

TEACHING THEOLOGY AND SCIENCE IN CONTEXT

Hermeneutics and Cultural Wisdom

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The following is the text of a presentation made to an International Symposium on “Religion and Science in Dialogue: The Consequences for Religious Education,” held at the Nanzan Institute for Religion and Culture on 29–30 January 2016.

I HAVE BEEN asked to share my thoughts about teaching theology and science, but I am acutely aware of the fact that I speak from a particular contextual perspective. I am an American who, for better or for worse, has been shaped by the way that the “religion and science” dialogue has been approached in that culture. My primary teaching experiences have been in seminaries, which is a somewhat peculiar educational context. As a seminary professor my overall teaching goal is to help Christians preparing for ministry to learn to responsibly interact with the natural sciences in the process of theological reflection. This is not the only goal one may have when teaching religion and science, nor is it the only possible audience. However, what follows is completely informed by and dependent upon my specific experiences. I have tried to offer some insights and suggestions that can be generalized beyond my context, but I do not pretend to understand any other culture or context but my own and I certainly don’t want to speak for anyone else. I can only share my contextualized experiences, which I hope will be found helpful in some way.

I have been teaching theology and science in the United States in one capacity or another for about ten years. I started as a Ph.D. student at Princeton Theological Seminary where I studied under the illustrious professor of theology and science, J. Wentzel van Huyssteen. I was a “preceptor” (teaching assistant) for a number of theology and science courses there. In addition, for three years I directed the Science for Ministry Institute at Princeton, a training program in theology and science for pastors and scientists. I was the primary instructor for that program, and I also designed the entire institute curriculum. After obtain-

ing my doctorate in theology and science I taught courses in philosophy at The College of New Jersey for one year. My family then moved to the state of Minnesota, where I am now an Assistant Professor of Theology at Bethel Seminary. I teach many different courses there, including systematic theology and philosophy, but my favorite course to teach is theology and science.

I was originally trained as a mathematician, computer scientist, and engineer. This is certainly one of the sources of my interest in the interdisciplinary dialogue between theology and science, but there are also other sources. Both of my grandfathers were Baptist pastors and missionaries and so the importance of faith is woven into the fabric of my family of origin. However, my father was a biology professor who firmly believed in evolution, a fact that frequently put him at odds with his family, church friends, and Christian university employer. My father did not have a clear way to integrate his faith with his scientific convictions, even though his life was indeed faithful, but from his example I adopted a fascination with the question of whether it is possible to achieve such integration.

The subtitle of my talk is “Hermeneutics and Cultural Wisdom.” Allow me to briefly explain what I mean by this. In my opinion interdisciplinary work is fundamentally a form of hermeneutics or interpretation, a claim which I have argued at length in my first book.¹ This is true not only for the practitioner but also for the teacher. Teaching theology and science is one big complicated hermeneutical exercise, with many layers of interpretation operating between teacher, students, and various disciplines. Most importantly, a good teacher will be an accomplished interpreter of culture and context, which requires what I am calling “cultural wisdom.” Cultural wisdom is the ability to effectively discern the contextual needs of others, to anticipate how their cultural backgrounds have prepared them for dialogue and learning. This is a skill any teacher should have, but I believe it is especially important for the kind of interdisciplinary instruction required to teach theology and science.

My paper is divided into two parts. In the first part I describe some basic principles that I believe transcend context. These principles are (1) having clear objectives, (2) knowing your audience, (3) paying attention to both sides, (4) not just focusing on knowledge, and (5) modeling healthy integration. In the second part I offer a list of specific strategies, which I suspect are more directly tied to my particular educational context. These strategies are (1) dispelling common myths, (2) returning to the Bible and history, (3) using biographies, (4) focusing on specific topics, (5) encouraging student choices, and (6) using creative media resources.

1. Kenneth A. Reynhout, *Interdisciplinary Interpretation: Paul Ricoeur and the Hermeneutics of Theology and Science* (Lanham, MD: Lexington, 2013).

Part 1: Basic Principles

Have Clear Objectives

Any good teacher knows the importance of having clear teaching objectives, or student learning outcomes. This is also true when teaching theology and science, but the interdisciplinary nature of the topic does create some unique challenges for the instructor. Universities and seminaries in the United States are structured by discipline, and professors are typically trained as specialists. They are comfortable being relative experts in their particular field, so even when teaching a class for the first time they usually have some level of familiarity and comfort with the subject matter. Teaching an interdisciplinary subject like theology and science is different, because the instructor is faced with needing to address disciplines that he or she is not trained to address. (It is even possible that a student will have a deeper background than the instructor in a particular subject.) This problem surfaces immediately, because defining course objectives precedes course design, which in turn precedes course execution. But defining desired learning outcomes forces a consideration of the multi-disciplinary nature of teaching theology and science.

Let me be more concrete. I am a professor of systematic theology, but when I teach theology and science I must ask whether I can reasonably expect my students to master particular scientific topics. For example, I routinely make “learning an accurate picture of evolutionary theory” one of my course objectives, but this presupposes that I am qualified to teach this to my students and evaluate their performance on this goal when I am not myself a biologist. I believe strongly that it is important and vital that I help my students correct misunderstandings of this most controversial scientific idea, but by definition this requires me to step outside of my disciplinary specialty and assume the role of science instructor, at least to some degree. I have spent a great deal of time and effort to ensure that I can accomplish this in a responsible manner, at least with respect to evolution, and I have some advantages due to the fact that I have advanced training in both theology and a scientific discipline, but even so I am not equally comfortable with every important scientific topic and I have to be careful when defining teaching and learning objectives.

There are some strategies one can use to address this challenge. *Team teaching* is an excellent way to have multiple disciplinary experts address topics as different as theology and science, and this may be an ideal arrangement for courses of this nature. Unfortunately, many American university systems are not structured to naturally support team teaching because teaching loads are tied to specific courses and universities don’t want to pay two people to teach the same course. An alternative strategy that gets a similar result is to use *guest lecturers*, and I have frequently used this strategy to great effect. *Textbook selection* is also

key. Picking the right set of textbooks is important for any course, but even more so when the instructor needs to augment a lack of specialized training or knowledge with quality treatments of other disciplines. For example, I usually assign at least one book whose sole function is to communicate an accurate representation of a given science, and I will often consult with trusted scientific colleagues to confirm that my chosen text will accomplish that goal.

It is appropriate here to pause and give a word of caution about interdisciplinary textbooks. Just as teachers of theology and science are rarely trained in multiple disciplines, authors of books in “theology and science” are not usually equally competent in both theology and science. It is not hard to find books written by theologians that do not adequately address the sciences and books written by scientists that do not adequately address theology, and in my experience I have never found a perfect textbook. Authors, like teachers, typically work in a specific disciplinary context and this colors the way they approach topics and questions. It is therefore important that the teacher exercises a kind of hermeneutical wisdom when selecting texts, which involves careful deliberation on the coordination of the instructor’s disciplinary context and expertise with the disciplinary context and expertise of the author under consideration. As an example, I will sometimes pick a text that is strong on the science but weaker on the theology because I am confident in my ability to add any appropriate corrections to the theological side of things. This also tends to work better for my audience, which have usually been seminary students.

Know Your Audience

The public face of the “religion and science” dialogue in the United States is framed by and filtered through the so-called “culture wars,” which are popularly depicted as a struggle between traditional, conservative Christian values and progressive “secular” forces. Much of this is overblown in the details, but its impact on our political and popular culture is real, profound, and often disturbing, and so I am forced to address this in various ways in my theology and science courses. In particular, I have to face the fact that many of my students may be entirely ignorant on the question of how to integrate theology with science but they have a great deal of exposure to a model of religion and science driven by radicals and characterized by conflict. On the side of religion, fundamentalist creationists and politically-active intelligent design proponents are the loudest voices, whereas outspoken scientific atheists dominate the other side of the “conversation.” Most of my students come to my courses with expectations shaped by this toxic public discourse.

As I mentioned earlier I have taught theology and science in two different seminary contexts, first at a relatively liberal Protestant “mainline” school and now at a relatively conservative evangelical school. These two institutions share

many important features, such as a common commitment to training future leaders of the Christian church, and they are not monolithic in terms of their students, but in general the students in each context have different concerns about theology and science generated in large part by their different interpretations of the culture wars. My evangelical students tend to be more skeptical about science and are worried that unwarranted materialist and atheist assumptions are lurking behind ideas like evolution, whereas the mainline students were more likely to trust the science but may be dismissive of conservative religious concerns. There are typically misunderstandings in both camps, but they aren't always located in the same place so I have had to adjust my assumptions and teaching techniques to match each context.

Knowing one's audience is therefore extremely important. My course objectives are designed to meet the contextual needs of my students, or at least my perception of those needs which is itself an interpretation based on my own experience. For example, in my current context I spend quite a bit of time on the content and scientific basis for evolutionary theory, which many of my students are predisposed to doubt. I also work to dispel many common myths about evolution, since these tend to create unnecessary interdisciplinary roadblocks. Compare this to how I taught in a more liberal context, where I spent far more time addressing philosophy of science and encouraging a more accurate and chastened view of scientific practices. I refer to the skill required to make these choices as a kind of "hermeneutics" or "cultural wisdom," because it involves developing an empathetic understanding of the cultural context of my students and how that prepares them for learning.

Pay Attention to Both Sides

The misunderstandings I commonly see in my students are not limited to the scientific ideas, but are just as frequently found on the side of theology. Teaching theology and science thus requires attention to both sides of the theology and science equation, in order to correct such misunderstandings, accurately locate problems, and generate potential solutions. I find that students frequently misdiagnose the relationship between Christian theology and the natural sciences. A prime example among my evangelical students is the belief that science threatens the Christian doctrine of creation. Some of this is based on confusion about the sciences, but mostly this is an issue generated by ignorance about the historical doctrine of creation. These students have been led to think about "creation" as limited to the question of *how* God *originally* created the world and its inhabitants. So, for example, evolution is automatically presumed to contradict Christian teaching because if that is how living organisms developed and formed then there seems little if any room for a creator to do the special acts of "making" or "creating." But this is a misunderstanding of the content and func-

tion of the doctrine of creation, which is less about how or when God did it but rather that all creatures owe their existence to the past, present, and future gracious presence of the one and only God. In other words, the question of whether God specially creates by fiat in an instant a few thousand years ago or instead creates through natural processes over the course of a multi-billion year history is in some ways beside the point, because in either case *God creates it all*, and this is the important theological point. All creatures owe their existence to God.

There are nevertheless real points of conflict between science and theology, specific areas that continue to challenge people of faith. For example, both my evangelical and mainline students can appreciate the fact that human evolution seems to contradict a number of traditional theological conceptions of human nature, sin, and redemption. The problem is that for many of my students there is a general lack of clarity regarding where the real challenges are actually located, and so it is imperative to address both theology and science. Such a clarifying exercise tends to be existentially beneficial for my students, because they can then confidently put their finger on the root of each authentic problem, whether it is biblical/exegetical or theological/systematic, and other issues can be dropped as unimportant.

Another common problem, which I referred to earlier, is that there are many popular misconceptions about science. In fact, this is something that *both* sides of the culture wars get terribly wrong, because they both assume that belief and knowledge must confirm to a particularly narrow model of empirical justification. Materialist atheists and religious fundamentalists agree on this, since they are both children of the modern experiment in western philosophy that came to valorize empiricism and foundationalist methods in epistemology. I won't get into more detail of this history here, except to say that I always spend time in my theology and science courses teaching (western) philosophy of science, which even among atheist philosophers has almost completely overthrown more "positivist" approaches to science. It is imperative to paint an accurate picture of scientific practice, not because it has been chastened by contemporary philosophy of science but because such accuracy is a prerequisite for a productive interdisciplinary dialogue.²

Don't Just Focus on Knowledge

Part of the reason I spend so much time on philosophy of science is that my students generally need better tools for thinking about knowledge, since many of the conflicts between science and theology are seen as conflicts of belief and

2. Two books that I like using in this regard are Alfred I. Tauber, *Science and the Quest for Meaning* (Waco, TX: Baylor University Press, 2009) and Peter Godfrey-Smith, *Theory and Reality: An Introduction to the Philosophy of Science* (Chicago: University of Chicago Press, 2003).

truth. However, in my experience it is a mistake for an instructor of theology and science to teach as if the content of their students' beliefs is paramount. Knowledge is certainly something to be concerned about, but it is far more important to pay attention to the affective issues of student experience. In other words, it is not enough for me to tell my students that they need to change the way they think about this our that idea, even as I attempt to correct misunderstandings, because beliefs are not merely structured as rational assent to apparently superior ideas. Beliefs are also driven and supported by emotions, including and especially fear and anxiety. I therefore make many of my course planning decisions according to what I think will help reduce fear and anxiety in my students, not because I am trying to protect them from feeling badly, but rather because the reduction of fear and anxiety helps prepare students for learning and reflecting on challenging ideas.

This is related to what I just mentioned above regarding the accurate location of problems. When my students discover that some of their presumptions of conflict are misplaced, it tends to open them up to other kinds of ideas. For example, if evolution is not as hostile to creation in the ways a student once thought, then perhaps he or she can be a little more receptive to accepting evolution as a true scientific theory. This kind of strategy is admittedly most appropriate for my American evangelical context, where anxiety about science is a significant issue, and there may be different affective issues at work in other contexts. Moreover, seminary students are generally going to have certain kinds of anxieties, whereas students of science might bring a different set of concerns. Once again, cultural wisdom demands attention to your particular students and the contexts that drive their prejudices.

Model a Healthy Presence and Approach

Marshall McLuhan famously coined the phrase “the medium is the message” to emphasize the fact that oftentimes the content of a message is less important than the medium or the form in which we choose to communicate this content.³ As the instructor *I* am the medium through which the message of theology and science is communicated, and so it is extremely important that I model a particular approach to the task of integrating theology and science. I work at modeling a non-anxious presence and a kind of quiet confidence in the process of interdisciplinary reflection. For my current seminary students it is important (1) that I am clearly committed to the Christian faith and am not trying to trick them in some way, (2) that my confidence in science is also evident, so they learn by example that serious attention to science does not necessarily threaten faith,

3. Marshall McLuhan, *Understanding Media: The Extensions of Man* (Signet, 1964).

and (3) that I show them that although I believe that there are answers somewhere to all our questions I don't necessarily have access to all those answers. The goal of theological reflection of any kind, interdisciplinary or otherwise, should not be an exacting certainty but rather a modest confidence or passionate humility. I attempt to model such an approach to interdisciplinary reflection in every class, and this seems to help students to construct a safe space within which they can approach difficult questions and construct alternative ways of thinking about the world.

Specific Strategies

Beyond these general principles I have also identified a number of specific strategies that have been effective in my teaching of theology and science.

Dispel Common Myths

The culture wars and a troublesome history create an environment in the American context where many of my students come with misconceptions about Christian theology, the sciences, or both. I have mentioned some of this already in relation to the importance of addressing philosophy of science and the doctrine of creation, but the most egregious misconceptions I encounter surround the science of evolution. These myths are corrosive to interdisciplinary dialogue, but they are routinely peddled by creationists in the United States so many of my students have been exposed to them through their churches, popular books, pseudo-scientific museums, and even movies. Dispelling these myths is therefore an important stage in preparing the way for my students to learn the actual truth of evolutionary science.

Here is a list of common myths that I have found to be important in my current context.

1. Darwin wanted to disprove Christianity.
2. Darwin invented the idea of evolution.
3. Evolution is nothing but blind randomness or chance.
4. There is a significant difference between "microevolution" and "macroevolution."
5. According to evolution human beings descended from chimpanzees or monkeys.
6. Scientists immediately seized on Darwin's theory to attack religion.
7. Evolution is "only" a theory.
8. Evolution cannot be tested and is therefore bad science.
9. There is good evidence that evolution is false.
10. Intelligent Design is a valid scientific alternative to evolution.



11. Evolution is about the past and does nothing useful for science today.
12. The idea of evolution encourages violence and genocide.
13. Evolution proves there is no God.
14. Evolution implies that God is unnecessary.
15. Evolution contradicts the Christian doctrine of creation.
16. Evolution forces the problem of evil on Christianity.

Some of these myths are historical, some are theological, but the majority of them pertain to the facts about the science of evolution.

I won't discuss these all in detail, but allow me to highlight one particular myth as an example. Conservative Christians in the United States commonly hold the idea that evolution is merely a blind random process (#3 above). If this were indeed true, then it would seem to prohibit popular notions of God's providential creation and so this popular notion tends to feed fear and anxiety. However, it is not true. There is some chance involved in the process of natural selection, but not in the way many people presume. Evolution is not "random" if by that we mean that all changes happen by mere chance, as if every creature has developed through an unlikely roll of the dice. A common analogy that is given is of a room full of monkeys randomly typing on a typewriter, which after billions of years would never produce the sequence of letters required for DNA since the probability of that happening is so astronomically small that it is essentially zero. Another analogy I have heard is that if you repeatedly dumped a large bucket of unassembled Lego bricks on the floor, they would never in the entire history of the universe fall in such a way to produce a building, airplane, or spaceship. Both of these observations are true, but that is not how evolution actually works.

Evolution by natural selection is a constrained process, which means that the randomness is kept within narrow parameters. These parameters are set by the structure of the genetic code, the environment, and, most importantly, by the current state of organisms. These parameters act like a funnel that limits possibilities and gives direction to the process. Furthermore, natural selection is a tinkering process. For each generation random mutations do this tinkering (at the genetic level), but they can only tinker with existing conditions. Evolu-

tion is a building process where development is realized as small changes to existing organisms. Hence the common analogies are simply wrong. Evolution is nothing like dumping the box of Lego bricks on the floor and seeing if they will randomly produce a spaceship. Instead, a better analogy is that evolution starts with an already assembled spaceship and only then picks random bricks out of a box and tests to see if any of them improve the overall functioning and design of the ship. Evolution will do this over and over again until it produces a significantly different spaceship.

This is just one of the many myths that I will typically address in my theology and science courses, at least in my current teaching position. It should be noted that this list would probably change if I were teaching in a different context. I spent a year teaching philosophy at a state university, and although I was not teaching religion and science the topic did come up from time to time. In that context students were more likely to have misconceptions about the ability of empirical science to adequately support all types of knowledge. If I were asked to teach religion and science in that context I would teach a very different course. As I have repeatedly emphasized, context is king, which means hermeneutics is vitally important. It is the job of the teacher to utilize cultural wisdom to interpret the contextual situation of their students and therefore the strategies best suited for learning and integration.

Return to Basics of Bible and History

Most of my current seminary students come from an evangelical church background, and so they usually think that they have a fairly good understanding of the Bible, but this is not always the case. In fact, what most of them do know is a particular interpretation of scripture based on the prevailing theological paradigm of their youth. When it comes to science, many of them think they know what the Bible says about creation based on a particular reading of Genesis 1-3. What they don't realize is that their interpretation of the text has been shaped by historical and cultural forces and not by a plain reading of the text. I have therefore found that in an evangelical context it helps to force students to engage in a slow and careful reading of the Genesis accounts, pointing out the ways in which many "creationist" assertions are not actually found there but have instead been read into the text. In addition, I will walk them through the history of these ideas, most of which are less than a few hundred years old and peculiar to the American context.⁴ The full history of interpretation of the creation stories in

4. For the history of creationism as it arose in the American context, see Ronald L. Numbers, *The Creationists: From Scientific Creationism to Intelligent Design* (Cambridge: Harvard, 2006) and Karl Giberson, *Saving Darwin: How to be a Christian and Believe in Evolution* (HarperOne, 2009).

Genesis is much more diverse and interesting, especially when one considers early church theologians.⁵

My students have also been helped by drawing attention to the fact that creation in the Bible is depicted in many different places and in many different ways outside of Genesis. If someone wants to have a “biblical view of creation,” then they need to account for all of the information, including that found in the Psalms, Proverbs, Job, Ecclesiastes, and Isaiah.⁶ I usually highlight the book of Job during lectures, since most students think they know what Job is about and therefore miss the grand creation poem found in chapters 38–41. There you can find a beautiful and haunting depiction of creation, one that doesn't hesitate to affirm God's providential plan for all creatures, including monsters and predators! (see, for example, Job 39:26–30) Bringing these aspects of the Bible and history to light doesn't solve all the problems associated with bridging faith with science, but it does tend to increase student reception of new and different ways of thinking.

Use Biographies

In the list of myths above you will notice a number that deal directly with Charles Darwin, arguably one of the most important figures in the history of science. Given the centrality of evolution for the dialogue between science and religion in America it should be no surprise that Darwin's name gets invoked quite a bit. In the American culture wars Darwin is both zealously revered as a champion of scientific truth and detested as a harbinger of secular atheism, depending on which side of the wars one is located. However, neither side is usually working with a completely accurate understanding of Darwin's life story, which was much more complex and nuanced than many are willing to admit. I have found that learning his biography in relation to his work to be a powerful experience for my students, and this tends to be true across the conservative-liberal spectrum. I suspect this is partly due to the fact that the idea of Darwin has become much more than the actual man – he is a powerful symbol with many different possible meanings. Fortunately, there are a number of very good representations of his life that I have successfully used both directly and indirectly (through lecture) with my students.⁷

5. Peter C. Bouteneff, *Beginnings: Ancient Christian Readings of the Biblical Creation Narratives* (Grand Rapids, MI: Baker Academic, 2006).

6. See William P. Brown, *The Seven Pillars of Creation: The Bible, Science, and the Ecology of Wonder* (Oxford, 2010).

7. Adrian Desmond and James Moore, *Darwin: The Life of a Tormented Evolutionist* (W. W. Norton, 1991); Randal Keynes, *Darwin, His Daughter, and Human Evolution* (Riverhead: 2001); David Quammen, *The Reluctant Mr. Darwin: An Intimate Portrait of Charles Darwin and the Making of His Theory of Evolution* (New York, Norton: 2006).

My evangelical Christian students are often surprised to discover that Darwin was a kind, compassionate, and gentle person who avoided the spotlight and did not generally like conflict. Despite the fact that he once entertained becoming a priest, he did eventually have many doubts about Christianity and religion. However, he rarely expressed those opinions, even to his family and friends. He was devoted to his wife, Emma, and his many children. Darwin even famously delayed publishing his theory of natural selection for many years in part because he was afraid it could damage the faith of people like his wife, who was a devout Anglican. He had few close friends, but even that group was not homogeneous and included both skeptics and religious folks. Darwin was enthralled by the intricate beauty of the natural world and driven to understand the immense range and discernible patterns of living organisms that he observed with unusual clarity. This was no conspiracy to overthrow the tyranny of religion, but rather a sincere and exacting attempt by an introverted and awkward beetle collector to explain the mounting evidence of a very old earth, massive geological change, fossils of extinct species, and the diversity and continuity of global animal forms.

Even more than these personal characteristics, my students have been drawn to the tragic aspects of Darwin's life. He had some kind of debilitating anxiety disorder that caused him great pain and distress through much of his adult life, and so knew personal suffering. Darwin lost three young children to illness, and so knew profound grief. Most significantly, his eldest daughter, Annie, whom he adored, died from a protracted and painful illness (probably tuberculosis) when she was ten. The series of events leading up to and following Annie's death were intricately intertwined with Darwin's development and eventual publication of his theory and the erosion of his Christian faith. He didn't become an agnostic (he never admitted to being an atheist) merely because he discovered evolution by natural selection; it had much more to do with his experiences of tragedy and loss and how these experiences coordinated with his developing scientific ideas. This is the particular story that has had the most impact on my students, because it turns an academic question into an existential experience of real life. It gives Darwin a human face and helps my students sympathize with his circumstances and choices, which in turn tends to help them be more accepting of evolutionary science.

Another biography that has great potential for teaching theology and science (and intersects with East Asia) is that of Pierre Teilhard de Chardin, the Jesuit priest, philosopher, theologian, and paleontologist.⁸ Teilhard de Chardin was part of the team that uncovered the famous "Peking Man" skull, a story that is

8. Amir Aczel, *The Jesuit and the Skull: Teilhard de Chardin, Evolution, and the Search for Peking Man* (New York: Riverhead, 2007).

itself full of political intrigue, but it is his personal struggles to bring his theological commitments into coherence with his scientific beliefs that is especially relevant for students. Another recent figure is the noted environmental ethicist Holmes Rolston III, whose life story has also been captured in biography form.⁹ Once again, a major theme is the way in which Rolston understood his personal faith in relation to the sciences that informed his view of the natural world, and how together both faith and science helped shape his moral convictions around environmental action. In any case, using biographies is a good way to draw students into the learning experience.

Focus Courses on Special Topics

There are two basic ways to approach teaching a course in theology and science. The first way is to teach it as a general overview course, where you attempt to cover a wide range of topics related to different sciences or different theological issues. This is the way many textbooks are structured, since the authors assume just such an overview model.¹⁰ The second way is to select one or two key issues and then unpack those issues slowly and carefully over the span of the course. I have taught my theology and science courses in both ways and they typically produce different learning results. The overview course can be a good learning experience if your goal is to provide students with an introduction to the field, but I have found that focusing on special topics is far more effective in helping students to conquer their anxiety and achieve a level of existential comfort with science and their developing theological perspectives.

In short, the overview model is good at feeding minds, but the focused model is better at changing hearts. Because I want to encourage transformation in my students I now prefer to focus on special topics in my theology and science courses.

One of the topics I have used for this focused approach is the relationship between evolution and the problem of evil. This is a complicated problem, with many hermeneutical layers that address different biblical, historical, philosophical, scientific, and theological interpretations. It may seem surprising that I would spend an entire fourteen-week semester course on this topic alone, but the richness of the topic allowed us to explore many different layers of the question across multiple disciplines. In truth we touched on many of the same issues that one would encounter in an overview course, but because the learn-

9. Christopher J. Preston, *Saving Creation: Nature and Faith in the Life of Holmes Rolston III* (Trinity University Press, 2009).

10. See, for example, Alister E. McGrath, *Science and Religion: A New Introduction* (Wiley-Blackwell, 2009) and Christopher Southgate, *God, Humanity and the Cosmos: A Textbook in Science and Religion*, 3rd edition (T&T Clark, 2011).

ing experience was motivated by and focused on a common problem it greatly enriched the learning experience for the students. I have done a similar thing in another theology and science course with the topic of human evolution and theological anthropology, specifically the doctrine of sin, which is a particularly challenging question and frequent stumbling block for my evangelical students. There are many other topics that could be chosen for a focused experience, such as cosmic fine-tuning, or the cognitive science of religion.

Encourage Student Freedom and Self-Determination

Many of my students come to my courses with both anxiety and a degree of defensiveness. These students are worried that I might somehow try to change their minds or force them to accept something that would be damaging to their faith, and so they are ready to be argumentative and expect me to be the same. What they discover instead (I hope) is a great deal of freedom and a non-coercive, invitational classroom environment. I attempt to promote such an environment in a number of ways.

(1) I find it is not worth trying to force students to accept any particular viewpoint. I am uncompromising about the facts of science, but I give my students permission and lots of latitude to draw their own conclusions and believe what they want to believe. I consistently reassure them that I am not trying to “convert” them, even though I have hopes they will see the positive potential of an alternative approach. They are also not graded according to whether they agree with me or not. I make it clear to them when I think that their opinions about science or the history of theology are factually incorrect (and they are not allowed to be dismissive about facts in assignments), but it is still their choice as to how they stitch it all together into their personal theological worldview. Occasionally I have a student who will leave my course the same way they came in, usually as a stubborn creationist of some kind, but that is rare and most students thrive in an environment where they feel a sense of freedom to self-determine.

(2) I try to design assignments with considerable flexibility and choice, such that a student who is highly anxious about one topic (say, for instance, evolution) can choose to address something that feels less threatening (such as cosmic fine-tuning). I have designed an assignment model that I call “topic clustering.” I provide a list of themes from which students can choose their final research paper topic, but then I also assign three books for each topic that must be consulted and addressed in their paper, along with a certain number of extra sources they find on their own. These resources are hand selected by me, and so I have some confidence in their quality, but the students also have freedom to choose the cluster they want and find a position within that cluster to use as their paper’s thesis. For a class I am currently teaching I have identified 21 topics, each clustered with three unique texts.

(3) Sometimes students don't get a choice about the paper topic. For example, in the course where I focused on human evolution I asked each student write a paper on their theological view of sin in light of all the course material we had covered. This seems like a perfectly reasonable exercise, except that I am not forcing my students to automatically agree with everything I am telling them. Some of my students simply could not stomach the idea of human evolution, no matter how much evidence was laid before them, and so this assignment had the potential to be trivial or make no sense. Consequently, I required the whole class to write the paper "as if" human evolution were true. For obvious reasons I now call this type of assignment an "as if theological reflection." Surprisingly, all of my students were able to adequately accomplish this task, even the ones who refused to accept human evolution. Even more surprising, one of my students actually changed his mind about human evolution as a result of completing this task, because the exercise helped him conclude that the theological hurdle wasn't as high as he thought it was.

Use Creative Media

One of the advantages of teaching theology and science is that there are many wonderful media resources available that deal with relevant science topics. I have used various television documentary programs produced by public broadcasting such as *Nova* and *Nature*, which are usually entertaining, informative, and contemporary. There are a number of adaptations of Darwin's life, my favorite of which is a 2009 movie titled *Creation* that specifically addresses the more tragic aspects of his story. Some science fiction movies can generate interesting conversations about religion and science (*Contact* 1997 and *Interstellar* 2014, for example). Internet resources are also increasing at a rapid pace. You have to be careful when selecting such things, but I have found some very good articles and videos on the internet that I will sometimes use in class. Some materials can be found at the websites of the John Templeton Foundation (<https://www.templeton.org>) and BioLogos (<http://biologos.org>), the evangelical foundation promoting a healthy dialogue between faith and science. Finally, field trips can also be used to enrich the learning experience. This coming spring semester I will be taking my theology and science students to our local science museum to see the fossil exhibits and talk about the scientific evidence for evolution.

Conclusion

I understand teaching theology and science to be exciting and a great privilege, in part because I think it is vital for the global Christian church to finally come to terms with our scientific age. But I also find it exciting because interdisciplinary learning is relatively new and untested, at least in the American context.

There are no clear blueprints for success, and so I have many opportunities to experiment. I don't expect that all of my experiments will be appropriate for everyone, but I hope that in these experiences there are at least some principles and strategies that can be translated into other learning contexts.