Realistic Stance toward the Vital Trends of Nature," *Zygon: Journal of Religion and Science* 36(2001):327-334, citations on p. 330, p. 331, p. 334.

J. Wentzel van Huyssteen (Princeton Theological Seminary) cites *Science and Religion*. In "Pluralism and Interdisciplinarity: In Search of Theology's Public Voice," *American Journal of Theology and Philosophy* 22 (no. 1, January 2001):65-87, citation on p. 70.

Nancey Murphy (Theology, Fuller Theological Seminary) cites *Science and Religion: A Critical Survey* in a select bibliography. In "Religion and Science," in *Routledge Encyclopedia of Philosophy*, ed., Edward Craig (London: Routledge, 1998), 10 vols., in vol. 8, pages 230-236, citation on p. 236.

Philip Hefner (Theology, Lutheran School of Theology at Chicago) cites *Science and Religion: A Critical Survey*. In "How Science is a Resource and a Challenge for Religion: Perspective of a Theologian," *Zygon: Journal of Religion and Science*, 37(2002):55-62, citation on p. 56, p. 62. Also published in C. Matthews, M. E. Tucker, and P. Hefner, eds., *When Worlds Converge* (Chicago: Open Court, 2002).

Phillip Hefner (Theology, Lutheran School of Theology at Chicago) cites *Science and Religion* for its analysis of meaning in science and religion. In "Science-and-Religion and the Search for Meaning," *Zygon: Journal of Religion and Science* 31(1996):307-321, citation on p. 316, p. 321.

Donald VanDeVeer and Christine Pierce cite *Science and Religion* in a select bibliography on "Religious and Cultural Perspectives" on understanding the natural world. In *Environmental Ethics and Policy Book* (Belmont, CA: Thomson-Wadsworth, 2003), citation on p. 661.

Karl E. Peters (Philosophy, Religion, Rollins College, Winter Park, FL) cites *Science and Religion* and develops Rolston's concept of "cruciform nature." In *Dancing with the Sacred: Evolution, Ecology, and God* (Harrisburg, PA: Trinity Press International, 2002), citations on p. 152 and Chapter 9, "In Harmony with Cruciform Nature." He also cites "Does Nature Need to be Redeemed?", p. 152.

Michael Ruse (Philosophy, Florida State University) cites *Science and Religion*. In "Robert Boyle and the Machine Metaphor," *Zygon: Journal of Religion and Science* 37(2002):581-596, citation on p. 595.

Arthur Peacocke (Ian Ramsey Centre, Centre for the Study of Science and Religion, Oxford University) finds that *Science and Religion* "is a stimulating book and is especially significant for its treatment of the biological, psychological, and social sciences." In *Paths from Science towards God* (Oxford: Oneworld Publications, 2001), citation on p. 188.

Mark Wynn (Philosophy of Religion, Australian Catholic University), cites *Science and Religion* on the "supernatural" and emerging states of the natural superposed on precedent states. In "In Defence of 'the Supernatural': A Response to Peter Forest," *American Catholic Philosophical Quarterly* 78(no. 3, 1999):477-495, citation on p. 492.

Ian G. Barbour (Physics, Religion, Carleton College, Northfield, MN) cites *Science and Religion* for its account of suffering in nature. In *Nature, Human Nature, and God* (Minneapolis: Fortress Press, 2002), citations on p. 106, pp. 153-154.

John A. Tiele (Psychology, Elizabethtown College, Elizabethtown, PA) cites *Science and Religion*. In "The Haunting of the Human Spirit," *Zygon: Journal of Religion and Science* 34(no. 2, 1999):307-322, citation on p. 319, p. 322.

John F. Haught (Theology, Georgetown University) cites *Science and Religion* on hard and soft

naturalism. In "Is Nature Enough? No," *Zygon: Journal of Science and Religion* 38(2003):769-782, citation on p. 770, p. 782.

Lisa H. Sideris (School of Environment and Faculty of Religious Studies, McGill University, Montreal) cites *Science and Religion*. In *Environmental Ethics, Ecological Theology, and Natural Selection* (New York: Columbia University Press, 2003), citations passim.

Angelica Duran (English, Purdue University) cites *Science and Religion* on the relation between words and mathematics in science and the bearing of this on the sublime in religion, "the strategies of mathematical signification that can be applied to Milton's era and to our own." In "The Sexual Mathematics of *Paradise Lost*," *Milton Quarterly* 37(no. 2, 2003):55-76, citation on pp. 70-71, p. 76.

Derek L. Pusey (Physics, Iowa State University) cites *Science and Religion*. In "What if ID IS True?" *Presbyterian Outlook* 188 (no. 8, February 27):12-13.

Richard Weikart (California State University, Stanislaus, Turlock, CA) cites *Science and Religion* for its account of the complex relations of science and religion, replacing earlier more antagonistic accounts. In "Darwinism and Death: Devaluing Human Life in Germany 1859-1920," *Journal of the History of Ideas* 63(no. 2, 2002):323-344, citation on p. 324.

Mikael Stenmark (Theology, Uppsala University, Sweden) cites *Science and Religion* on critical evaluation of religious belief, on causes and meanings in science and religion, and on relations between science and religion. In *How to Relate Science and Religion* (Grand Rapids, MI: William B. Eerdmans, 2004), citations on p. 21, p. 26, p. 29, p. 266, p. 275.

Michael J. Dodds (Dominican School of Philosophy and Theology, Graduate Theological Union, Berkeley, CA) cites *Science and Religion: A Critical Survey* in "Hylomorphism and Human Wholeness: Perspectives on the Mind-Brain Problem," *Theology and Science* 7(2009):141-162, citations on p. 144, p. 156.

William Grassie (Metanexus Institute) cites *Science and Religion* for its account of theology and evolution. In "Toward a Constructive Theology of Evolution," in *Politics by Other Means: Science and Religion in the 21st Century* (Bryn Mawr, PA: Metanexus Institute, 1010), pp. 39-59, citation on p. 39.

Wayne Viney (Psychology, Colorado State University) and William Douglas Woody (Psychological Sciences, University of Northern Colorado) say "Thoughtful critical comment of psychology is nowhere better illustrated than in Holmes Rolston's scholarly book *Science and Religion: A Critical Survey*. Rolston carefully explores classical psychoanalysis, behaviorism, and humanistic psychology along with a brief treatment of cognitive psychology. His work challenges the earlier claim of Leuba that 'the subjective facts of religious life belong to psychology.' Indeed, Rolston notes correctly that in the case of most behavioral psychologies, there is no inner life. Other psychological systems, according to Rolston, are equally inadequate in their attempts to explain human religious experiences. The reductionist scientific frames in each case are insufficient for the profuse, robust, personal, and complex nature of the subject matter they hope to capture.

Rolston concludes that none of the psychological systems he explores 'has enough historical rooting, evolutionary scope, cultural appreciation, or ontological insight. This does not fault what they can successfully abstract from life, but shows them to be incomplete explanations of what it means to live humanly in the world.'" In Wayne Viney and William Douglas Woody, *Neglected Perspectives on Science and Religion: Historical and Contemporary Relations* (New

York: Routledge, 2017), on p. 201.

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## Part 2. Other critical notice in science and religion

Christopher Southgate (Theology, University of Exeter, Exeter) analyses "Rolston's important contributions, both on the character of the evolutionary process and on theories of value in the nonhuman world" (p. 813), with particular reference to the question of evil in nature, citing *Science and Religion: A Critical Survey*, "Kenosis and Nature," and "Naturalizing and Systematizing Evil." In "God and Evolutionary Evil: Theodicy in the Light of Darwinism," *Zygon: Journal of Religion and Science* 27(2002):803-824, citations passim.

John Brooke (History of Science, University of Lancaster; Science and Religion, Oxford University) and Geoffrey Cantor (History of Science, University of Leeds) cite and quote from "Does Nature Need to be Redeemed?" a "striking passage" on the human relationship to nature. In their Gifford Lectures, *Reconstructing Nature: The Engagement of Science and Religion* (Edinburgh: T&T Clark, 1998), citation on p. 167, p. 175.

Nancey Murphy (Philosophy, Fuller Theological Seminary) cites "Does Nature Need to be Redeemed?" in "On the Nature of Theology," in W. Mark Richardson and Wesley J. Wildman, eds., *Religion and Science: History, Method, Dialogue* (London: Routledge, 1996), pp. 151-159, citations on pp. 152-153, p. 159.

Gary Comstock (Philosophy, Iowa State University) cites "Does Nature Need to be Redeemed?" In "Theism and Environmental Ethics," in Philip L. Quinn and Charles Taliaferro, eds., *A Companion to Philosophy of Religion* (Cambridge, MA: Blackwell Publishers, 1997), pp. 505-519, citation on p. 509, p. 512.

Niels Henrik Gregersen (Theology, Aarhus University, Denmark) cites "Does Nature Need to be Redeemed?," for its account of value capture in nature. In "The Cross of Christ in an Evolutionary World," *Dialog: A Journal of Theology* 40(no. 3, Fall 2002):192-207, citation on p. 198, p. 206.

Michael Cavanaugh (Baton Rouge, Louisiana) cites "Religion in an Age of Science; Metaphysics in an Age of History" as a "good criticism of process theology in general and Ian Barbour in particular." He also cites "Science Education and Moral Education" as "a sensitive argument against too much freedom" for young children in making moral judgments. *Biotheology* (Lanham, Md: University Press of America, 1996), citations on p. 137, p. 252, p. 263, pp. 310-311.

Robert L. Stivers (Religion, Pacific Lutheran University) cites "Does Nature Need to be Redeemed?," remarking that "Philosopher Holmes Rolston, III, has reflected effectively on the problem" of how to "extend social into environmental ethics." In "Birds, Barbour, and Boats," (critical response to Ian Barbour's *Ethics in an Age of Technology*, Gifford Lectures, 1989-1991), *Zygon: Journal of Religion and Science* 31(1996):75-85, citations on pp. 80-81, p. 85.

Nancey Murphy (Philosophy, Fuller Theological Seminary) and George F. R. Ellis (Mathematics, Astronomy, University of Cape Town, South Africa) cite "Does Nature Need To Be Redeemed?," "quoting Rolston's inimitable prose at length" on the "cruciform" character of the natural world. In *On the Moral Nature of the Universe: Theology, Cosmology, and Ethics* (Minneapolis: Fortress Press, 1996), citations on p. 203, pp. 211-213, p. 245, p. 248.



Niels Henrik Gregersen (Theology, Aarhus University, Denmark) cites "Does Nature Need To Be Redeemed?" for "an inventive cross-fertilization between biology and theology." In "A Contextual Coherence Theory for the Science-Theology Dialogue," in Niels Henrik Gregersen and J. Wentzel Van Huyssteen, eds., *Rethinking Theology and Science: Six Models for the Current Dialogue* (Grand Rapids, MI: William B. Eerdmans Publishing Co., 1998), pp. 181-231, citation on p. 224, p. 231.

David W. Oxtoby (Chemistry, Director of the James Frank Institute, University of Chicago) cites Rolston's discussion of "surprises of the first magnitude" in human and evolutionary history, and his criticism of process philosophy for insufficient attention to such genuine novelty, in "Religion in an Age of Science; Metaphysics in an Era of History" (review of Barbour, *Religion in an Age of Science*). In "Sudden Change in the World," *Zygon* 29(1994):547-555. citation on p. 549. p. 555.

John F. Haught (Theology, Georgetown University) cites "Science, Religion, and the Future," in *God after Darwin: A Theology of Evolution* (Boulder, CO: Westview Press, 1999), citation on pp. 145-146. Holmes Rolston "is one of America's best environmental ethicists." Also he cites Rolston's accounts of "cruciform nature," p. 46, p. 196.

Nancey Murphy (Philosophy, Fuller Theological Seminary) cites "Does Nature Need To Be Redeemed?", quoting Rolston's "beautiful prose at length" on the relevance of suffering to creativity in the world. In "Darwin, Social Theory, and the Sociology of Scientific Knowledge," *Zygon: Journal of Religion and Science* 34(1999):573-600, citation on pp. 590-591.

Theodore Nunez (Center for Ethics, Villanova University) cites "Does Nature Need To Be Redeemed?" In "Can a Christian Environmental Ethic Go Wild? Evaluating Ecotheological Responses to the Wilderness Debate," pages 329-348 in John Kelsey and Sumner B. Twiss, eds., *The Annual of the Society of Christian Ethics* (Washington, DC: Georgetown University Press, 2000), citations on p. 344, p. 347.

Michael Cavanaugh cites Rolston's review of Matthew H. Nitecki and Doris V. Nitecki, eds. *Evolutionary Epistemology and Its Implications for Humankind* [*Zygon* 30(1995):513-517]. In "A Restrospective on Sociobiology," *Zygon: Journal of Religion and Science* 35(2000):813-826, citation on p. 824, p. 826.

Malcolm Jeeves (Neuropsychology, St. Andrews University, Scotland) cites "Kenosis and Nature" for its "strong dose of semantic hygiene lest we slip into category mistakes" about sacrificial love. In "The Nature of Persons and the Emergence of Kenotic Behavior," pages 66-89 in John Polkinghorne, ed., *The Work of Love: Creation as Kenosis* (London: SPCK Press, 2001 and Grand Rapids: Eerdmans Publishing Co., 2001), citation on p. 68.

S. Brian Stratton (Religion, Theology, Alma College, Alma, MI) cites "Religion in an Age of Science; Metaphysics in an Age of History" (Review of Ian Barbour, *Religion in an Age of Science*), for its analysis of the weakness in process thought when interpreting historical narrative and biological natural history. In *Coherence, Consonance, and Conversation* (Lanham, MD: University Press of America, 2000), citations on p. 104, p. 136, p. 128, p. 142, p. 150, p. 151, p. 239. He also cites *Science and Religion: A Critical Survey*, p. 239.

F. Forrester Church (Unitarian Church of All Souls, New York City) cites and quotes from "Shaken Atheism: A Look at the Fine-Tuned Universe," in *The Seven Deadly Virtues* (San Francisco: Harper and Row, 1988), p. 76, p. 111.

J. Wentzel Van Huyssteen (Princeton Theological Seminary) cites "Science, Religion, and the Future" repeatedly. "Holmes Rolston is right, therefore, when he claims a more nuanced approach: at present, for example, there may be more dialogue and integration between physics, cosmology, and theology; but between biology and theology there is certainly ample conflict and considerable independence" (p. 3). "Again, Rolston is sharp and to the point: the dialogue between biology and religion will increasingly try to figure out whether in the genesis of these riches [biodiversity on Earth] we need interference by a supernatural agency, or the recognition of a marvelous endowment of matter with a propensity toward life... Rolston has also intriguingly predicted that in the century to come science will reveal the order on our earth to be even more remarkable still" (p. 37).

"Holmes Rolston gives a vivid rendition of how the two kinds of biology have now been creatively and theoretically interrelated: the genetic level supplies variations, does the coding of life, and constructs proteins; organisms then cope at their native-range levels, inhabiting ecosystems; and species are selected and transformed as they track changing environments across deep evolutionary time" (p. 107). "Holmes Rolston too has argued this point very clearly: in nature information travels intergenerationally through genes, while in culture information travels neurally, as people are educated into transmissible cultures" (p. 158). In *Duet or Duel? Theology and Science in a Postmodern World* (London: SCM Press, 1998, and Harrisburg, PA: Trinity Press International, 1998). Citations on p. 2, p. 3, p. 34, pp. 36-38, pp. 106-108, p. 158.

Gregory R. Peterson (Religion, Thiel College, Greenville, PA) cites "Does Nature Need to be Redeemed?" In "The Evolution of Consciousness and the Theology of Nature," *Zygon: Journal of Religion and Science* 34 (no. 2, 1999):283-306, citation on p. 302, p. 306.

James B. Ashbrook (Garrett-Evangelical Theological Seminary, Evanston, IL) and Carol Rausch Albright (Center for Theology and Natural Science, Berkeley) cite *Science and Religion* on information perfusing both parts and whole in the human person. In "The Humanizing Brain: An Introduction," *Zygon: Journal of Religion and Science* 34(no. 1, 1999):7-43, citation on p. 12, p. 17, p. 30, p. 42.

Christopher Southgate (Theology, University of Exeter, UK), Celia Deane-Drummond (Theology, University College, Chester, UK), Paul D. Murray (Theology, Newman College, Birmingham, UK), Michael Robert Negus (Biology, Newman College, Birmingham), Lawrence Osborn (Astronomy, Ridley Hall, Cambridge, UK), Michael Poole (Education, King's College, London), Jacqui Stewart (Theology and Biology, University of Leeds, UK), and Fraser Watts (Theology and the Natural Sciences, University of Cambridge, UK) cite "Science, Religion, and the Future." In *God, Humanity and the Cosmos* (Edinburgh: T&T Clark, 1999, and Harrisburg, PA: Trinity International, 1999), citations on p. 393, pp. 396-397, p. 425.

Gregory H. Peterson (Religion, South Dakota State University) cites "Does Nature Need to Be Redeemed?" for its account of "cruciform nature." In *Minding God: Theology and the Cognitive Sciences* (Minneapolis: Fortress Press, 2003), citations on p. 149-150, p. 232, p. 243.

Bradley C. Hanson (Religion, Luther College, Decorah, Iowa) cites "Shaken Atheism: A Look at the Fine-Tuned Universe." In *Introduction to Christian Theology* (Minneapolis: Fortress Press, 1997), citation on p. 49.

Ilia Delio (Ecclesiastical History, Washington Theological Union) cites "Kenosis and Nature," for its analysis of the way of nature as a *via dolorosa*. In "Revisiting the Franciscan Doctrine of Christ," *Theological Studies* 64(no. 1, 2003):3-23, citation on p. 15. Similarly in *Franciscan Prayer*

(Cleveland, Ohio: St. Anthony Messenger Press, 2004), p. 172, p. 180.

Sung Jin Kim (Philosophy, Hallym University, Chuncheon, Gangwan-do, Korea) cites *Science and Religion*. In "The Philosophy Department of Colorado State University and Professor Holmes Rolston III." Pages 129-148 in *Hwan Kyong Ch'ol Hak (Environmental Philosophy)* (Official Journal of the Korean Society for the Study of Environmental Philosophy), vol. 3, 2004, citation on p. 146.

Gregory R. Peterson (Philosophy and Religion, South Dakota State University, Brookings) cites "Does Nature Need to be Redeemed?" on suffering in the natural world. In "Being Conscious of Mark Bekoff: Thinking of Animal Self-Consciousness," *Zygon: Journal of Religion and Science* 38(no. 2, 2003):247-256, citation on p. 254, p. 255.

Chad Stanley Mason (Mennonite pastor, Des Moines, Iowa) cites *Science and Religion*: "The secret of life is that it is a passion play" (p. 144). In "Passion Play," *Christian Century* 123(no. 8, April 18, 2006):9-10.

Joseph A. Bracken (Theology, Xavier University, Cincinnati, Ohio) cites "Naturalizing and Systematizing Evil" for its concept of a "cruciform creation." In *Christianity and Process Thought* (Philadelphia: Templeton Foundation Press, 2006), citation on p. 32, p. 143.

Robert J. Russell (Director, Center for Theology and the Natural Sciences, Graduate Theological Union, Berkeley, CA) cites "Does Nature Need to be Redeemed?" for its account of natural history as a "passion play." In "An Appreciative Response to Niels Henrik Gregersen's JKR Research Conference Lecture," *Theology and Science* 4(no.,2, 2006):129-135, citation on p. 132, p. 134.

Roger S. Gottlieb (Philosophy, Worcester Polytechnic Institute) cites how "Holmes Rolston finds evolution to be cruciform." In *A Greener Faith: Religious Environmentalism and Our Planet's Future*. New York: Oxford University Press, 2006. Citations on p. 67.

Celia Deane-Drummond (Theology, Biology, University of Chester, UK) cites "Naturalizing and Systematizing Evil" for its account of "cruciform nature." She also cites Rolston, ed., *Biology, Ethics and the Origins of Life*. In *Wonder and Wisdom: Conversations in Science, Spirituality and Theology* (London: Darton, Longman, and Todd, 2006), citations on pp. 119-120, p. 170, p. 181.

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