

SCIENCE AND THE EASTERN RELIGIONS: TOWARDS AN INTEGRAL VISION OF REALITY Course: PS 20

Institution: Little Flower Seminary, Institute of Philosophy and Religion

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Course Description

The course will be given as a four credit basic course for the second and third year graduate students of the department of philosophy and religion of Little Flower Seminary and as an elective course to the guest students of the Institute of Science and Religion at Little Flower Seminary. The Course is an attempt at an Eastern Religious appropriation of the major insights of the modern western science in its wide-ranging fields. The course draws the data from an interdisciplinary dialogue between science and religion to re-conceive God, world and the Human in a manner fitting to the modern intellectual scientific culture in general and to the philosophical and religious context of India in particular. Hence the course unfolds itself at three levels. 1. Describing the intellectual setting of the intersection of science and mysticism 2. Critical inter-sectioning of the scientific and mystical worldviews from the perspective of the Kosmos, Bios and Nous. 3. Articulating the metaphysical, anthropological and theological implications of the inter-sectioning of science and mysticism. While Eastern religious approach is dominant in the course, the course presupposes the Christian perspectives on the ongoing debate and deal at some length with the same where and when necessary.

Concise Outline of the Course

Week 1 Introduction

Weeks 2-3 Part I

Intellectual Setting of the Inter-sectioning of Science and the Eastern Religions

Weeks 4-8 Part II

Intersecting Modern Scientific and Eastern Mystical Worldviews

Week 4-5 Science, Religion and the Kosmos

Week 6-7 Science, Religion and the Bios

Week 8 Science, Religion and the Nous

Weeks 9-10 Part III

Towards an integral Vision of Reality

Week 9 Metaphysical Implications

Anthropological Implications

Week 10 Theological Implications

The Praxis

Conclusion

Week 1

Introduction

Outline of Lectures

1. Over-all Structure and vision of the course.
2. Defining the Disciplines of Science and Religion, the Eastern religions.
3. Brief Historical sketch of the science-religion interaction in the West.
4. Models of Interaction between science and religion (Ian G. Barbour's and Philip Hefner's Approaches)
5. Science and religion in the Indian context (nature of their relationship; the methodological and hermeneutical pre-cautions needed for such an interdisciplinary setting.)

Required Readings:

1. I. G. Barbour, "Ways of Relating science and Theology," in Robert John Russell, et. al., *Physics, Philosophy and Theology* (Vatican Observatory: 1998), pp. 21-48.
2. Brooke, John Hedley. "Science and Theology in the Enlightenment," W. Mark Richardson and Wesley J. Wildman (eds.). *Religion and Science - History, Method, Dialogue*. New York: Routledge, 1996. 7-27.

3. Claude, Welch. "Dispelling Some Myths about the Split between Theology and Science in the Nineteenth Century," W. Mark Richardson and Wesley J. Wildman (eds.). Religion and Science - History, Method, Dialogue. New York: Routledge, 1996. 29-40.

4. T. R. R. Iyengar, Hinduism and the Scientific Quest, New Delhi: Printworld, 1962, pp.1-12.

Group / Class Activities:

1. Discussion: How far true is the warfare attitude between science and religion from 16th to the 19th century?
2. Why in India is there no significant conflict between science and religion despite the strong scientific and religious background of India?

Week 2-3 Part I

Intellectual Setting of the Inter-sectioning of Science and Eastern Religions

Week-2

Outline of Lectures

1. The Epistemological Setting: The emerging epistemological context of the proximity between reason and intuition. The shift from Logical to historical perspectives; major conclusions of scientific knowledge drawn from philosophy of science. The central tenets of Eastern mystical epistemology which brings it closer to the recent paradigm shifts in the self-understanding of modern science.
2. The commonality of the sense of awe and wonder in science and mystical tradition as a general philosophical setting for the intersectioning of the two.
3. The cultural setting: Shows how postmodern culture has come to acknowledge the inevitability of the interaction between the two. A cultural analysis shows that there is a tension within our culture due to our failure to think both scientifically and religiously.

Required Readings:

1. Barbour, Ian G. Myths, Models and Paradigms - A Comparative Study in Science and Religion. New York: Harper and Row Publishers, 1974.
2. A. N. Whitehead, Science and the Modern World, chapter 13 only.

3. Wildman, Wesley J. "The Quest for Harmony - An Interpretation of Contemporary Theology and Science," in W. Mark Richardson and Wesley J. Wildman (eds.). *Religion and Science - History, Method, Dialogue*. New York: Routledge, 1996. pp. 41-60.
4. Richard H Jones, *Science and Mysticism- A Comparative Study of Western Natural Science, Theravada Buddhism, and Advaita Vedanta*, London: Bucknell University Press, 1986. Part I – The Frameworks of Science and Mysticism, pp. 19-72.
5. David Lorimer, "From Experiment to Experience" in David Lorimer, ed., *The Spirit of Science*, New York: Continuum, 1999, pp. 17-32.

Groups / Class Activities

1. Discussion: How does the Indian cultural context necessitate the intersecting of science and religion?
2. Review of the Web Resources in the computer lab in groups of 3 on select topics dealing with science and religion in general.

Week 3

Outline of Lectures

1. The ecological setting: The intersection of the basic tenets of the worldviews of the new physics and eastern mysticism can very much enhance an ecological worldview.
2. The Interdisciplinary Setting: The modern quest for truth shows an unprecedented level of systematic interdisciplinary attention. Science and Religion are two major components of the same. Whitehead's bold statement that the future of the humanity depends on the relations between the two.
3. The Theological Setting: Contemporary theology witnesses a methodological shift from exegetical to hermeneutical and a renewed understanding of revelation from static to dynamic. The emerging theological paradigms necessitated by the scientific discoveries have very much to borrow from the eastern mystical philosophies of Hinduism, Buddhism, Taoism, etc.
4. A critical glance at the attempts made so far by the contemporary science-mysticism writers like Fritjof Capra, Gary Zukav, etc. with a view to identify the actual areas of consonance and dissonance.

Required Readings:

1. Wilber, Ken. "Introduction: Of Shadows and Symbols," Ken Wilber (ed.), *Quantum Questions*, New Science Library, 1984, pp. 3-31.

2. Paul, Pope John II, *Message on the Occasion of Newton Tricentennial in 1987*," Robert John, et. al. (eds.). *John Paul II on Science and Religion - Reflections on the New View From Rome*, Vatican City: Vatican Observatory Publications, 1990. M1-M14.

3. J. Baird Callicott and Roger T. Ames, *Nature in Asian Traditions of Thought*, New Delhi: Sri Satguru Publications, 1991. Section on "The Asian Traditions as a Conceptual Resource for Environmental Philosophy", pp. 1-24.

Group / Class Works:

1. Discussion: 1. Can the overall Eastern conceptual scenario provide a more conducive platform for a constructive interaction between science and religion?

2. Students should give a 3 page assignment, after assessing and discussing in small groups of 6, stating how the first part of the course can be promoting the central perspectives of the course as outlined in the Introduction.

Weeks 4-8

Part II: Intersectioning Science and Eastern Religions

Weeks 4-5: Science, Religion and the Kosmos

Week 4

Outline of Lectures

The understanding of cosmic unity in quantum physics based on the problem of phase entanglement, the act of observation, etc.

1. The dynamic worldview of physics based on the understanding of matter, space, time etc. in relativity theory and quantum physics.
2. The idea of interpenetration as proposed by the bootstrap hypothesis of Geoffrey Chew.
3. An Introduction to the Chaos Theory and its implications for the cosmic interconnectedness.

Required Readings

1. Nick Herbert, Quantum Reality - Beyond the New Physics, New York: Anchor Books. Chapters 9, 10. pp. 157-198.
2. Capra, The Tao of Physics (Flamingo, 1991, pp.141-155.
3. John Polkinghorne, Serious Talk – Science and Religion in Dialogue, Harrisburg: Trinity Press International, 1995. Chapter 2, Understanding Quantum Theory, pp. 17-33.

Group / Class Activities:

1. Discussion: Highlight and the major cosmological transitions from the classical physics of the new physics.
2. Video show of the documentary films by Carl Sagan, Cosmos I & II.

Week 5

Outline of Lectures

1. The Non-local vision of reality expounded by J S Bell as opposed to the deterministic vision of Einstein, Podolsky and Rosen.
2. The Hindu view of the cosmic unity based on the cosmogonic myths in the Vedas; the Upanishadic vision of the underlying unity of the cosmos, the metaphor of the cosmic dance of the Lord as resembled in the Nataraja image of Shiva of the Saivist sect of Hinduism, etc.

3. The oscillating model of the universe in Big Bang theory and the Cyclic view of creation, maintenance and destruction in Bhagavatgita 9:7-10.

Required Readings:

1. Gary Zukav, The Dancing Wu Li Masters, New York: Bantam books, 1980, pp.281-304 (Chapter on The End of Physics).

2. Heinz R. Pagels, The Cosmic Code – Quantum Physics as the Language of Nature, New York: Simon and Schuster, 1982. Chapter 13 – The Reality Market place, pp. 177-192.

3. Rgveda, x. 90, 128, 10.

Group / Class Activities:

1. How do the cosmological parallels between the scientific and mystical account of the cosmos point to the unity of knowledge?

2. Attempt a scientifically suited reinterpretation of the symbolism of the Nataraja image of Siva, after a meditative reflection and discussion sitting in front of the sculptor of the Lord.

3. A field trip to the Advaitashram in Kalady, the birth place of Sree Sankara, the exponent of the pure monism (advaita) of Hinduism. This is an internationally known pilgrim center. Students will examine several Hindu metaphors and images representing the unified, dynamic and oscillating models of the universe. There will also be an interactive session with the resident students there and our students.

Week 6-7 Science, Religion and the Bios

Week 6

Outline of Lectures

(Guest Lecturer Dr. Kuruvilla Pandiakattu, CTNS-SRCP award winner from Jnana-Deepa Vidyapeeth, Pune, being also a regular visiting staff of the seminary, will give part of the lectures in week 6 and 7 on the theory of evolution and the developments in genetics.)

1. An Introduction to the theory of evolution and the mechanism of Natural selection. The evolutionary origin of life, the human evolution and psycho-social evolution.
2. Revisiting creationism, evolution and eschatology.
3. An eastern religious appropriation of the theory of evolution. The evolutionary vision of reality in Taoism, centering the reflections around the principle of Li (principle of organization) and the dialectical interplay between the polar opposites of Yin and Yang.
4. The evolutionary outlook towards world and human in ancient modern Hindu Philosophy and religion. Jiva and ajiva categories in Jainism. Modern Indian Philosopher Sri. Aurobindo Ghosh's doctrine of the spiritual evolution and the continuity of being from matter through the biological world to the Gnostic beings – the human.
5. A critical glance at the substantive and epistemic differences between the scientific and religious vision of evolution and the analogical complementarity between the two.

Required Readings:

1. John Durant, "Darwinism and Divinity: A Century of Debate" in John Durant, Darwinism and Divinity, New York: Basil Blackwell, 1985, pp. 9-40.
2. Philip Hefner, The Human Factor – Evolution, Culture and Religion (Minneapolis: Fortress Press, 1993), pp. 3-53.
3. Arthur Peacocke, God and the New Biology, San Francisco: Harper and Row Publishers, 1986, pp. 73-86.
4. Sri Aurabindo, The Evolutionary Process – Ascent and Integration, Pondichery: Sri Aurabindo Library, 1975, pp. 683-701.

Group / Class Activities

1. Discussion: Is there an ontological commonality between the scientific evolution and the spiritual evolution represented in the East and what are its actual implications?
2. Computer Lab exercise in groups on the audio-visual materials on the Theory of Evolution in the CTNS' CD Metalibrary – Interactive resources in science and religion.
3. Web-site review of counterbalance and meta-library in the computer lab.

Week 7

Outline of Lectures

1. The Neo-Darwinist syntheses and a brief historical review of the developments of modern genetics and genetic researches.
2. An Introduction to the issues of cloning and its metaphysical underpinnings for a cosmic vision of reality; the human genome project with a philosophical exploration of its relevance and implications for a renewed holistic understanding of the humans and the infra-human realities, underscoring the metaphysical proximity, continuity and interconnectedness of reality.
3. The Hua-Yen school of Japanese Buddhism emphasizing the absolute unity of the human and the world. The Jaina vision of the human personhood and the “non-corporeality” envisaging the metaphysical oneness of reality.
4. The inter-sectioning of the Eastern religions and the Western sciences from biological perspectives is only analogical and the actual implications of this complementarity are more ontological than biological.

Required Readings:

1. V. Elving Anderson, "A Genetic View of Human Nature," in Warren S. Brown, et. al., eds., *Whatever Happened to the Soul? Scientific and Theological Portraits of Human Nature*, Minneapolis: Fortress Press, 1998, pp. 49-72.

2. Audrey R. Chapman, *Unprecedented Choices* (Chapter 3 on Religious contributions to the Debate on Cloning), Minneapolis: Fortress press, 1999, pp. 77-124.

3. J Robert Nelson, *On the Frontiers of Genetics and Religion* (Chapter 5, Personal Religious Positions Individually Expressed), Michigan: William B. Eerdmans Publishing Co.1994, pp. 119-169.

Group / Class Activities:

1. Video Show - "Lights Breaking: A Journey Down the Byways of Genetic Engineering," ITEST Faith Science Press.

2. Field Study - Each student has to interview at least 25 ordinary people and collect their impressions and opinions on cloning, human genome project, etc. The outcome of this field study is to be presented in groups of 10 each. Each group has to present the report before the entire class.

3. Discussion: What are the philosophical and religious pre-suppositions behind the opinions expressed by the people and how does it betray the popular impression about science and religion. Do the data point to the need for alternate worldviews?

4. A 3 page assignment prepared by each student after discussing in groups of seven identifying the areas of consonance and dissonance between science and the Eastern Religions in their perception.

Week 8 Science, Religion and the Nous

Outline of Lectures

1. Brief review of the recent developments in neural sciences with special emphasis on the mind-brain problem and the problem of consciousness and varying responses to it.

2. Implicit theological questions in neural sciences especially the question of personhood and self.

3. The fundamental spiritual and conscious stuff of the universe as envisioned in the Vedas and Upanishads of the Hindus. The de-materialisation of the stuff of the Cosmos through the concept of the Conscious Purusa (person) in the Vedas, which are pregnant with rich conceptual resources for a renewed understanding of the human from the perspectives of body and soul.

Required Readings:

1. Warren S. Brown, "A Neuro-Cognitive Perspective on Free Will", in CTNS Bulletin, vol. 19, No. 1 pp. 22-29.

2. Ian G. Barbour, "Neuroscience: Artificial Intelligence and Human Nature: Theological and Philosophical Reflections," in Zygon, Vol. 34, No. 3 1999, pp. 361-398.

3. Andrew Newberg and Eugene d'Aquili, "Wired for the Ultimate Reality: the Neuropsychology of Religious Experience," in Science and Spirit, vol 11, no. 2, 2000, pp. 12-13.

Class / Group Activities

1. Discussion: How do you appropriate the various accounts of religious experience in the particular Indian context within the light of the developments in neural sciences?

2. Computer Lab exercise: Nancy Murphy's talk on personhood in CTNS' CD Metalibrary- Interactive resources in science and religion.

3. Review of the Web resources of CTNS and counterbalance on the related topics.

Part III

Weeks 9-10, Towards an Integral Vision of Reality

Week 9

Outline of Lectures

1. Introduction: What are the wider philosophical assumptions behind the shared viewpoints of science and mysticism? How to use the scientific and religious data for re-conceiving the Reality in terms of God, human and the world?

2. Metaphysical implications: Reality as synthesis- Exploring the fuller nuances of Paul Davies's assertions that "the world around us is the manifestation of something very, very clever indeed"; Further Scientific explorations include the implications and philosophical assumptions of the Grand Unified Theories, David Bohm's concept of the Implicate Order, etc. - "The search for the real music of the universe... unity of unity and diversity or the wholeness of the part and the whole." (David Bohm)

3. The pure monistic vision of Sri Sankara, the world as the abode of the absolute and the pan-en-theistic vision of Isavasya Upanishad and Bhagavat Gita. The doctrine of Eka-nishtata (one-centredness) of the Hindu philosophy as advocated by Brahamanbandab Upadhyay.

Required Readings:

1. Brahmabandhab Updhyay, "The One-Centredness of the Hindu Race," *Vidyajyoti Journal of Theological Reflections*, XLI, October 1981. 410-421.

2. Renee Weber, "The Search for Unity" in Renee Weber, *Dialogues with Scientists and Sages*, London: Routledge, 1986, pp. 1-22.

3. Werner Heisenberg, "Science and the Beautiful," Renee Weber, *Quantum Questions*.

Class / Group Activities

1. Discussion: In the light of our discussion on the said topic, give your critical reflections on Fritjof Capra's remarks that "the Brahman of the Hindus, like the Dharmakaya of the Buddhists and the Tao of the Taoists, can be seen, perhaps, as the unified field from which spring not only the phenomena studied in physics, but all other phenomena as well."

Week 10

Outline of Lectures

1. Anthropological implications: Human existence as a universal presence and participation in the cosmic oneness of being. Scientific foundations of this claim are the perspectives of Ilya Prigogine, Ken Wilber, the Consciousness created Reality school of quantum mechanics and the cosmic anthropic principle.
2. The three stages of consciousness described in Brahadaranyaka Upanishad. The Upanishadic identification of the individual self with the Universal self (Atman-Brahman).
3. Theological Implications – New Models of God substantively complemented by science and the Eastern religious world views, like pan-en-theism, process theology, and the Taoist vision of the Creation “without a creator”. A critical philosophical re-interpretation of Hawking’s theological claims from an Indian religious point of view.
4. The Praxis of the new integral vision of Reality defined in terms of the metaphors of Bhagavatgita, viz., Lokasamgraha (Welfare of All) and Sarva-bhuta-hite-ratah (ecstatic joy at the enhanced goodness of each being). Recapitulation of the perspectives and conclusion.

Required Readings

1. Michael Talbot, *Mysticism and the New Physics*, New York: Bantam Books, 1981, Part III, pp. 113-184.
2. Arthur Peacocke, *Creation and the World of Science*, (Chapter 4, Our Understanding of God’s relation to the world in the light of the knowledge afforded by the natural sciences, pp. 203-213.), Oxford: Clarendon Press, 1979.
3. William R. Stoeger, *Discovering God’s Action in the world in light of Scientific Knowledge of Reality,*” in R. J. Russell, et. al., *Chaos and Complexity* (Berkeley: CTNS, 1995), 239-262.
4. Somaraj Gupta “The Word that became the Absolute – Reflections on AUM.”

Class / Group Activities

A series of Meditative exercises on the various stages on the sacred mantra (aphorism) Aum and the various stages of the consciousness envisioned in the Yoga system of Indian philosophy for giving an experiential touch to the whole program, enabling students to view reality as a cosmic harmony in which we are partakers, on a conviction of the hermeneutical principle that understanding is knowing plus living.

Requirements and Grading Criteria

1. Regular and active attendance in the classes, discussion forums, lab exercises and all class activities is a must. Anyone who misses any session for a valid reason should do an assignment to make up for it.
2. Class Participation and Discussion Performance 10%
3. Two Individual Assignments 20%
4. Mid-term Examination 20%
5. Final Paper 20%
6. Final Examination 30%

Performance of each student in discussions, presentations and reviews will be individually assessed along with the overall performance of each group. Individual assignments refer to the requirements mentioned in the class activities of Week 3 and Week 7. Mid-term examination covers all the portions covered from weeks 1-5. Each student has to prepare a paper of 2000 words on a topic of their choice fitting to the general perspectives of the course. The paper should show the nature of serious academic research and the personal vision of the student on the relationship between science and religion should form part of the paper. The final examination includes all the topics covered in Weeks 6-10.

Due Dates

1. Individual Assignment I September 28, 2002.
2. Mid-term Examination October 12, 2002
3. Individual Assignment II October 26, 2002
4. Final Paper November 23, 2002
5. Final Examination November 30, 2002

Other Available References Recommended

Part I

Audouze, Jean, Michel Casse and Jean-Claude Carriere. Saroj Butani (tr.). *Cosmology - Conversations About the Invisible*, New Delhi: Wiley Eastern Ltd. 1990.

Ian G. Barbour, *When Science Meets Religion - enemies, strangers, or partners?* Harper San Francisco, New York, 1980.

----- . *Issues in Science and Religion*. New Jersey: Prentice Hall Inc., 1966.

----- . *Religion in Age of Science*. San Francisco: Harper and Row Publishers, 1990.

Ravi Ravindra, *Science and Spirit*, An ICUS Book Paragon House, New York, 1990.

Renee Weber, *Dialogues With Scientists and Sages the Search for Unity*, Routledge & Kegan Paul, London, 1986.

Brown, James Robert. [1994], *Smoke and Mirrors - How Science Reflects Reality*, London: Routledge.

Capra, Fritjof, *The New Vision of Reality - A Synthesis of Eastern Wisdom and Western Science*, Bombay: Bharatiya Vidya Bhavan, 1983.

Alister E. Mc Grath, *The Foundations of Dialogue in Science & Religion*, Blackwell Publishers, Massachusetts, 1998.

Holmes Rolston, III, *Science and Religion- A Critical Survey*, Random House, New York, 1987.

Capra, Fritjof. [1983], *The Turning Point - Science, Society and the Rising Culture*, New York: Bantam Books.

Sir John Templeton, Possibilities for Over One Hundredfold More Spiritual Information- The Humble Approach in Theology and Science, Templeton Foundation Press, London, 2000.

d'Espagnat, Bernard., Reality and the Physicist - Knowledge, Duration and the Quantum World, Cambridge: Cambridge University Press, 1989.

Mangum, John M. (ed.). The New Faith - Science Debate, Geneva: WCC Publication, 1989.

Morris, Richard. The Nature of Reality - The Universe after Einstein, New York: The Noonday Press, 1987.

Whitehead, Alfred. Science and the Modern World. New York: Free Press, 1967.

Weinberg, Steven. The First Three Minutes. New York: Bantam Books, 1979.

Part II

Paul Brockleman, Cosmology and Creation - The Spiritual Significance of Contemporary Cosmology, Oxford University Press, Oxford, 1999.

Juan De Dios Vial Correa and Elio Sgreccia, Human Genome, Human Person and Society of the Future, Liberia Editrice Vaticana, Vaticana, 1999.

Barrow, John and Frank Tipler. The Anthropic Cosmological Principle. Oxford: Clarendon Press, 1986.

Bohm, David. Wholeness and the Implicate Order, London: Routledge & Kegan Paul, 1980.

Chinmaynanda, Swm (tr.). [1962], Taittiriya Upaniad, Madras: Chinmaya Publication Trust.

Eva Wong, Taoism- A Complete introduction to the history, philosophy, and practice of an ancient Chinese spiritual tradition, Shabhala, Boston, 1997

Davies, Paul. God and the New Physics. Harmondsworth: Penguin Books, 1987.

----- Superforce, New York: Simon and Schuster, 1984.

----- Forces of Nature, 2d ed., Cambridge, 1986

Erich Harth, The Creative Loop – how the Brain Makes a Mind, New York: Addison-Sesley Publishing Co., 1995

Gambhrnadha, Swmi (tr.). Chandogya Upanshiad, Calcutta: Advaita Ashram, 1983.

Gleick, James, Chaos, Vintage, 1998.

Griffith, Ralph T. H. (tr.). The Hymns of the Rigveda, Vol. II, Benares: E. J. Lazarus and Co., 1920, 1926.

Hawking, Stephen W. A Brief History of Time - From Big Bang to Black Holes. New York: Bantam Books, 1989.

Heisenberg, Werner, and Philosophy - The Revolution in Modern Science, London: George Allen and Unwin Ltd, 1958.

----- The Physicist's Conception of Nature, London: The Scientific Book Guild, 1962.

----- Physics and Beyond - Encounters and Conversations, London: George Allen and Unwin Ltd., 1971.

Lindberg, David C., The Beginnings of Western Science, Chicago: The University of Chicago Press, 1972

Munitz, Milton K. The Question of Reality, Princeton: Princeton University Press, 1990.

Radhakrishnan, S. Indian Philosophy, 2 Vols., London: George Allen and Unwin Ltd., 1940

Sharma, D. S. (tr.) The Upanishads an Anthology, Bombay: Bharatiya Vidya Bhavan, 1970

Siu, R. G. H., The Tao of Science, Cambridge: The M. I. T. Press, 1957.

Sri Ramakrishna Math., The Bhadarayaka Upanishad, 1968

Tipler, Frank. The Physics of Immortality. New York: Pan Books, 1994.

Wigner, Eugene P. Symmetries and Reflections - Scientific Essays, Woodbridge: Ox Bow Press, 1979.

Juan De Dios Vial Correa and Elio Sgreccia, Human Genome, Human Person and Society of the Future, Liberia Editrice Vaticana, Vaticana, 1999.

John F. Haught, God After Darwin A Theology of Evolution, Westview Press, Colorado, 2000.

Ronald Cole Turner, Human Cloning - Religious Responses, Westminster John Knox Press, Louisville, 1997.

Willem B. Drees, Beyond the Big Bang - Quantum Cosmologies and God, Open Court, Illinois, 1990.

Clifford N. Mathews and Roy Varghese (eds.), Cosmic Beginnings and Human Ends- Where Science and Religion Meet, Open Court, Chicago, 1995.

John F. Haught, Science and Religion - From Conflict to Conversation, Paulist Press, New Delhi, 1995.

Paul Davies, The Mind Of God - The Scientific Basis for A Rational World, Simon & Schuster, New York, 1992.

Robert Brungs & Marianne Postiglione (eds.), *The Genome plant, Animal, Human*, ITEST Faith/Science Press, Missouri, 2000.

J. P. Moreland and John Mark Reynolds (ed.), *Three Views on Creation and Evolution*, JM Books, Secunderabad, 1999.

J Robert Nelson, *On the New Frontiers of Genetics and Religion*, William B Eerdmans Publishing Co., Michigan, 1994.

Ted Peters, *Playing God Genetic Determinism and Human Freedom*, Routledge, New York, 1997.

John Durant, *Darwinism and Divinity*, Basil Blackwell, New York, 1985.

Giuseppe Del Re, *The Cosmic Dance - Science Discovers the Mysterious Harmony of the Universe*, Templeton Foundation Press, London, 2000.

Steven J. Dick (ed.), *Many Worlds - The New Universe, Extraterrestrial Life, and the Theological Implications*, Templeton Foundation Press, London, 2000.

Daniel C. Dennett, *Darwin's Dangerous Idea - Evolution and the Meaning of Life*, Published by Simon & Schuster, New York, 1995.

Michael Ruse, *Taking Darwin Seriously - A Naturalistic Approach to Philosophy*, Basil Blackwell, New York, 1986.

Neal C Gillespie, *Charles Darwin and the Problem of Creation*, The University of Chicago Press, Chicago, 1979.

Part III

John Polkinghorne, *Beyond Science- The Wider Human Context*, Cambridge University Press, Cambridge, 1996.

John Mark Templeton & Robert L. Herrmann, *Is God the Only Reality - Science Points a Deeper Meaning of the Universe*, Continuum Publishing Co., New York, 1994.

Moltmann, Jurgen. *God in Creation - An Ecological Doctrine of Creation*. London: SCM Press Ltd., 1985.

----- . *The Coming of God*. Minneapolis: Fortress Press, 1996.

Ken Wilber, *A Brief History of Everything*, Shambhala, London, 1996.

Mooney, Christopher F. *Theology and Scientific Knowledge*. London: University of Notre Dame Press, 1996.

Peacocke, Arthur, *Theology for a Scientific Age - Being and Becoming, Natural, Divine and Human*. Minneapolis: Fortress Press, 1993.

Diarmuid O' Murchu, *Quantum Theology, A Crossroad Book*, New York, 1998.

Polkinghorne, John. *Science and Christian Belief - Theological Reflections of a bottom-up Thinker*. London: Society for Promoting Christian Knowledge, 1994.

Paulinus F. Forsthoefel, *Religious Faith meets Modern Science*, Alba House, New York, 1994.

Prigogine, Ilya and Isabelle Stengers. *Order Out of Chaos: Man's New Dialogue with Nature*. London: Fontana, 1984.

Wallace, Alan B. [1989], *Choosing Reality - A Contemplative View of Physics and the Mind*, Shambala: New Science Library.

Whitehead, Alfred North. *Process and Reality*. London: The Free Press, 1978.

Gerhard Staghun, *God's laughter Man and His Cosmos*, Harper Collins, London, 1990.

Worthing, Mark William. *God, Creation and Contemporary Physics*. Minneapolis: Fortress Press, 1996.

Ken Wilber, *The Spectrum of Consciousness*, The Theosophical Publishing House, Illinois, 1982.