A Defense of *Science* and *Religion*: Reflections on Peter Harrison's "After Science and Religion" Project

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Introduction

Since science and religion began as a field in the 1960s, many scholars have tried to draw upon post-Kuhnian philosophy of science to show how theology can meet the standards of scientific inquiry (Reeves 2018). Rather than setting science and religion in opposition, the goal is to show that both are rational enterprises and worthy conversation partners. This emphasis on the common features of science and religion, however, has been heavily critiqued in the past decade. Recent scholarship has called into question the categories "science" and "religion" because, as Peter Harrison (2015, 5) argues: "We should not assume natural kinds where there are none." To accept the idea of "science," so the argument goes, is to make metaphysical and theological assumptions that theologians should find problematic. Continuing to use the categories of "science" and "religion," even to promote dialogue, obscures understanding more than helps.

The critique of the categories "science" and "religion" has above all been associated with Harrison, the former Andreas Idreos Professor of Science & Religion at Oxford University and perhaps the most influential scholar working in on science and religion today. Criticism of basic categories has been a common theme in his work (Harrison 2002) and was given full expression in his Gifford Lectures that were published as *The Territories of Science and Religion* (2015). The basic outline of Harrison's critique of science and religion is clear, but it is not clear even to Harrison what are the full theological implications of his argument. The two books (Harrison and Milbank 2022; Harrison and Tyson 2022) that compose the "After Science and Religion" project are an opportunity to bring together leading theologians and scientists to contemplate "what follows" from *Territories*.

This article evaluates the philosophical conclusions that Harrison draws from his anti-essentialist philosophy in the two volumes associated with the "After Science and Religion Project." Though I will touch on arguments raised in the other chapters, I focus on the core claims of the project as articulated by Harrison. Because most of the theological participants are associated with the theological movement known as Radical Orthodoxy, the conclusions they draw from Harrison's work—scholars need to retrieve a Platonic and Christian metaphysics of the premodern era to solve our current scientific impasses—were argued long before *Territories*. I leave it to others to engage the historical arguments of the Radical Orthodoxy movement.

While I agree with Harrison's criticisms concerning early scholarship in science and religion and value his historical scholarship, this article raises questions about the philosophical conclusions that Harrison draws from the history of science. I worry that Harrison's project is too skeptical towards the categories "science" and "religion" and places too much emphasis on naturalism being incompatible with Christian theology. One can accept the lessons of anti-essentialism—above all, how meanings of terms shift over time—and still use the terms "science" and "religion" in responsible ways. This article defends the basic impulse of most

scholars in science and religion who promote dialogue; a complete rethinking of its intellectual foundations is unnecessary, much less is science and religion "dead," as Radical Orthodox theologian John Milbank and "After Science and Religion" project participant has recently proclaimed (Tyson, 2022a, Back Cover).

Summary of Harrison's Position

The traditional role of historians in science and religion has been that of myth buster, showing how sweeping generalizations about science and religion do not match the complexity of the historical record (Numbers 2010, 16). This style is associated most with John Hedley Brooke (1991) and is often dubbed "the complexity thesis." The complexity thesis encourages scholars to have more awareness of the malleability of our basic categories and to avoid generalizations about "the relationship" between science and religion.

Harrison differs from Brooke and other myth-busting historians in his expansive agenda: he is not content just to urge caution in how we interpret the past, rather we should rather reconstruct the field of science and religion from the ground up, using new conceptual tools. As Milbank (2022, 75) summarizes the aim of Harrison and his collaborators: "The aim of the new 'After Science and Religion' project is to call into question an entire existing intellectual discourse and to try to forge a new one in its place." The reason a new discourse is said to be needed is that assumptions are smuggled in by using the categories "science" and "religion." As Harrison says (2022b, 17), "interactions and the range of solutions to the problem are already predetermined by the way in which these categories divide up aspects of our intellectual and religious lives."

The clearest example for Harrison of the limitations of our categories is the presumption of naturalism in the explanatory practices of the sciences. He comes close to saying theists should reject methodological naturalism, the explanatory strategy that restricts science to the search for naturalistic explanations. While he does positively refer (Harrison 2022b, 20) to recent historical scholarship that shows that methodological naturalism "was invented and promoted by Christian scientists," he later seems to cast doubt on the idea that Christianity and methodological naturalism can be reconciled.[1] He argues (2022b, 20): "But it is reasonable to inquire whether the regular adoption of such a heuristic has a habituating effect that precludes seeing the world in a non-naturalistic, non-reductive way," suggesting there is a "fundamental incompatibility" between theological and scientific approaches to the world.

The other major issue Harrison (2022b, 15) has with using the terms "science" and "religion" is that they promote "an illicit reification" that portrays the sciences and religious traditions as "enterprises that deliver propositions about the world." Focusing on the truth value of propositions causes one to not focus on the formative practices that generate them. Harrison argues that both scientists and religious believers are formed by practices that change how they perceive the world. He says (2022b, 22), "What science and religion share is the fact that coming to believe or know certain things requires that a certain prior work be performed on the self, or that certain disciplinary practices be undertaken, in order to access the relevant knowledge." This point matters because scientific practice, in Harrison's view, can also blind one to key features of the world. Rather than giving objective knowledge as propositions, science is a formative process that causes one to focus on certain features of reality and ignore others (Harrison 2022b,

[1] For an example of this scholarship, see (Jordan 2022).

19). Naturalism becomes not just a useful explanatory strategy in limited contexts, but an all-encompassing form of life that makes modern science hostile to religious perspectives.

The presuppositions that come with "science" and "religion" are what make so much of scholarship in science and religion suspect, in Harrison's view. By assuming that science gives true propositions, rather than a particular perspective shaded by naturalism, scholars in the science and religion field are left only with the choices of a "one-sided dialogue," where science dictates to theology what beliefs to accept, or a "false peace" where theologians adjust core Christian commitments (Harrison 2022a, 318). What Harrison hopes to achieve is a "new and genuinely two-way conversation" where science must accommodate itself to theological knowledge as much as theology adjusts itself to scientific knowledge.

One might think that Harrison would endorse the Intelligent Design (ID) movement, who likewise share the ambition of redefining science so that it is not limited by methodological naturalism. ID theorists echo many of Harrison's points about the way methodological naturalism closes off scientific paths of inquiry and casts doubt upon a theological picture of the world. But Harrison critiques (2022a, 320) the ID movement for likewise accepting too many traditional assumptions about science. Whereas ID wants current science to be open to theistic explanations, Harrison wants to rethink the whole category of natural inquiry. The situation cannot be fixed by adding a few theistic explanations on top of a naturalistic picture of the world.

What then is the path forward? One option advocated by some in the "After Science and Religion" project is a retrieval of terms and practices for natural inquiry that were discarded in the history of science. Our current meanings of science are, according to Harrison, historical accidents. Why not reconsider other potential paths not taken? Some in the "After Science and Religion" project aim to rehabilitate the terms "natural philosophy" and "natural philosopher" that were widespread before the mid-19th century because they carry explicit theological overtones that suggest a different model for relating natural and theological inquiry.[2]

Another option for retrieval emphasizes metaphysics more than it does natural philosophy. The metaphysical route is suggested by theologians in the Radical Orthodoxy movement, who argue we need to return to the pre-modern medieval synthesis of theology and neo-Platonic philosophy (Harrison 2022a, 318). Harrison argues that the metaphysics of the Scientific Revolution laid the foundations for later materialist and atheist philosophies and has served as the foundation for scholarship in science and religion. As he explains (2022a, 319), "The science—religion discussion that largely takes the official, if often implicit, metaphysics of modern science for granted tends to be locked into a tight range of restricted possibilities for the relationship between science and religion." The solution is to rethink basic metaphysical categories in order to offer more explanatory resources for scientists to draw upon and to preserve the meanings and values that are asserted by most religious traditions. Many topics crucial for a theological account of human nature—such as consciousness, agency, and purpose—cannot be accounted for in terms of reductive materialism (Harrison 2022a, 321).

A final option is the one that Harrison develops in his chapter, which is to understand scientific and religious traditions as forms of life. This Wittgensteinian-influenced position encourages scholars to move beyond comparing the truth value of propositions and instead "get inside the language games/paradigms of the respective traditions"(Harrison 2022b, 32). While this might lead some to worry about relativism—that no independent standard exists to adjudicate between rival paradigms—Harrison does not agree. Different traditions might be incommensurable, but this need not give rise to relativism. Harrison appeals (2022b, 32) to

[2] This has also been suggested by (Reeves 2008).

Alasdair MacIntyre who claims that dramatic narrative and historical reason can supply a means of "negotiating between apparently incommensurable traditions."

In sum, there are multiple options for scholars who want to build upon Harrison's research program and though Harrison gives the most attention to the third option, he thinks all are viable. Stepping back from the individual arguments, it is worth reflecting on the ambitious nature of Harrison's view: that to attempt religious dialogue with science is to presume too strong a view of science, and that theology should alter the way we interpret scientific data. Harrison never states which theological doctrine—or even what religious tradition—should be incorporated into modern science. I suspect Harrison's project would be less persuasive if he were to name which particular scientific theories to which Christians (Harrison only engages Christians in the "After Science and Religion" project) should object because he would have to engage empirical arguments and not rely upon methodological or metaphysical criticisms alone.

In what follows, I will raise two main questions that are generated from Harrison's project. First, while many modern thinkers think of the sciences and religious traditions in terms of propositions, this is not true of recent scholarship in the disciplines of philosophy of science and religious studies. Scholars there are likewise influenced by the Wittgensteinian turn to prioritize practice over propositions. My question is: why does Harrison not find these updated accounts of "science" and "religion" consonant with the argument in *Territories*? Notice the tension in Harrison's argument: on the one hand, we cannot construct meta-narratives about science and religion because word meanings are malleable. But on the other hand, Harrison argues we should abandon the categories "science" and "religion" because they are irretrievably broken. If meanings of words change over time, can "science" and "religion" not be modified to meanings more consonant with theism? Why take the more difficult path towards a revolution in terminology when reform will suffice?

Second, is it possible for historians to draw conclusions about the inherent compatibility of science and religion? I will argue that because all the outstanding scholarship that has been produced by Harrison and other historians of science over the past half century, there has been a tendency in recent science and religion discussions to put more weight (in terms of normative conclusions) than historical scholarship can bear. I will argue that too often there have been apologetic claims for the inherent compatibility of science and religion because historians have debunked the "conflict thesis." But if the conflict thesis is construed as a conclusion *writ large* about the relationship between science and religion, rather than a specific objection to subpar historical narratives, I do not see how historians can make such large-scale normative judgements from the history of science alone.

Beyond Natural Kinds

Many recent methodological discussions have endorsed Harrison's claim that "science" and "religion" are not natural kinds. Harrison uses this point to make a stronger argument: If science and religion are not trans-historical categories, then maybe we as scholars should relinquish those terms once and for all because they distort as much as help. But is it possible to do science and religion scholarship—which necessarily involves generalization—without some categories? Critics (Grey 2021, 489) of new approaches in science and religion will always ask: are you not presuming categories and perpetuating binaries even when you try to give them up? When Harrison refers to "religious traditions" and "religious values," what could he mean without some conception of religion (Sikahall 2022)? Does one smuggle in assumptions about science when one looks to physics or biology for interdisciplinary engagement? That

presuppositions about classic "science" and "religion" always seem to work under the surface suggests that one cannot wipe our conceptual slates clean and start again.

I argue it is possible to keep "science" and "religion" while avoiding the dangers of essentialism. That we can use categories even without essential definitions is the point of Wittgenstein's famous discussion (2003 [1953], §§65–71) of games in his *Philosophical Investigations*. He explains it is impossible to give an exact definition of a game; some involve balls, some involve competition, but no games share any single feature. But Wittgenstein argues that this does not make the word "game" unusable. Numerous games do share overlapping similarities—a family resemblance—making the word *game* useful, even if we cannot draw sharp boundaries about what belongs in the group. Almost no category that we use in history and society can be considered a natural kind.

If one accepts anti-essentialism, what is one committing oneself to? As argued in *Against Methodology in Science and Religion* (Reeves 2018), this philosophy rejects one-size-fits-all explanations and methods in science; it says the reasonableness of accepting a theory depends entirely on the reasons relevant to the theory, rather than because of its association with "science;" it focuses attention on the "disunity" of science. But anti-essentialism does not mean that we abandon terms just because they are not natural kinds. Requiring our categories to be culturally universal would hinder comparative analysis (Riesebrodt 2010, 19).

Consider as an analogy the word "economy" (Riesebrodt 2010, 16)."Economy" is both a Western concept and a term that has shifted over time: it originally concerned the management of household affairs. Only in the late-17th century did it come to refer to activities related to the production and trade of goods and services. Just as for the term religion, many non-Western languages have no equivalent word. And perhaps one could produce negative associations with the term, especially related to the spread of capitalism. Should scholars thus drop the concept? To do so would be an intellectual loss, for it would make comparison between feudalism, substance economies, and other ways of ordering economic behavior more difficult. Using the word economy allows one to demarcate the boundaries about which one is speaking, allowing for specialization. The word economy can be formulated in ways that do not privilege modern economic value-judgments (Riesebrodt 2010, 17). The lesson for science and religion scholars is that we should justify our categories based on their scholarly utility, not because they divide the world in a way suitable to all languages and cultures, as if there is a universal vantage point outside language.

The real question is whether the categories "science" and "religion" are hopelessly biased because of the Enlightenment conceptual schemes with which there are associated, which reify their products as propositions about the world. In the next two sections, I will argue that the move from propositions to practices is a key development in recent scholarship on "science" and "religion." This suggests the easier solution for science and religion scholarship going forward is to adapt more nuanced understandings of these categories, rather than abandoning them all together.

Arguments for "Science"

This section will explain how much of recent philosophy of science has emphasized scientific practice, reforming the category "science" in light of critiques. Philosophy of science has traditionally been seen as a matter of beliefs; the key issues that occupy philosophers of science are the structure and justification of scientific knowledge. But this view has been challenged in the 20th century, especially in the wake of Thomas Kuhn's *Structure of Scientific*

Revolutions (2012 [1962). Many philosophers object to portraying scientific knowledge as fully transferable in nontacit form, and that the relationship of experiment to theory is a straightforward process (Collins 2001, 109). Scientists not only represent the world, they are continually refiguring it through their practices (Hacking 1983). Scientific research reconstructs the world as well as redescribes it and so is a kind of practical activity that bears strong affinities to other types of craft knowledge (Rouse 1996, 127).

For a contemporary example, consider James Woodward's (2003) *Making Things Happen: A Theory of Causal Explanation*. Woodward does not attempt (2003, 23) to give an essentialist definition of science, but more modestly aims to make sense of the causal inferences and explanatory practices commonly found in the sciences. Such a theory would presumably be consonant with Harrison's Wittgensteinian emphasis on uncovering the scientific "form of life." A distinctive feature of the sciences, according to Woodward (2003, 7), are the practices of causal inference and explanation, which involve substantial tacit knowledge. An interest in causes and explanations is a common feature of all cultures; people naturally wonder whether some food produces nausea or why a river floods. The sciences build upon common explanations by developing more systematic procedures for isolating causes (Woodward 2003, 19). Manipulation is key to uncovering causation; as Woodward summarizes (2003, 61) his view: "No causal difference without a difference in manipulability relations, and no difference in manipulability relations without a causal difference." Experimentation has always been a central topic for those wanting to explain the success of science, but too often characterization of experimental research programs has been wedded to positivist ideals where experiments were seen to give rise to precise, unambiguous, and rigorously derived knowledge (Cartwright 1999, 319). Not every scientific question can be manipulated experimentally, of course, but even when scientists try to explain the formation of the early universe, for example, they want to understand how its development would have changed if certain variables and parameters were different. In other words, what would happen if scientists *could* run an experiment such as creating a different universe or replaying the tape of life?

Woodward, like many other philosophers of science (Rouse 1996), emphasizes the role of experimentation, manipulation, and measurement of the natural world to produce reliable effects. Science for Woodward is not merely about developing a correct world-picture but also about techniques that give us power over matter. As he says (2003, 12), "On the conception of science that I favor, two aims that are often regarded as quite separate—the 'pure science' aim of representing nature in a way that is truthful and accurate and the 'applied science' aim of representing nature in a way that permits manipulation and control—are deeply intertwined." Thus, when many in the "After Science and Religion" project argue that the success of science does not demonstrate the truth of a theory, their criticism misses the central issue. Of course, one can manipulate without causal understanding, but the key change in the philosophy of science after the Scientific Revolution is that true understanding of causal processes allows one to manipulate. Understanding the DNA sequences of certain viruses, for example, allows scientists to create new vaccines. As the history of science shows, it is too easy to create a "just-so" story that accounts for the present facts of natural processes with no deeper understanding of the causes that give rise to them.

One consequence of this account of science is that one need not have a full-blown metaphysical theory to identify relationships that support control. Woodward says scientists only need a minimalist metaphysics to begin study of the natural world, such as the principle of common causation. Portraying science as a skill-based activity helps one avoid the mistake of

portraying all scientists as united in believing in a single, naturalistic worldview. Scientists hold to numerous worldviews and interpretations of a single experimental outcome. What unites scientists together in a discipline is the ability to solve the same problems. When Milbank and others object that modern science competes with theological accounts of the world because of its deficient metaphysics, Woodward's account suggests that this misses the point. Milbank and the Radical Orthodox theologians seem to presume an intellectual account of science, where without correct metaphysical beliefs, there can be no proper science. But scientific experiments are compatible with many metaphysical schemes. One need not hold a reductive, materialist account of nature when doing science, as many religious scientists show. Science is successful for Woodward because of its metaphysical minimalism, and that it has uncovered many causal relationships through experimentation, even though much of the world cannot be accounted for using its investigatory tools. Suggesting that science should be suspect until it is wedded to the right metaphysics overestimates the type of knowledge that science can deliver. Rather than arguing against the category of "science," the target of Harrison and the "After Science and Religion" project should be popularizations of science that do not distinguish between the experimental evidence for theories and the philosophy used to integrate scientific knowledge into a larger worldview.

In summary, much of recent work in the philosophy of science has moved to more practice-based conceptions of science. This leads to the question: would Harrison consider such understandings of "science" as friendly to his argument in *Territories*? The fact that embodied practices have been a central theme in both the history of science (especially on the Scientific Revolution) and current scientific inquiry suggests that Harrison's rejection of the word "science" is unnecessary. By focusing only on the questions of theological integration, Harrison can portray the mid-19th century as a sharp break between natural philosophy and modern science. But if one selects a different feature of the study of nature—such as an emphasis on experiments—then the history of science is one of organic development rather than radical disruption. I think it is better to see natural philosophy as part of the same tradition as modern science instead of being an entirely different enterprise because of a too narrow definition of science.[3]

Arguments for "Religion"

A similar emphasis on practice can be found in recent defenses of the category "religion." When reading *Territories*, several criticisms are presented about the way modern Westerners understand religion. The primary critique is that modern concepts of religion are concerned with propositions rather than the internal state of the believer, which is explained by a post-Reformation era emphasis on restraining heresy during internecine Christian theological conflicts (Harrison 2015, 49). Once the concept took hold in Christian Europe, it was used by scholars of later centuries to classify the worship practices of other cultures as "religions," creating the categories of Hinduism, Buddhism, and Confucianism. The shift in terminology for Harrison is illustrated by Thomas Aquinas, who thought *religio* was a moral virtue, referring to interior acts of devotion and prayer. Aquinas does not think *religio* refers to propositions and, consequently, that there are other religions. As Harrison (2015, 16) argues, "Between Thomas's time and our own, *religio* has been transformed from a human virtue into a generic something, typically constituted by sets of beliefs and practices." The problem with modern "religion," says Harrison,

[3] This point is made by the historian of science David Lindberg (Lindberg 2010, 3)

is that it severs the link between the moral and intellectual realms when accounting for the world. Modern Westerns separate the domain of material facts, which are explained by science, from the realm of moral and religious values, which are covered by religion. This conceptualization leads one to bring the propositions into "dialogue," where key theological commitments are pressured to give way.

Martin Riesebrodt (2010, 77) has developed a theory of religion that does not focus primarily on propositions, arguing that it should be understood as an "institutionalized complex of practices." He agrees (2010, 80) with Harrison that scholars should not privilege the cognitive side of religion and downplay its practices, as if religious activities were a simple implementation of theological rules. The meaning of religious action is better derived from liturgies, "that is, from the meaning of practices as expressed in spoken words, symbolic actions, formulas, gestures, or songs"(Riesebrodt 2010, 87). These liturgies are empirically accessible objects that can be studied and compared. If scholars focus on worship practices rather than explicit beliefs about metaphysics or ethics, they find "institutionalized rules and guidelines for humans' interactions with superhuman powers" that promise "to ward off misfortune, to help cope with crises, and to provide salvation"(Riesebrodt 2010, 72). These superhuman powers can be personal or impersonal, and religious practices prescribe ways "to establish contact with these powers or to gain access to them" (Riesebrodt 2010, 75). Riesebrodt makes a compelling case that such attempts to access superhuman powers are not limited to Western religious traditions.

Understanding "religion" as a practice makes it easier to connect modern to pre-modern understandings of ultimate reality. Riesebrodt says his definition of religion has premodern parallels, just as modern science has pre-19th century parallels for the study of nature. As he explains (2010, 2), "Religious activity has always been distinguished from nonreligious activity, religious specialists from other specialists, sacred places from profane places, and holy times from profane times." Religious traditions have always competed with or borrowed from each other (e.g., regulations against idol worship in the Hebrew Bible), governments in complex societies normally have regulated religious practice (e.g., which rites and temples are allowed), and travelers have always been interested in variations in religious practices (e.g., Herodotus's account of non-Greek religious practices). Aquinas (ST, II-II.81.1) positively quotes the Roman writer Cicero that "religion consists in offering service and ceremonial rites to a superior nature that men call divine." Even for Aquinas (ST, II-II.81.1), *religio* "denotes properly a relation to God," which overlaps with Riesebrodt's claim about religion prescribing the right way to gain access to superhuman powers. While Reisebrodt would not claim that the concept of religion is universal, one should also not define terms so narrowly so that it obscures overlaps of meaning with ancient and medieval thinkers. And rather than seeing attempts to reduce religion to propositional belief as a uniquely modern temptation, it is better to see it as a continual problem for unmotivated religious practitioners. In the New Testament, James (2:19) argues that having faith without good actions is not enough: if faith is simply believing certain propositions about God, then even demons would have faith.

The move to practice-based accounts of "science" and "religion" in recent scholarship should be consistent with Harrison's analysis of the shortcomings of those terms in the field of science and religion, but it leads to less skepticism of our current linguistic practices. It suggests that scholars can use the terms "science" and "religion" in responsible ways for scholarly analysis that do not depend on questionable assumptions. I am curious to see how Harrison would evaluate this more moderate application of the lessons from *Territories*.

Difference Between Religious and Spiritual Practices

The biggest worry, I suspect, from Harrison to my more moderate reading of his project is that it still suggests a stark division between scientific and religious ways of perceiving the world, rather than emphasizing the overlaps between the two, especially in the way practices alter human belief. While Harrison is right to object to a strict dichotomy, I think whatever terms we use to describe what we currently call "science" and "religion" will have to account for basic differences between scientific and religious practices. In other words, it is not clear how renaming "science" as "natural philosophy" would alter scientific practices. The sciences, as Woodward says (2003, 242), look for "relationships that are invariant under interventions." Invariance means the same values between variables hold when we act to manipulate them. This invariance is what allows for technology; one can predict the conditions for producing some natural phenomenon that can be built into modern devices. While religious rituals do produce change, the development is not as direct, not as easy to measure or reliable, because many do not bring about the intended results. Most religious traditions also suggest that the object of spiritual rituals are supernatural agents who cannot be manipulated because they act for their own independent reasons.

Attention to the differences between spiritual and scientific practices provides a response to the criticism frequently made by those in the "After Science and Religion" project that the traffic between science and religion has usually been one way. The classic examples of theology giving way are when Christian theologians have become too wedded to scientific theories that are not, with the benefit of hindsight, found in Scripture, such as the age of the earth and structure of the cosmos. But once Christians cease using the Bible to defend outdated scientific claims in the areas of biology and physics, the question becomes: How exactly does one get enough empirical evidence to make a theological difference?[4] Spiritual practices may change how believers perceive the world, but they do not allow for the same manipulation of nature as the sciences do.

It is close to impossible for any experimental evidence, on its own, to prove any theological claim, and experiments can always be interpreted multiple ways. What is needed are scientific models that integrate data that are then brought into theological conversation. But even so, most models in the natural sciences seem to have no theological consequences. What does it matter to theology if scientists explain the world by appealing to homogenous atoms or substantial forms or ensouled matter? If mechanistic philosophy was consistent with Christianity until the secularization of Western culture, should we expect the relationship of science and religion to shift even if scientists adapt a metaphysics that makes room for consciousness and intentionality? Aristotelian, neo-Platonic, and Newtonian philosophies of nature can all be given theistic interpretations. This point is confirmed by most participants in the "After Science and Religion" project; despite their call for a two-way conversation between science and theology, what most wanted was a return to Neo-Platonic metaphysics. But is it theology or metaphysics that is leading the conversation? Only for Radical Orthodoxy theologians is the return of an ancient pagan philosophical system a way to show how theology makes a difference for the practice of science.

The irrelevance of most of natural science to theology is why I disagree with those who argue (Spencer and Waite 2022, 13) the science and religion conversation has been "plagued" by a narrow focus on too few issues—evolution, Big Bang, and neuroscience. Focus on these

[4] Jong makes this criticism will evaluating recent "science-engaged theology" projects (Jong 2021, 484).

questions does not signal an implicit commitment to a conflict narrative, but rather to the fact that these issues are the easiest places to get empirical traction on theological questions. Bringing empirical data to bear on theological questions is harder than it looks, as shown by recent science-engaged theology projects (Perry and Leidenhag 2021). The solution is more research investment in these questions and more scholars seeking dialogue with science, not less. It may never lead to a place "beyond science and religion," but if it helps teach religious communities how to engage science well, that will be a much better result.

Historians and the Conflict Thesis

This article has argued that there might be good reasons for holding on to "science" and "religion" as analytic categories, even if those terms are not shared across languages and cultures. In this last section, I reflect more generally on the limitations of what the history of science and religion can offer contemporary debates. The changing meanings of key concepts and the difficulty in constructing historical meta-narratives are important points with which all scholars in science and religion should be familiar. Nevertheless, there are real limits for using history to draw conclusions about the "conflict thesis." My criticism here is not of the way Harrison uses history, but rather how other theologians and historians have used historical scholarship to draw normative conclusions.

The "conflict thesis," as historians of science have discussed over the last 30 years, was originally focused on how best to interpret the history of science and religion (Hardin, Numbers, and Binzley 2018). But there seems to be a basic ambiguity in the meaning of "the conflict thesis" that leads to confusion and overreach. Sometimes it refers to specific claims made about how best to interpret the history of science and religion. This is a historical thesis, and it says: "the history of Western science has been characterised by unremitting conflict with religion"(Harrison 2022b, 16). Historians often pin the blame of the conflict thesis on two historians in the late 19th century who created in the public mind the idea of inherent conflict, which has proved difficult to dislodge. The historians are John Draper, who wrote *History of the Conflict between Religion and Science* (1874), and Andrew Dickson White, who wrote *A History of the Warfare of Science with Theology in Christendom* (1896). As argued (Numbers 2010, 6) in *Galileo Goes to Jail*, "Historians of science have known for years that White's and Draper's accounts are more propaganda than history… Yet the message has rarely escaped academia." The claims is that while the work of Draper and White has escaped the ivory tower, the objections of historians have not.

I agree the historical version of the conflict thesis has been disproven by historians. Any account of history that portrays religion as an obstacle to scientific progress has cherry-picked historical examples to support a pre-existing narrative. The better alternative is John Hedley Brooke's "complexity thesis," which is not really a thesis but a critique of simplistic historical narratives (Lightman 2019) (Brooke 2019, 235).

At other times, however, the "conflict thesis" refers to a far stronger claim: that science and religion are *inherently* in conflict. This thesis is stronger because it is not merely about the past but also the present. It can be equated with the "conflict" model in Ian Barbour's fourfold typology of possible relationships between science and religion, and thus makes a universal and normative claim about the relationship between science and religion. For example, Helen De Cruz (De Cruz 2022) argues in the Stanford Encyclopedia of Philosophy: "The vast majority of authors in the science and religion field is critical of the conflict model and believes it is based on a shallow and partisan reading of the historical record." Notice the implication that without a

partisan reading of the history of science, the conflict thesis has no basis. Another historian of science and religion has recently co-published a book (Hutchings and Ungureanu 2021) claiming that the idea that science and religion are in conflict is a "myth that fooled the world" and is the most successful conspiracy theory of all time. The conflict model of science and religion is portrayed as simply a matter of misinformed history.

On this point scholars are moving from an argument about the historical record to a conclusion that goes beyond what history can justify. It seems to me that scholars in science and religion have put too much emphasis on Draper and White as being the source of perceived conflicts between science and religion. Here is a personal example to illustrate. My 12-year-old daughter had just finished a section of evolution in her science class, with the teacher giving evidence for common descent, to which a boy in the class proclaimed in a loud voice: "Take that Jesus lovers!" Where did this conflict idea come from? Do we think this 12-year-old is influenced by Draper, White, or the new atheists like Richard Dawkins? What is motivating the conflict belief in this case is better explained by our location in the American south, where many Christians argue that only a literal reading of Genesis does justice to Biblical authority, a position that is difficult to trace to skeptical historians or scientists. Here at least, the conflict narrative originates more within the Christian tradition than outside, with pastors rather than 19th century historians. Perhaps the reason for the difficulty in changing the public's mind about science and religion is that the conflict model is not premised on any reading of the historical record, though it may prime them to be more accepting to conflicting accounts of the history of science and religion.

Can historians tell these Christians that there is no inherent conflict between science and religion, that their reading of the Bible is wrong? While I think such interpretations of Christian Scripture are problematic, that normative conclusion is outside the scope of the historian's subject. A historian can point to how others in the past have interpreted the Bible, why it is complicated to make historical generalizations, and to show how meanings of words have changed. But historians cannot prove the conflict thesis, as a claim about the present relationship between the sciences and religious traditions, is wrong. Even if historians could show that science and religion have always been mutually supporting, it does not mean that present day sciences and different religious traditions are not currently in conflict on some key areas.

This argument is confirmed by a tension running through the "After Science and Religion" project. On the one hand, the participants in the project say there is no essential conflict because our modern categories 'science' and 'religion' were not in play. Any yet, many argue that Harrison's work gives permission to rethink the terms science and religion, since science as practiced for the last 150 years is equated to functional atheism (Harrison 2021, 482). How can it both be true that history shows that there is no inherent conflict while also claiming that modern science—the type of science practiced since the time of Darwin—is inherently antithetical to a theistic view of the world? For all the work that Harrison has done to show the complexity of the historical record, the "After Science and Religion" Project seems to be allowing the "conflict thesis" to enter through the back door. Regardless, it is better to see the history of science as a tool that helps sharpen and complexify current debates, rather than a body of scholarship that proves or disproves the conflict model.

Conclusion: Our Changed Social Environment

Harrison began his Gifford lectures with a memorable analogy; imagine, he says, that historians had claimed to discover some undocumented war between Egypt and Israel in the year

1600. Despite whatever evidence that could be marshaled from geography and archeology, Harrison says the overarching claim would be mistaken because Egypt and Israel as modern nations did not yet exist. In the same way, "science" and "religion" cannot be in conflict because our modern meanings of those terms only took shape over the last few centuries. Harrison uses this conclusion—that we conceive the world differently than our predecessors—to argue for an ambitious agenda to overturn use of the categories "science" and "religion." Harrison and others in the "After Science and Religion" project that such a linguistic change would lead to a dramatic reconfiguring of assumptions and improvement in scholarship by those who work in the field of science and religion.

But imagine a different analogy, in which a few historians argue that despite what is commonly taught in textbooks, there was no such thing as the Hundred Years' War between France and England during the Middle Ages. The reason being that the meanings we associate with England and France—western liberal democracies with stable borders—were not present in the 14th century. The medieval kingdoms that generally occupy the land that we associate with France and England should be given different names—perhaps the Plantagenets versus the Valois. Such an argument would be unlikely to be convincing for most historians, for despite seven centuries of change in culture, population migrations, and political organization, there are enough overlaps to continue to use the terms "France" and "England" for past conflicts. While changing terms might be more precise in some ways, it would lead to confusion in others and not make a significant difference in our histories of the Hundred Year's War. The lesson of this analogy is caution; our term meanings do not line up exactly with our predecessors because of centuries of cultural changes, but there is also a tradeoff for changing our current linguistic categories. In the same way, I think there are enough overlaps in terminology for scholars to continue to use the terms "science" and "religion," even while recognizing changes in meaning over time. Even if we ceased using the terms "religion" and "science" and instead used "natural philosophy" and "Christian theology" or some equivalent, the same questions related to evolution, miracles, design, and reductionism would still raise troubling questions. Arguments on these questions will continue much as before, making a total linguistic renovation unnecessary. I believe this more moderate agenda is still consonant with the lessons of *Territories*.

While one of the aims of the "After Science and Religion" project is successful—engagement by theologians with Harrison's project—I worry that the project took on too skeptical a tone because of involvement by Radical Orthodox theologians. Many of their criticisms of "science" were too vague and abstract to be helpful for solving particular research problems. Are Radical Orthodoxy theologians asserting all of science is metaphysically suspect? If so, then this position seems little different to the skeptical dismissal of science from creationists in the United States, who think they can ignore the empirical evidence of the sciences because scientists do not begin with their same foundational premises. But such large-scale generalizations about "science" are incompatible with anti-essentialism. Even if anti-realist conclusions about psychological theories of human nature were justified, why would that justify anti-realism in other disciplines such as physics? If only the conclusions of some scientists are metaphysically deficient, then it is up to the Radical Orthodox to enter the ring to show how particular sciences fall short in their explanations and how they might be helped by theological frameworks. But this requires the very attempts at dialogue that were dismissed as philosophically naïve.

As historians of science have repeatedly shown, social context influences the scholarly debates of any period. As science gained authority and prestige in university curriculums in the

20th century, for example, theologians turned to science for arguments to demonstrate that theology is a legitimate, truth-seeking discipline (Reeves 2018). I believe our context has changed in a post-COVID era. The issue now is whether Christians in an era of science skepticism can be responsible consumers of scientific information (Reeves 2021). For much of the past century, it seemed that Christians could still be informed scientific citizens even if they objected to some theories because of a literalist reading of Scripture. But now the roots of mistrust have flowered into a generalized skepticism, making many Christian communities hostile to all kinds of scientific information. In our present moment of widespread science skepticism in Christian communities, wholesale generalizations about the lack of neutrality in the sciences is not wise. Scholars should continue to critique individual theories and push back against bad popularizations of science, but the sciences are too varied—since it is not a natural kind—to generalize about its metaphysical assumptions. This is not to give "science" exemption from criticism. I share many of the concerns raised in the "After Science and Religion" project about excluding consciousness and teleology from scientific accounts of the universe. But the issue here is not "science" but scientific overreach. The aim of theology should not be to tell technical science what to do, or what conclusions they should draw, but to constantly remind scientists of what they cannot yet do.[5] This is the dialogue to which scholars of science and religion should aspire, and I think the argument of *Territories* greatly helps those conversations.

Bibliography

Brooke, John Hedley. 1991. *Science and Religion: Some Historical Perspectives*. Cambridge History of Science. Cambridge: Cambridge University Press.

———. 2019. "Afterword: The Instantiation of Historical Complexity." In *Rethinking History, Science, and Religion: An Exploration of Conflict and the Complexity Principle*, edited by Bernard Lightman. Pittsburgh: University of Pittsburgh Press.

Cartwright, Nancy. 1999. "The Limits of Exact Science, from Economics to Physics." *Perspectives on Science* 7.

Chang, Hasok. 2004. *Inventing Temperature: Measurement and Scientific Progress*. Oxford University Press, USA.

Collins, H. M. 2001. "What Is Tacit Knowledge?" In *The Practice Turn in Contemporary Theory*, edited by Theodore R. Schatzki, K. Knorr-Cetina, and Eike von Savigny, 107–19. London: Routledge.

De Cruz, Helen. 2022. "Religion and Science." In *The Stanford Encyclopedia of Philosophy*, edited by Edward N. Zalta, Fall 2022. Metaphysics Research Lab, Stanford University. https://plato.stanford.edu/archives/fall2022/entries/religion-science/.

Grey, Carmody. 2021. "A Theologian's Perspective on Science-Engaged Theology." *Modern Theology* 37 (2): 489–94. https://doi.org/10.1111/moth.12695.

Hacking, Ian. 1983. *Representing and Intervening: Introductory Topics in the Philosophy of Natural Science*. Cambridge: Cambridge University Press.

Hardin, Jeff, Ronald L. Numbers, and Ronald A. Binzley. 2018. *The Warfare between Science & Religion: The Idea That Wouldn't Die*. John Hopkins University Press.

[5] This point is inspired by the philosopher of science Hasok Chang's argument (Chang 2004, 249) that: "The primary aim of complementary science is not to tell specialist science what to do, but to do what specialist science is presently unable to do."

Harrison, Peter. 2002. *"Religion" and the Religions in the English Enlightenment*. Cambridge: Cambridge University Press.
———. 2015. *The Territories of Science and Religion*. Chicago: University of Chicago Press.
———. 2021. "A Historian's Perspective on Science-Engaged Theology." *Modern Theology* 37 (2): 476–82. https://doi.org/10.1111/moth.12693.
———. 2022a. "Conclusion." In *After Science and Religion: Fresh Perspectives from Philosophy and Theology*, edited by Peter Harrison and John Milbank, 316–24. Cambridge: Cambridge University Press.
———. 2022b. "Science and Religion as Historical Traditions." In *After Science and Religion: Fresh Perspectives from Philosophy and Theology*, edited by Peter Harrison and John Milbank, 15–34. Cambridge: Cambridge University Press.
Harrison, Peter, and John Milbank, eds. 2022. *After Science and Religion: Fresh Perspectives from Philosophy and Theology*. Cambridge: Cambridge University Press.
Harrison, Peter, and Paul Tyson. 2022. *New Directions in Theology and Science: Beyond Dialogue*. Routledge.
Hutchings, David, and James C. Ungureanu. 2021. *Of Popes and Unicorns: Science, Christianity, and How the Conflict Thesis Fooled the World*. Oxford University Press.
Jong, Jonathan. 2021. "A Scientist's Perspective on Science-Engaged Theology." *Modern Theology* 37 (2): 483–88. https://doi.org/10.1111/moth.12694.
Jordan, Peter N. 2022. *Naturalism in the Christian Imagination: Providence and Causality in Early Modern England*. Cambridge University Press.
Kuhn, Thomas S. 2012. *The Structure of Scientific Revolutions: 50th Anniversary Edition*. University of Chicago Press.
Lightman, Bernard. 2019. "Introduction." In *Rethinking History, Science, and Religion: An Exploration of Conflict and the Complexity Principle*, edited by Bernard Lightman. Pittsburgh: University of Pittsburgh Press.
Lindberg, David C. 2010. *The Beginnings of Western Science: The European Scientific Tradition in Philosophical, Religious, and Institutional Context, Prehistory to A.D. 1450, Second Edition*. University of Chicago Press.
Milbank, John. 2022. "Religion, Science and Magic: Rewriting the Agenda." In *After Science and Religion: Fresh Perspectives from Philosophy and Theology*, edited by Peter Harrison and John Milbank, 57–143. Cambridge: Cambridge University Press.
Numbers, Ronald L., ed. 2010. *Galileo Goes to Jail and Other Myths about Science and Religion*. Cambridge, Mass.: Harvard University Press.
Perry, John, and Joanna Leidenhag. 2021. "What Is Science-Engaged Theology?" *Modern Theology* 37 (2): 245–53. https://doi.org/10.1111/moth.12681.
Reeves, Josh A. 2008. "The Field of Science and Religion as Natural Philosophy." *Theology and Science* 6 (4): 403–19.
———. 2018. *Against Methodology in Science and Religion: Recent Debates on Rationality and Theology*. New York: Routledge.
———. 2021. *Redeeming Expertise: Scientific Trust and the Future of the Church*. Baylor University Press.
Riesebrodt, Martin. 2010. *The Promise of Salvation: A Theory of Religion*. University of Chicago Press.
Rouse, Joseph. 1996. *Engaging Science: How to Understand Its Practices Philosophically*. Ithaca: Cornell University Press.

Sikahall, Esgrid. 2022. “A Gadamerian Approach to Science and Religion Historiographies: Reinterpreting Essentialism, Anachronism, and Complexity in Recent Science and Religion Historiographies through the Thought of Hans-Georg Gadamer.” Edinburgh University.

Spencer, Nick, and Hannah Waite. 2022. “‘Science and Religion’: Moving Away from the Shallow End.” Theos. https://www.theosthinktank.co.uk/cmsfiles/Science-and-Religion-Moving-away-from-the-shallow-end_REPORT.pdf.

Tyson, Paul. 2022. *Christian Theology of Science*. Grand Rapids, Michigan: Baker Academic.

Wittgenstein, Ludwig. 2003. *Philosophical Investigations: The German Text, with a Revised English Translation*. 3rd ed. Oxford: Blackwell.

Woodward, James. 2003. *Making Things Happen: A Theory of Causal Explanation*. Oxford: Oxford University Press.