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Dallas Theological Seminary

ST5520A, Issues in Science and Theology
Fall 2020
Tuesdays, 1:00-3:40pm

ISSUES IN SCIENCE AND THEOLOGY
SYLLABUS

I. COURSE DESCRIPTION

DTS Catalogue: A study of the relationship between science and theology, focusing on current issues such as creation and evolution, age of the universe, environmentalism, biomedical technology, and relevant ethical issues. Prerequisite: ST101 Theological Method and Bibliology.

When the professor completed a doctorate at a university, he discovered that he had not been instructed in the dominant academic concerns of the Twentieth Century; namely, the development and dominance of modern science. Perhaps this deficiency could be overcome with readings in the various sciences, but he discovered that scientists themselves were profoundly divided between the hard subjects (like biology, chemistry, and physics) and the softer disciplines (like psychology and the social sciences). He read broadly for about 10 years, discovering that the information could be very useful in teaching theology. For example, among the weakest areas of "the dialogue" are anthropology and hamartiology. The sciences are far richer in anthropology than evangelicals, because they care about understanding how nature works, from astronomy to histology (the physiology and function of cells). On the other hand, the sciences have no "doctrine of sin," which leaves them with a large void in explaining or dealing with evil in the world. This course is the professor's attempt to share his twenty-year pilgrimage into the relationship of science and theology, including readings, dialogues, visits to laboratories, and memberships. He had been an active member of the "Society for Neuroscience" for about sixteen years.

II. COURSE OBJECTIVES

A. To encourage students to develop their thinking about issues in science and religion/theology in historical, contemporary, and biblical perspectives. Science has become preeminent in the institutions of the modern world. The core of its incredible, mind-bending influence lies in a world-wide network of elite educational institutions. Education (from grammar schools through graduate schools) impacts professional institutions like law, medicine, and engineering to such an extent that it mandates a response from religion and theology. It is a driving force behind the secularity of modern technologies. The responses to science have been capitulations to its naturalistic commitments. The traditions of religions have been challenged by science's obvious contributions to social change for better (e.g., medical care and energy-saving appliances) or worse (e.g., a decline in ethics and increase in earth-threatening weaponry).

B. This course will attempt to identify some of the primary issues, their backgrounds, and some leading scientific and religious thinkers today. It has been designed to introduce students the wide variety subjects in the sciences and religious studies. It will include a few materials that are relatively advanced, though it will not include highly technical materials such as journals like *Science*, *Nature*, and *Cell*.

C. Through daily assignments and discussion students will be encouraged to integrate the content of the course into their worldview and apply it meaningfully to aspects of their personal, familial, ecclesial, and public life.

III. COURSE TEXTBOOKS

A. Selections from books, journals, and class materials have been copied and collected into a sizeable body of materials that students may use for class assignments and a personal bibliography. The readings will include perspectives from professional scientists, academic religious ("divinity") scholars, and biblical theology. Most of the dialogue today involves religious scholars in dialogue with scientific scholars, usually in the direction of science. Biblical theology is not a meaningful player in the academic dialogues.

B. SELECTED BIBLIOGRAPHY, additional selections from a vast bibliography

Appleman, Philip, ed. *Darwin*. 2d Norton Critical Edition. New York: W. W. Norton, 1979. A complete collection of Darwinian materials in one volume, including 19-century context, *Origin of the Species*, *The Descent of Man*, and Darwin's influence on Science, philosophy, literature, and society.

Barbour, Ian. *Religion in an Age of Science*. The Gifford Lectures. San Francisco: Harper & Row, 1990. One of the standard authors and text for issues in the sciences and academic religion with insightful chapters on views of God and the human person. This book was later presented in a revised and expanded edition as *Religion and Science: Historical and Contemporary Issues* (San Francisco: HarperCollins, 1997).

Beck, James, and Bruce Demarest. *The Human Person in Theology and Psychology: A biblical Anthropology for the Twenty-First Century.* Grand Rapids: Kregel, 2005. The authors explore issues of origin, identity, behavior, and community from an evangelical perspective.

Bender, David *et al. Science and Religion: Opposing Viewpoints*. San Diego: Greenhaven, 1988. Formatted as a debate, the book presents "opposing viewpoints" on evolution, religion and/or science, the ethical limits of science, and the age of the universe and humanity.

Brown, Warren, Nancey Murphy, and Newton Malony. *What Ever Happened to the Soul?* Minneapolis: Fortress, 1998. Traditional theological anthropology focused on "the soul" as a comprehensive term for the immaterial person. The brain was long felt to be the residence of "the soul" and, therefore, the locus of immortality. This is the reason that neurosurgery was not widespread until the Twentieth Century. Issues of the "soul" have resurfaced as a response to materialism; namely, the brain accounts for the soul and the mind. This book attempts to argue that the brain cannot account for the totality of human life.

Bruce, Robert. *The Launching of Modern American Science, 1846 – 1876*. New York: Alfred Knopf, 1987.

Bush, Vannevar. *Science, the Endless Frontier: A Report to the President on a Program for Postwar Scientific Research*. Washington: National Science Foundation, 1945. Bush, President of MIT, was commissioned by President Roosevelt to place science at the forefront of America's future. This report reflects the thinking of leading scientific scholars at the time. It is one of the most influential publications of the century.

Butterfield, Herbert. *The Origins of Modern Science*, 1300-1800. Rev. ed. New York: Macmillan/Free, 1957. This book is a long-standing standard on the history of science.

Caudill, Maureen. *In Our Own Image: Building an Artificial Person*. New York: Oxford Univ., 1992. In spite of its date, this book about turning "creation in the image of God" on its head is still very relevant.

Collins, Francis. *The Language of God.* The director of the NIH advances BioLogos as an attempt to bridge the chasm of faith and science harmoniously.

Damasio, Antonio. *Descartes' Error: Emotion, Reason, and the Human Brain*. New York: HarperCollins/Quill, 1994. An influential book by a leading neuroscientist on the brain and the human person.

Damasio, Antonio. *The Feeling of What Happens: Body and Emotion in the Making of Consciousness*. New York: Harcourt/Harvest, 1999. Damasio presents his thinking on the pivotal subject of consciousness.

Davies, Paul. *The Mind of God: The Scientific Basis for a Rational World.* New York: Simon and Schuster, 1992. The book is not so much about God, but the unlimited potentials of theoretical

Dennett, Daniel. *Darwin's Dangerous Idea: Evolution and the Meanings of Life.* New York: Simon and Schuster/Touchstone, 1996. Dennett's exploration of the "meanings" of life in light of the evolutionary theory. The reader might also consult *Consciousness Explained*.

Evans, Gillian, Alister McGrath, and Allen Galloway, *The History of Christian Theology: The Science of Theology, vol. 1*. Ed. Paul Avis. Grand Rapids: Eerdmans, 1986. A commendable history of Christian doctrine with an acknowledgement of the rise of modern science. McGrath wrote the section on "Reformation to Enlightenment."

Frith, Chris. *Making up the Mind: How the Brain Creates our Mental World*. Oxford: Blackwell, 2007. A neuropsychologist explores how the "you" that moves through the social world is a construction of your brain. Personal relationships, accordingly, are a "meeting of each other's brains."

Funkenstein, Amos, *Theology and the Scientific Imagination from the Middle Ages to the Seventeenth Century*. Princeton: Princeton Univ., 1986. The author traces the ideals of science in a skeptical direction with focus on omnipresence, omnipotence, providence and epistemology. His conclusion discusses "Kant and the De-Theologization of Science."

Gillies, Donald. *Philosophy of Science in the Twentieth Century: Four Central Themes*. This study concerns inductivism (the Cambridge and Vienna circles), conventionalism (the Quine thesis), the nature of observation, and the demarcation of science and metaphysics.

Green, Joel, ed. *What about the Soul?: Neuroscience and Christian Anthropology*. Nashville: Abingdon, 2004. Most people are familiar with conflicts between theology and science initiated by Copernicus and Darwin. Very few people are aware of the revolutionary conflicts on the horizon that are advanced by various disciplines in neuroscience. Is there a distinction between the soul and the brain? These authors answer in the affirmative.

Gregersen, Niels Henrik, Willem Drees, and Ulf Görman, eds. *The Human Person in Science and Theology*. Grand Rapids: Eerdmans, 2000. The authors from Europe and America discuss the various views of "personhood" from biology to theology and sociology. A significant sub-theme is the relationship of "mind" and "culture" to our understanding of the person.

Kilner, John. *Life on the Line: Ethics, Aging, Ending Patients' Lives, and Allocating Vital Resources.* Eugene: Wipf and Stock, 1992. An important book by a TEDS professor on life issues.

Koch, Christof. *The Quest for Consciousness: A Neurobiological Approach.* Englewood, CO: Roberts and Company, 2004. Understanding the neural basis "consciousness" is the hard problem in the neurosciences. This premier researcher argues that the brain dynamically forms, dissolves, and reforms our ever-changing sense of consciousness.

Manson, Neil, ed. *God and Design: The Teleological Argument and Modern Science*. New York: Routledge, 2003.

Newberg, Andrew, Eugene D'Aquili, and Vince Rause. *Why God Won't Go Away: Brain Science and the Biology of Belief*. New York: Ballantine, 2001. This landmark research from the University of Pennsylvania argues that "the religious impulse" is rooted in the biology of the brain. In other words, God "hardwired" humanity to worship him. D'Aquili died, and Newberg has moved on the study of "genius."

Peterson, Greg, *Minding God: Theology and the Cognitive Sciences*. Minneapolis: Fortress, 2003. With an emphasis on understanding the mind, the author tries to "do theology through the lens of cognitive science."

Peacocke, A. R., ed. *The Sciences and Theology in the Twentieth Century*. This book is a compendium of presentations at the 1979 Oxford International Symposium on the subject, resulting in six approaches to the relationship between religion and science.

Peacocke, Arthur. *Theology for a Scientific Age: Being and Becoming – Natural, Divine and Human*. Minneapolis: Fortress, 1993. Peacocke, like many academic religionists, finds the dialogue between religion and science in the evolution/becomingness/emergence of humanity.

Peterson, Greg. *Minding God: Theology and the Cognitive Sciences*. Minneapolis: Fortress, 2003. Peterson explores what it means to be "human" by surveying the state of scientific research in attempting to argue for the distinctiveness of the human person.

Polkinghorne, John. *Science and Theology: An Introduction*. Minneapolis: Fortress, 1998. The Presidents of Queens College (Cambridge) and an eminent mathematician gives us a readable introduction to the course from the academic religious perspective.

Pollock, Robert. *The Faith of Biology and the Biology of Faith*. The Schoff Lectures. New York: Columbia Univ., 2000. The author argues that the intersection of scientific creativity and compassionate religious insight is the prerequisite for the emergence of more humane medical science.

Ruse, Michael. *Can a Darwinian be a Christian?* Cambridge: Cambridge Univ., 2001. A widely read book argues that it is difficult for a Darwinian to embrace Christian belief, "but it is by no means inconceivable." Christianity in works like this are spun into a state church framework with little concern for biblical theology.

Russell, Robert John, ed. *Fifty Years in Science and Religion: Ian Barbour and His Legacy*. Burlington, VT: Ashgate, 2004. A *Festschrift* to one of the deans of dialogue between "Science and Religion." Barbour's "Process Theology" is applied to various scientific topics like physics, genetics, and the environment as well as Roman Catholicism and Buddhism.

Samson, Fred, and George Adelman, eds. *The Neurosciences: Paths of Discovery*. 2 vols. An insightful collection by a large group of professionals in brain science.

Shepherd, Gordon. *Creating Modern Neuroscience: The Revolutionary 1950s*. Oxford: Oxford University Press, 2010. A wonderful analysis by a leading scholar who has been professor at Yale University School of Medicine from 1967.

Stannard, Russell, ed., *God for the 21st Century*. A collection of highly influential academics, imagining what religion might look like under the sovereignty of science. The universe is so vast, so there must be other life forms in the multiverses. The direction of the articles is pan(en)theistic, God as evolutionary force guiding existence toward humane goals.

Walters, Ronald G., Ed. *Scientific Authority and Twentieth-Century America*. Baltimore: Johns Hopkins Univ., 2001. An historical survey of science's attempt to deal with uncertainty and reform in the century.

Ward, Keith. *The Big Questions in Science and Religion*. Perhaps the best single volume on the subject of this course, but far outside of Dallas Seminary's curriculum. West Conshohocken, PA: Templeton Foundation, 2008. A leading UK divinity professor and ordained Anglican priest, who somehow ignores Jesus in academic discussions of anthropology, cosmology, and morality. The readings contain a couple of chapters from the book.

Wootton, David. *The Invention of Science: A New History of the Scientific Revolution*. New York: HarperCollins, 2015. A highly acclaimed addition to an already vast bibliography.

Zachary, Pascal. *Endless Frontier: Vannevar Bush, Engineer of the American Century*. Cambridge, MA: MIT, 1999. A lengthy biography of the author of "The Endless Frontier."

IV. COURSE REQUIREMENTS

The course is structured as **a colloquy**. Students are expected to submit mini-papers each class over the assigned readings that will serve as the basis of class discussions. The readings will provide the student with a sizeable and diverse bibliography. Additional sources, from beginner to advanced, are listed above as well. Students may select a single source instead of the broad readings, if they have a specific focus that they wish to take from the course. The short papers should be **about two pages (double spaced)** in length. They will be submitted at the end of each class period. These papers should summarize the content of the articles in outline or prose form. Also, they should include a question that the student presents to the class. The readings which are on closed reserve at Turpin Library will have several questions to guide the students' summaries. A course grade will consist of the quality of these papers and class discussion.

V. COURSE POLICIES

A. **Weight Given to Course Requirements for Grading**
Grading on all options in this course will attempt to honor variables among students such as relative exposure to the course content and varying demands on the student's time. **The course will tend to favor less advantaged students,** so that a passing grade is possible for students with unforeseen handicaps and pressures. However, advanced materials are included in the class notes for those who can profitably use them.

B. **Class Participation**
Is encouraged.

C. **Late Assignments**
Late work that is turned in after acceptable due dates must be discussed with the professor to determine the circumstances for lateness and the penalty to be assigned, ordinarily one grade for each week of tardiness. **The most important deadline for the student is the last class period, when all of the course requirements will be due.**

D. **Absences**
A class role will be available at each class period. **Four unexcused absences** are allowed before the student's grade will be reduced. Under no circumstances can one student "cover" in any way for the absence of a classmate.

E. **Letter/Numerical Grade Scale**

A+	**99-100**	**B+**	**91-93**	**C+**	**83-85**	**D+**	**75-77**	**F**	**0-69**
A	**96-98**	**B**	**88-90**	**C**	**80-82**	**D**	**72-74**		
A-	**94-95**	**B-**	**86-87**	**C-**	**78-79**	**D-**	**70-71**		

1. A = excellent work (thorough, accurate, insightful)
2. B = good work (above average but lacking in precision and insight)
3. C = average work (satisfactory but not noteworthy)
4. D = passing work
5. F = failure to meet minimal standards

VI. COURSE SUPPLEMENTAL INFORMATION

Dallas Theological Seminary works to provide reasonable and appropriate accommodations to students with psychological, medical, physical, and learning disabilities. A student desiring or needing accommodations on the basis of such disabilities or of medical incidents such as hospitalization or severe injury is to contact the Director of Services for Students with Disabilities (https://students.dts.edu/studentlife/disability-services/). If the student is aware of a condition that may impact his/her studies, the student should contact the Director of Services for Students with Disabilities prior to the beginning of the semester or at the onset of a crisis.

VII. COURSE SCHEDULE

August 24 = classes begin

There will be three sections to the course. The first one focuses on issues that we face (present). Some of the subjects that will be discussed are working definitions of biblical theology, academic religion, and science (or the sciences). Then various topics will follow like method and approach, truth claims, views of human personhood, the origin and speciation of humanity, and the ages of humanity and the universe.

Reading Week and Thanksgiving Recess, November 16-27

The second section will deal with historical issues that led to present conflicts. Some of the subjects that will be discussed are the Cosmological Revolution, the Enlightenment's rejection of tradition, the rise of

the Technological Revolution, the philosophical move to naturalism (empiricism) and human autonomy, and a number of topics relating to science's 20th-Century dominance like the "Endless Frontier," the Scopes Trial, the growing suppression of religion in public squares, biomedical ethics, genetics, the environment, and neuroscience.

The third part of the course will concern the future direction of the sciences and religions. Can they contribute to each other or will science continue to dominate educational priorities?

December 14-17, exam week