

## SCIENCE & RELIGION

### CC ALUMNI READING GROUP SYLLABUS 2024-25

The readings for this year are drawn from a two-week study abroad seminar in Cambridge UK, led by Prof. Matthew Puffer in the 2024 spring semester. The texts selected are meant to represent a variety of ways that human beings have understood the relationship between science and religion. Each offers a different perspective. Some examine the emergence of modern science and religion as distinct from what they would have meant to ancients, others trace the changed relationship between science and religion as one or the other concept evolved. Each affords a distinct vantage that collectively troubles any simplistic conflict vs. complimentary binary. They also move us beyond merely controversial issues and advance the more constructive dialogues that have taken place between religious and non-religious persons, theologians and scientists. The texts engage topics such as cosmology, evolution, ecology, human freedom, and morality—themes that have shaped the way humans have understood themselves, the natural and supernatural world, God, religion, and science. Implicitly and explicitly, these texts tell somewhat different stories about the development of religion, science, and their relation—sometimes competing, sometimes complimentary stories—and each draws variously upon ancient, medieval, and modern history, figures, and ideas of discovery, innovation, and revolution. As always, read carefully, interpret responsibly, and discuss thoughtfully!

#### TEXTS

1. Peter Harrison, selections from *The Territories of Science and Religion* (2015)
2. Max Weber, “Science as a Vocation” (1917)
3. C.S. Lewis, selections from *The Discarded Image: An Introduction to Medieval and Renaissance Literature* (1964), “The Funeral of a Great Myth” in *Christian Reflections* (1967), “Religion and Science” in *God in the Dock: Essays on Theology and Ethics* (1970).
4. Dietrich Bonhoeffer, selections from *Letters and Papers from Prison* (1945)
5. Thomas Kuhn, “The Function of Dogma in Scientific Research” (1960), “The Nature and Necessity of Scientific Revolutions” and “Progress Through Revolutions” in *The Structure of Scientific Revolutions* (1962)
6. Lynn White, “The Historical Roots of Our Ecologic Crisis,” *Science* (1967)  
&  
Pope Francis, *Laudato si’* (2015)
7. Lorraine Daston, selections from *Against Nature* (2019)  
&  
David Wallace-Wells, “The Uninhabitable Earth” (2017)

## Session 1: Mapping the Terrain of Science and Religion

Text: Peter Harrison, *The Territories of Science and Religion* (ix-xi, 1-19)

As we begin our inquiry, we could hardly ask for a better guide and preliminary map of the territory of science and religion than is offered by Peter Harrison in his 2011 Gifford Lectures, published as *The Territories of Science and Religion* (University of Chicago, 2015). Harrison describes in the preface two aspects of the story about science and religion that he intends to subvert. He seeks to retrace the history by which “these two notions both begin as inner qualities of the individual—‘virtues,’ if you will—before becoming concrete and abstract entities that are understood primarily in terms of doctrines and practices” (x). In seeking to persuade his audience of his story about science and religion as involving a transition from two complimentary virtues to two conflicting doctrines and ways of life, he contrasts this story with another familiar one. “I am seeking to call into question common narratives about the trajectory of science ... beginning with its birth among the ancient Greeks, its decline in the Christian Middle Ages, its revival with the scientific revolution, and final triumph with the professionalization of science in the nineteenth century” (x). In the first chapter of his book, Harrison sketches out the historical narrative in brief and presents an overview of the argument of the whole.

### Discussion questions

- According to the opening section titled ‘Maps and Territories’, what happens when we project modern notions of science and religion backward historically onto pre-modern texts and concepts?
- In ‘The Joints of Nature’ Harrison argues that science and religion are not “natural kinds.” What are the implications of this claim? How is his argument supported by the observation that the fields of “natural history” (e.g., geology, evolutionary biology) and “natural philosophy” (e.g., chemistry, physics) were viewed as separate enterprises and brought under the umbrella of “science” only in the 19<sup>th</sup> century (a reality still reflected in older cities often maintaining a separate “Natural History Museum” and a newer “Science Museum”)?
- In the sections ‘The History of “Religion”’ and ‘The History of “Science”’ and elsewhere in his book, Harrison describes and characterizes the development and transformation of religion and science in a variety of ways (turned inside-out, objectification, externalization, systemization, etc.). How do you see these two stories relating to each other – similarities and parallels, as well as tensions, differences, and independent elements?
- Given the different meanings ascribed to “science” and “religion,” how might these concepts be viewed variously as complimentary, as inherently in conflict or competition, or as operating on completely different registers such that conflict is impossible or involves a category mistake?
- How does the chapter’s framing device of an analogy to an imagined Israel-Egypt war and the “idea of a nation” prepare us to think about “territories” of “science” and “religion”?

## Session 2: Separating Modern Science and Religion

Text: Max Weber, “Science as a Vocation” (1917)

With Harrison’s preliminary map in hand, we can begin to situate our authors within some potential topographies of science, religion, and their relation. Max Weber (1864-1920) presents what has become a paradigmatically modern account of science as in tension with, if in some respects resembling, a religious vocation. The lecture we are reading was delivered in Munich as Germany was coming to grips with its impending defeat in the Great War. That this defeat was in no small part due to America’s intervention makes the early comparisons between German and American academic institutions all the more interesting. Weber’s audience was a group of young, aspiring academics who were eager for some wisdom from a senior scholar about the conditions of possibility for a career in science. Rather than encouragement and inspiration, however, Weber channels Dante’s *Inferno*, “Abandon all hope, ye who enter here.” The prospects for success are slim indeed, and those most likely to persevere, it seems, are those who approach their work with something like religious inspiration and sense of calling. If there is an irony here, it was not lost on the author who identified the Protestant work ethic as the “spirit” of capitalism.

### Discussion questions

- How would you characterize the main problem or question about science as a vocation that Weber aims to address? How does the argument’s structure serve to achieve this end?
- How are the “external conditions” (129-134) related to the “inward calling” (134ff) of the scientific vocation?
- What is the impact of “specialization” upon science as a vocation?
- How does what youth think happens in a laboratory compare to what actually happens?
- Do we think similarly about the similarities and differences between “art” and “science”? How might this distinction between art and science pertain to the liberal arts or humanities?
- Weber asserts a difference between “moderns” and “savages” as one of disenchantment—a distinction regarding what one believes one *could* learn. Are there analogous distinctions in our contemporary culture?
- What does “science as a vocation” mean to the disciples of science? (140)
- Is Weber right to say that Plato’s *Republic* is the opposite of how youth experience science today?
- According to Weber, is it possible to “Follow the science”? Is Weber correct that science cannot answer what shall we do and how shall we live (143)?
- What are the implications for science of rejecting the vocations of the prophet or partisan activist? How does this compare to Harrison’s story of science and religion, ancient and modern?
- What does science do with “miracles”, “revelation”, or “supernatural interventions”? How does science deal with “inconvenient facts”? (147)
- What seems to be significant about “disenchantment”? (148-9)
- How is science related to our thinking about matters of ultimate concern? (151) About justice and injustice, slavery and poverty, suffering and joy?
- How would you characterize Weber’s understanding of science? Of religion? Of their relation? Is it fair to characterize science as having to do with facts, whereas religion has to do with values?

### Session 3: The Myth of Conflict Between Natural and Supernatural

C.S. Lewis (1898-1963) is perhaps best known as the author of *The Chronicles of Narnia* series and works of Christian apologetics such as *Mere Christianity* and *The Screwtape Letters*. His academic training, however, was as a scholar of medieval literature. In the texts selected, we find him arguing at the intersection of these interests for a particular way of interpreting scientific and religious inquiry, not only as we find these pursuits expressed in ancient and medieval literature, but also as he encountered scientific and religious claims in the contemporary world around him.

Texts: C.S. Lewis, *The Discarded Image*, “The Funeral of a Great Myth,” “Religion & Science”

#### Discussion questions

*The Discarded Image*, 1-21, 216-223

- According to Lewis, what is the “image” and what is the process by which it was “discarded”?
- In what ways do we and our fellow citizens show signs of having discarded the medieval model? And, perhaps, of not having discarded it entirely?
- What is the relationship between science and religion in this model (cf. 16-19)?
- What is entailed in the shift from a devolutionary to evolutionary model in terms of how humans fit phenomena to imagination (220-23)?
- What happens when individuals hold that either the Medieval or Modern Model is true?

#### The Funeral of a Great Myth

- What is the great myth of the late 19<sup>th</sup> and early 20<sup>th</sup> century?
- How does the great myth compare to the “modern model” of the *Discarded Image*?

#### Religion & Science

- How does Lewis in this essay define “science” and “religion”? How are they related to one another? To nature and supernature?
- What is the significance of “interference” to the argument?
- How would you describe Lewis’s understanding of science, religion, and their relation? Is it fair to characterize science as inquiry into the normal operation of the natural world, and religion as inquiry into the beginnings, interference, and ends? How does Lewis’s view compare to Weber’s?

## Session 4: Scientific Maturity for a “Religion-less” Christianity

Text: Dietrich Bonhoeffer, *Letters and Papers from Prison*

Dietrich Bonhoeffer (1906-1945) was a Lutheran pastor, theologian, ecumenist, and peace activist. He wrote profoundly about community, grace, and ethics, centered on the question, ‘Who is Christ for us today?’ Witnessing the racism of segregation in Harlem and the Jim Crow South sensitized him to resist the atrocities of the Nazi Regime much earlier than most, and compelled him initially into church resistance and eventually into political resistance culminating in a conspiracy against the Hitler regime aimed to install a new government that would end the war and those atrocities. The letters we will read were composed during his incarceration in Berlin after the crucible of interrogations. Although these texts were composed before Lewis’s, Bonhoeffer’s perspectives on science and religion are more resonant with later writers. In part this is due to his father and brother being among the leading psychologists and physicists in Berlin, affording Bonhoeffer an unusual familiarity with the latest developments in academic psychology, quantum mechanics, and the sciences in general. In another sense, however, they resonate due to the significant influence Bonhoeffer’s writings had on theologians, such as Karl Barth, as well as later scholars interested in the relationship of science, religion, and secularity.

### Discussion questions

- What are the big questions Bonhoeffer claims to be wrestling with regarding Jesus Christ, religion, and God? (April 30) What is the “religion” beyond which modern “religionless Christianity” has matured?
- How do Bonhoeffer’s affirmations – for example, of God at the center, not at the boundary; and of finding God in what we know and “scientific knowledge,” not in what we don’t know and unsolved questions -- and his critique of a *deus ex machina* compare to Lewis’s accounts of science as inquiry into the natural and of religion as inquiry into supernatural “interference”?
- What does it mean to “interpret in a religious sense” or in a “worldly/religionless” sense? (May 5)
- What seems to have given rise to Bonhoeffer’s new line of inquiry? (May 29)
- What is a “god of the gaps”? What does it mean to understand “God” as a “stop-gap”? What does it mean to find God in what we know, not what we don’t know?
- What is a “world come of age”? What is wrong with the project of Christian apologetics? (June 8)
- What is the story Bonhoeffer tells about autonomy, art, science, ethics, etc.? (June 8 - July 16)
- Is this the same as Weber’s story about arts and sciences? Is it the same as Lewis’s story about Darwinian evolution? What is new in Bonhoeffer’s story about science and the mistaken place and uses of religion? What seem to be his feelings about his observation that, in every sense, we live in the world *etsi deus non daretur*? In what ways has God been pushed out of the world?
- If “religion” is jettisoned, what does it mean to be a Christian, to receive the calling “to share in god’s suffering at the hands of a godless world” (July 18), “to learn to have faith” (July 21)?
- In what sense is “blessing” a mediating theological concept? (July 28)
- Did the “Outline for a Book” clarify anything from the earlier suggestive and provocative letters?
  
- How would you characterize Bonhoeffer’s account of science? Of religion? Of their relation? How does it compare to the texts we’ve read from Harrison, Weber, and Lewis? Who do you find most persuasive?

## Session 5: Science As Catechetical Confirmation and Reformation of Tradition

Text: Thomas Kuhn, “The Function of Dogma in Scientific Research”

What if scientists are nothing like unbiased, open-minded, discoverers they are imagined to be, but are instead prejudiced, close-minded, priestly curators of a dogmatic tradition into which they have been catechized? This destabilizing account of the scientist underwrites the story told by Thomas Kuhn (1922-96) in his seminal work on the history of science, *The Structure of Scientific Revolutions* (1962).

### Discussion questions

#### The Function of Dogma in Scientific Research

- How compelling do you find Kuhn’s competing depictions of scientists—as explorer vs. as puzzle-solver—with the litany of their contrasting attributes? What are some sources of our images of scientists and how might these images distort the actual practice of science?
- How is scientific education distinct from arts? How is it distinct from the humanities? Why is this important to Kuhn? How does this compare to the account of Weber and others?
- What characterizes a Kuhnian “paradigm”? Is this comparable to Lewis’s “models”?
- What is involved in the “normal science” that most scientists are doing most of the time?
- How do anomalies and crises serve to overturn dogmas of scientific tradition, the invention of new theories, and revolutions in paradigms?

#### IX. The Nature and Necessity of Scientific Revolutions

- What does Ch. IX add to our understanding of the nature of “scientific revolutions”?
- What parallel features of *political* and *scientific* “revolutions” justifies the use of this metaphor?
- Why can’t a choice between paradigms be made on the basis of normal science?
- What is significant about the fact that the “assimilation of either a new sort of phenomenon or a new scientific theory must demand the rejection of an older paradigm”?
- Are you convinced by the discussion of Newtonian dynamics vs. Einsteinian dynamics that this represents not a cumulative acquisition of *novel* scientific knowledge but a paradigm shift?
- How does the concept of scientific revolutions alter our understanding of nature? Of science?
- What does it mean to say that paradigms are “constitutive” of science? determine normal science

#### XIII. Progress Through Revolutions

- What is the relationship between science and progress?
- What kind of progress is made in *normal science*? In *extraordinary science*?
- How is scientific progress similar and different from other fields? Is this like Weber?
- In rethinking science and progress along Kuhn’s evolutionary lines, must we also relinquish the image of science as making progress *towards* truth? As bringing us *nearer* to truth?
- Kuhn makes extensive use of religious similes and metaphors to describe the work of scientists and the nature of scientific revolutions and progress. Is it fair to characterize science *as* a religion on Kuhn’s terms? Is there a better description of the relationship of Kuhnian science to religion?

## Session 6: Constructed Ecologies of Science and Religion

Contemporary discourses about the ecological crisis criticize and laud both religion and science as contributing causes and as potential solutions. The historian of technology, Lynn White (1907-87) placed a particular deal of guilt at the feet of Latin Medieval Christianity while simultaneously viewing this tradition as uniquely positioned to remedy the crisis. Religion got us into this mess and only religion can get us out, he argues, and he proposes a new democracy of all creatures as embodied by Saint Francis of Assisi. Nearly fifty years later, the chemist and Jesuit priest Jorge Mario Bergoglio took “Francis” as his papal name in honor of St Francis, and in 2015 he promulgated the Roman Catholic Church’s first environmental encyclical, *Laudato Si’*. The scientist-layperson and the scientist-priest present science and religion as interacting in an ecology and both draw attention to competing interpretations of human nature and the biblical account of the human as “the image of God” as crucial to proper human-nonhuman relations.

Texts: Lynn White, “The Historical Roots of Our Ecologic Crisis” (1967)  
Pope Francis, *Laudato Si* (2015)

### “The Historical Roots of Our Ecologic Crisis”

- White observes that our “ecological crisis is the product of an emerging democratic culture.” What is the story he tells about how modern democratic culture arose from science and religion? Why can’t we “science” our way out? What is the significance of the Baconian creed? (1203)
- How did modern Western views of science and technology (1204) develop out of Medieval views about human-nonhuman relations (1205)? How does this compare to Lewis’s Medieval and Modern Models? Are White’s claims persuasive: “What people do about their ecology depends on what they think about themselves in relation to things around them. Human ecology is deeply conditioned by beliefs about our nature and destiny—that is, by religion.” (1204)? And “Christianity is the most anthropocentric religion the world has ever seen.” (1205)? In what respects do Latin Western and Greek Eastern Christianity differ? (1206)
- What makes Francis of Assisi particularly attractive as a patron saint of ecology? (1207)

### *Laudato Si’*

- What kinds of authorities does Pope Francis draw into the conversation? (7) Where are we to look for solutions? (9)

#### Ch. 1 – What is Happening to Our Common Home

- What is the impact of rapidification? (18) What is the source of the unique dignity of human beings? (43) What are the risks and benefits of the new media? (47) Who are the excluded majority? (49) Are you persuaded that population growth is not the problem? (50) What powers stand in the way of establishing the necessary new legal framework? (53-54)

#### Ch. 2 – The Gospel of Creation

- To what audience is the document addressed? (62) What differentiate the interpretation of human creation that Francis favors (65-66) from the anthropocentrism that he critiques (66-69)? What are the implications for private property? (93) What role does Jesus play? (98-99)

Ch. 3 – The Human Roots of our Ecological Crisis

- How does this allusively titled chapter respond to the diagnosis of White? What is needed to resist the assault of the technocratic paradigm? (111) How are we to think of GMOs, antibiotics? (133-4)

Ch. 4 – Integral Ecology

- How might the recognition of our integral ecology—linking *environmental, economic, social, cultural, daily life, moral, common good, future generations*—call for a cultural paradigm shift?

Ch. 5 – Lines of Approach and Action

- What are the major paths of dialogue? (163-200) What did we learn from the financial crisis? (189) What should we have learned? (195-200)

Ch. 6 – Ecological Education and Spirituality

- What needs to change beyond laws? What habits are needed? What kinds of conversion?
  
- White's and Francis's ecological concerns inform a complex account of the relationship of science and religion beyond simply conflicting or complimentary worldviews. Both science and religion are potential allies for practical aims without being reducible to mere tools. Are there aspects of their accounts of science or religion that you find especially novel or important for contemporary crises?



## Session 7: Science and Religion Against Natural Disaster

Our final session engages authors who are raising questions about what our stories about science and religion do and do not enable us to see in what we call “nature.” Director emerita of the Max Planck Institute for the History of Science, Lorraine Daston (b. 1951) seeks to understand why the naturalistic fallacy is so persistent. Why is it that humans derive moral norms from the natural world? Her investigation doesn’t suggest the stubborn residue of premodern religion but instead the taxonomic faculties of human reason. When we look out at nature, we *create* categories to structure what we find—namely, specific natures, local natures, and universal natural laws. The journalist, David Wallace-Wells (b. 1982) writes of climate change that “we are unable to comprehend its scope” and “we suffer from an incredible failure of imagination.” How do our taken-for-granted assumptions about science and religion condition what we see?

Texts: Lorraine Daston, *Against Nature*  
David Wallace-Wells, “The Uninhabitable Earth”

### Discussion questions

#### *Against Nature*

- What are the implications if *human* reason is not universal reason (natural to all rational beings), but is instead particular to the human?
- Does “is” imply “ought”? What are some examples that serve to demonstrate the problem of the naturalistic fallacy? What is implied by “the revenge of nature”?
- What is a specific nature? What is the science of specific natures? What is its disruption? Why did early modern explorers consider the platypus for a monster?
- What are local natures? What is the science of local natures? What is its disruption? Are there significant differences between the feelings of terror in the face of what is labelled an “act of God” [tornado, earthquake, tsunami] and “nature’s revenge” [breached dams, climate change]?
- What is universal nature law? What is the science of universal laws? What is its disruption? Is there a wonderful antinomy in affirming both universal natural laws and human freedom?
- What do the passions of the unnatural (horror, terror, and wonder) tell us about ourselves?
- How does Daston’s characterization of science, religion, and their relation compare to others?

#### “The Uninhabitable Earth”

- Wallace-Wells’s introduction (I: Doomsday) and conclusion (IX: The Great Filter) frame the argument as involving several interrelated claims: (a) our inability to comprehend the dire future of the planet, (b) the reticence of scientists to tell us the truth (i.e., a social psychology of science), (c) the role of scientists and engineers in causing/solving our problems, and (d) the complex system of cascading of ecological issues. Which facets of the author’s argument do you find most interesting or compelling? Is the primary problem our ignorance or denial? Or “scientific reticence” about climate change? Or our engineering the causes without workable solutions? Or something else?

- How did you respond to sections II-VIII? Were there elements you found particularly interesting? Disturbing? What information was news to you? What details seem dated or prescient now in 2024?
- How does Wallace-Wells characterize the interviews with climate scientists? Which proposal seems most plausible: geoengineering, carbon-tax, carbon extraction, ... sixth great extinction?
- What do you make of Wallace-Wells' depiction of stories as that which enables us to "see"—"the dilemmas and dramas of climate change are simply incompatible with the kinds of stories we tell ourselves about ourselves"?
- What are we to make of the final two paragraphs? Are there particular words that popped off the page? How might our investigation of science and religion enable us to see even more than Wallace-Wells, even as he turns to religious language to make sense of climate catastrophe?
- How might understanding the development and dynamics between science and religion contribute toward resolving the great challenges facing humanity in the 21<sup>st</sup> century?