

# **SCIENCE AND THEOLOGY IN DIALOGUE: A HERMENEUTIC OF HUMILITY**

Institution: Claremont School of Theology

Instructor: Stephen S. Kim, Ph.D.

## **DESCRIPTION**

A study of history, method, and meaning of interaction between science and theology in nineteenth century and twentieth century Europe and North America. Main focus is on discerning the dialogical aspects of the interaction as a new way of understanding and relating science and theology in common search for the intelligibility and meaning of faith.

## **THE PURPOSE**

The purpose of the course is to help students develop an ability to critically reflect on the general interaction between Christian theology and science with a view to show the cultural and hermeneutic framework within which the interaction ensued. In particular, the course is designed to help students develop a critical perspective on the historical developments in the so-called “conflict between science and religion” in Victorian England, which eventually led to the secularization of Victorian culture, that is, the cultural paradigm shift from a religious world view to a secular one. An argument is presented for students to consider, which will help their reflection: both science and theology developed dogmatic methods which affected their hermeneutics, and the so-called “conflict” turned out to be catalysts for another way of understanding and interpreting the reality. In this continuing process of new understanding and new interpretation, science and theology are understood as complementary “truths” to articulate the meaning of nature, history and life in a fuller way than can be done by either discipline alone. This course is to alternate with Professor David Ray Griffin’s course, “Creation and Evolution.”

## **REQUIRED TEXTS**

Ian G. Barbour. *Religion and Science: Historical and Contemporary Issues*. San Francisco: Harper San Francisco, 1997.

James R. Moore. *The Post-Darwinian Controversies: A Study of the Protestant Struggle to Come to Terms with Darwin in Great Britain and America, 1870-1900*. Cambridge: Cambridge University Press, 1981 [1979].

Wolfhart Pannenberg, ed. by Ted Peters. *Toward a Theology of Nature: Essays on Science and Faith*. Louisville: Westminster / J. Knox Press, 1993.

Arthur Peacocke. *Theology for a Scientific Age: Being and Becoming - Natural and Divine*. Oxford: Basil Blackwell Ltd., 1990.

John C. Polkinghorne. *Serious Talk: Science and Religion in Dialogue*. Valley Forge, PA: Trinity Press International, 1995.

W. Mark Richardson and Wesley J. Wildman, eds. *Religion & Science: History, Method, Dialogue*. New York: Routledge, 1996.

John M. Templeton. *The Humble Approach: Scientists Discover God*. New York: Continuum, 1995.

Frank Miller Turner. *Contesting Cultural Authority: Essays in Victorian Intellectual Life*. Cambridge and New York: Cambridge University Press, 1993.

### **SUGGESTED READING**

Owen Chadwick. *The Secularization of the European Mind in the Nineteenth Century*. Cambridge: Cambridge University Press, 1977 [1975].

John B. Cobb, Jr. *A Christian Natural Theology: Based on the Thought of Alfred North Whitehead*. Philadelphia: The Westminster Press, 1974.

Anna Therese Cosslett, ed. *Science and Religion in the Nineteenth Century*. Cambridge: Cambridge University Press, 1984.

John R. Durant, ed. *Darwinism and Divinity*. Oxford: Blackwell, 1985. David Ray Griffin. *Religion and Scientific Naturalism: Overcoming the Conflicts*. Oxford University Press (forthcoming).

George Johnson. *Fire in the Mind: Science, Faith, and the Search for Order*. New York: Knopf, 1995.

Tony Kelly. *An Expanding Theology: Faith in a World of Connections*. Newton, NSW: E. J. Dwyer, 1993.

Thomas Kuhn. *The Structure of Scientific Revolutions*. 2nd ed. Chicago: University of Chicago Press, 1970 [1960].

Colin Russell, ed. *Science and Religious Beliefs: A Selection of Recent Historical Studies*. London: University of London Press, 1973.

Frank Miller Turner. *Between Religion and Science: The Reaction to Scientific Naturalism in Late Victorian England*. New Haven: Yale University Press, 1974.

**COURSE OUTLINE** (14 three-hour lecture/seminar sessions for graduate level students)

**PART I: HISTORY AND METHODS OF DIALOGUE**

**1. Introduction: Setting up the questions** Five-minute devotion - Class organization, assignments and term paper - Students make at least one presentation in class on required reading. - Every week, students are required to bring a short (under five pages) reading report with questions and comments on reading, which will be used during the discussion sessions. - Find out where the students are in terms of their perception of the relation between science and theology (a brainstorm session). - Why would the students of the Bible and theology need to bother with science? - (The Christian message can be proclaimed as Divine Revelation without regard to rational and scientific “proof,” but it is done at the risk of irrelevance and being out of touch with reality.) - A General Introduction to the study of history of science and theology - Historiographical issues: the importance of “metascience” and “metahistory,” internal and external factors for the development of knowledge, logic and intuition, falsifiability. Methodological issues: historical rationality and scientific rationality, the “History of Religion” School, social anthropology and theology of culture, theories of religion, pluralism and dialogue - Hermeneutical issues: ideological and cultural presuppositions, limits of reason, critical realism, “hermeneutics of suspicion,” reconstructive postmodernism and contextualization

**2. Historical Backgrounds** -Reading: Barbour, Chapters 1- 3. - Historical backgrounds of the Science-Theology (or Religion) interaction: A brief survey of the Science-Theology interaction in the seventeenth, eighteenth and nineteenth centuries: - Physics and metaphysics in the seventeenth century - Nature and God in the eighteenth century - Biology and theology in the nineteenth century - Discuss the difficult question of hermeneutics, both scientific and theological. - Both scientists and theologians (clerics) operated with their own ideological and cultural presuppositions. - What assumptions and values do we bring to the class? - How do they influence our thinking about and interpretation of history? - To be aware of presuppositions will be a corrective to possible distortions in the understanding of “reality.” - The importance of the hermeneutic of humility is that the open attitude or approach to the issues are as important as the issues themselves. - Discuss the distinguishing characteristics and common features of methods in science and theology. - Was there a common quest? Is there one in contemporary science and theology? -Supplemental reading: Richardson and Wildman, Part I. “The Quest for Harmony: An Interpretation of Contemporary Theology and Science”

**3. Theology and the Methods of Science** - Reading: Barbour, Chapters 4 - 6; Richardson and Wildman, Round I of Part II - The focus is on the need for dialogue for the integrity of both theology and science. - A general introduction to the methods and methodological issues in both fields. - The complementarity of theological and scientific methods. “Listening to Each Other” – “Why Theologians Must Pay Attention to Science” - The differences in methodology: falsifiability in science and theology. - Discuss several historical models and their strength/weakness. - The role of models, and how do they

develop? - What are some ways to avoid the pitfalls of traditional models? - The role of paradigms, how do the models develop? - Paradigm shift as Integrative processes in science and theology - Are there models that can transcend cultural confines in which traditional models developed? - Paradigm shifts as means of transcending cultural confines in which traditional models developed. - *Supplemental Reading*: Thomas Kuhn. *The Structure of Scientific Revolutions*.

**4. *Theology and the Theories of Science*** - *Reading*: Barbour, Chapters 7 - 9 - Metaphysical and Theological implications of Physics - Theology and Quantum Theory - Theology and Relativity - Theology and Thermodynamics - The Big Bang Theory and Creation - Evolution and Continuing Creation - Integration through Dialogue - The conflict model is historiographically more inadequate and theologically more inept than the dialogue model. (*Supplemental reading*: Moore, chapter 1) - Is there a mutually acceptable meeting point between the two world views? - Dialogue is to find ways to transcend one's own cultural confines with humility; Purpose is a GUT ("Grand Unified Theory").

**5. *A Quest for Integration: Dialogue as "Serious Talk" for Integration*** - *Reading*: Polkinghorne, Chapters 1 - 8 - Integration as "Serious Talk" as "Taking Reality Seriously" both scientifically and theologically. - Case studies in Integration: Creation, Providence, Resurrection, and the *Eschaton*. - Dialogue as the contextualization of Science and Theology, and it requires inquiry into external (social, political, cultural) as well as internal (philosophical and theological) influences. - Historical backgrounds of Science-Theology controversies on various issues in the nineteenth century regarding primarily new geological theories and the Darwinian theory of transmutation of species and their effects on the interpretation of the major motifs in the Bible. - What were theological and cultural assumptions in the controversies? - Contextualization is a methodological presupposition for cultural and religious pluralism, in which cultural paradigm shifts happen. - How did the Christian Church treat science, and *vice versa* in Victorian England and 20th century America? - Both science and theology are integral part of human inquiry into nature, history, and reality.

## **PART II: DIALOGUE IN SEARCH OF MEANING AND INTELLIGIBILITY: CASE STUDIES**

**6. *Darwinism in Theology: A Case Study in Dialogue I*** - *Reading*: Moore, Part II - Revising a Warfare Metaphor to a Dialogue Metaphor - "The Post-Darwinian Controversies" - Theology coming to terms with Darwin - Christian Anti-Darwinism: the realm of certainty and fixity - Christian Darwinisticism: the role of providence and progress - Christian Darwinism: the relevance of orthodox theology - Darwinism and Darwinisticism in theology - The orthodox theological roots of Darwinism - The difficulties and decline of Darwin's theology - Darwinism made acceptable by - the teleology of Paley - the theodicy of Malthus - the doctrine of providence and progress

**7. *Cosmology and Creation: A Case Study in Dialogue II*** - *Reading*: Richardson and Wildman, Case Study I, II, and III in Part III. - Reflect on the history of controversies

regarding the scientists' attack on Mosaic cosmogony and the stories of creation in the Bible. - *Supplemental reading*: Cosslett, Chapter 8. - Quantum Physics, Chaos Theory, and Divine Action - complementarity, Dialectic, and Christology - Observe the ways in which "conflict" leading to "dialogue" on the question of the origin of the Earth from the critique of the Mosaic belief to other cosmological theories including the Big Bang Theory. - How did the Church respond to the attacks? - What was at stake? - *Supplemental Reading*: Charles Goodwin's "The Mosaic Cosmogony" in Cosslett, Chapter 5.

**8. Creation, Evolution, and Social Genetics: A Case Study in Dialogue III** - *Reading*: Moore, Part III; Richardson and Wildman, Case Study VI, V, and VI in Part III. - Reflect on the history of controversies regarding the scientists' attack on the biblical faith regarding the origin of life and the stories of creation in the Bible and contemporary theories regarding creation and evolution. - Observe the ways in which "conflict" leading to "dialogue" on the question of the origin of the life (or species) through the Darwinian critique of biblical creationism. - *Supplemental reading*: Durant, Chapters 1 - 3. - How did the Church respond to the attacks? - What was at stake?

**9. Meaning of Faith in Science and Theology: Search for Intelligibility and Meaning I** - *Reading*: Peacocke, Part I. - Theological interpretation of "Natural Being and Becoming." - The meaning of "faith" changed during the cultural paradigm shift. - Redefine the meaning of faith in the minds of both the clerics and the scientists as they faced the limits of reason as well as of the Church's authority. - Discuss and reflect on the process of establishing scientific naturalism with its emphasis on the unity of nature and the universality of natural law. - Discuss Bernard Lightman's claim that it is the origin of Victorian agnosticism which most Victorian "scientific clerisy" suffered. - *Supplemental reading*: Bernard Lightman. *The Origin of Agnosticism*. - How to avoid agnosticism? Or is agnosticism still the most honest answer or is it a convenient cop-out?

**10. Meaning of Faith in Science and Theology: Search for Intelligibility and Meaning II** - *Reading*: Peacocke, Part II. - Naturalistic interpretation of "Divine Being and Becoming." - The secular and naturalistic meaning of "faith." - Discuss and reflect on the process of establishing naturalistic theism with the emphasis on the intelligibility and meaning of theological statements.

**PART III: DIALOGUE AS A HERMEUTICAL KEY TO THEOLOGY OF SCIENCE AND CULTURE 11. On the Victorian "Conflict" between Science and Theology: A Matter of Cultural Authority** - *Reading*: Turner. *Contesting Cultural Authority*. - Discuss the Victorian response to the charges of cultural hegemony by young scientists, particularly surrounding the issue of authority of the Bible and the Established Church and the Church's control of science. - Discuss the significance of the so-called "Victorian Crisis of Faith." - The significance of the "crisis" for Victorian culture. - *Supplemental reading*: Turner. *Between Religion and Science*. - In most of these "controversies," the core issue has been about "cultural authority." - Reflect on the importance of dialogue over conflict. - Dialogue as a new way of cooperatively interpreting scientific and theological construction of reality. - "Secularization" by

scientific culture (*Supplement reading: Chadwick. The Secularization of European Culture*). - Secularization as a new paradigm. - Secularization as a new way of looking at the world, a new hermeneutic of integrity and accountability.

**12. Theology of Nature** - *Reading: Pannenberg.* – Einstein’s two-language game: the language of fact and the language of value - The emergence of “hypothetical consonance” approach over the “two-language game” - A God who is the meaning of both science and theology can be articulated, who is the omega point of all, who makes a new synthesis necessary and sufficient in a postmodern era. - Theology, rather than, religion, is in conversation with science. - How to construct a hermeneutic that is appropriate to this task? - A critique of traditional prepositional theological methods. – “Theology as the Science of God” increases the intelligibility of the natural world - Theology of nature as a field theory of the spirit

**13. Process Theology and Postmodern Integration** - *Reading: Barbour, Chapters 11 - 12.* - Supplemental reading: John B. Cobb, Jr. Christian Natural Theology - Process Thought and “Christian natural theology” ( John B. Cobb, Jr.) as a viable dialogue-integration model over William Paley’s natural theology. - Postmodern natural theology for dialogue with science - Discuss the implications of “postmodern natural theology” for dialogue and integration. - Reflect on the theological significance of new science for the articulation of meaning and truth in the postmodern world.. - Metaphysical issues of the nature of reality, and how we perceive and conceive of it. - How to bridge the gap between objectivity and subjectivity for a new kind of science-religion interaction, or cooperation? - Process view of theodicy - (*Supplemental reading: David R. Griffin. God, Power, and Evil: Process Theodicy.*)

#### **PART IV: CONCLUSION**

**14. A Hermeneutic of Humility** - *Reading: Templeton.* - How should Christian ministers respond to new science’s “demand” for dialogue? - The limits of reason requires humility both in science and theology. - Redefine the concept of faith that is vital to both science and theology. - What are the complementary aspects of science and theology and how do they in fact complement each other, and for what end? - Make a claim as to what science and theology actually do, and how, in a postmodern existence. - What is the meaning that science and theology conjointly attempt to articulate? Is there such a meaning?