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# Replies to Some of Our Friendlier Critics

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In this Book Symposium, Dirk Evers, King-Ho Leung, Robyn Boeré, and Mikael Leidenhag have discussed John Perry and Joanna Leidenhag's book *Science-Engaged Theology*. Here, Perry and Leidenhag respond to their comments.

## Introduction

What a privilege to have four excellent scholars give such careful attention to our book; we are deeply grateful. Each response is appreciative, but also identifies the intersecting points where we needed to say more on what we mean by key terms like secularism, policing, empirical, and entanglement. This Book Symposium started as an "Authors Meet Critics" panel at the European Academy of Religion in St Andrews 2023, and so we thank the EUAoR and *Zygon: Journal of Religion and Science* for facilitating and publishing this conversation, as well as Dr Danielle Jansen for editorial assistance.

To help us zero in on the most fruitful passages, we have selected one or two direct quotes from each response. We do this both to keep our rejoinders narrowly focused and also as a way to honor our critics' words. They have developed our thinking on these matters, and as a way to show gratitude, we will now dive more deeply into some of their salient points.

## Response to Dirk Evers

Let us start with Dirk Evers, who pushes us to think more about historical contextualization in several different ways.[1] We focus here on the first such way, when he writes:

> Here as well as at other places Perry and Leidenhag refer to a meta-narrative of secularization. . . . However, the term secularization or secularism is not so much a descriptive historical category as it is an analytical term which became common with Sigmund Freud, Max Weber, Émile Durkheim, Peter L. Berger, and others as a characterization of the development of modernity away from religious dominance in society. (Evers 2024, 872)

What Evers objects to is those places where we speak of secularism as an ideology as opposed to the description of a historical trend, as we do in the opening lines of Chapter 3: "the deconstruction of modern terms like 'science' is necessary because in this conversation the terms were invented as tools of an ideology called secularism" (Perry and Leidenhag 2023, 21).

In our book, we tried to reserve secularism (note the *-ism* ending) to refer to the view that orthodox Christianity will (and should) inevitably die out to be replaced by something, allegedly neutral and presuppositionless, called science. Thomas Jefferson is the poster-boy for this view, but he is not the only one; two others that we mention in the book are Voltaire and, much more recently, Russell McCutcheon. We needed some word to denote this "Jeffersonian" notion, and we chose secularism.

Secularism in this sense is conceptually distinct from the theories of secularization proposed by the sociologists listed by Evers above, to which we may add other thinkers such as Charles Taylor, Alasdair MacIntyre, and José Casanova.

But we still needed some word to refer to whatever Jefferson and Voltaire were up to. Evers does not like our choice but does not propose an alternative. For what it is worth, the usage of both Berger and Taylor sounds closer to our terminology. Berger (2008) counts three different forms of secularism, even referring to them as ideology, as we do. Taylor (2018, 1–24) distinguishes Secularity 1 (akin to our secularism) from Secularity 2 (declining religious practice) from Secularity 3 (Taylor's own focus in *A Secular Age*). However, hidden behind Evers's quibble about terminology is a much more interesting argument. Reading his response gave a new handle on something that was in the back of our minds while writing the book but which we could never put into words until now.

There has been a swinging pendulum in science and religion historiography. The pendulum swings between (1) emphasizing meta-narratives as explanations for the relationship between science and religion (usually simplistic stories, like inevitable conflict or harmony) and (2) emphasizing complexity. Everyone involved in the discussion in these pages is broadly on the side of complexity, including Peter Harrison, Evers, and us. But simply asserting "It is complex," and nothing more, is not really an explanation of anything. As Harrison (2019, 223) writes, "while highlighting historical complexity is entirely appropriate as a first step, historians of science and religion need to do more than simply identify historical episodes that falsify unpalatable narratives." Ronald Numbers (2019, 235) puts the point sharper: "complexifying history seems to have little to recommend it besides its truth." Again, we think we are on the same page here as Evers. But what comes next?

For Harrison, what comes next is a swing of the pendulum back from complexity toward, ever so slightly, patterns or meta-narratives as partial explanations. He continues, "the primary task of the historian is not the searching out of complexity per se, but the attempt to render complexity intelligible as far as that is possible" (Harrison 2019, 226). So, historians must do more than simply tell episodic stories from long ago. We agree. However, what gave us pause in the original writing was the insight that, among all explanatory patterns, meta-narratives of secularization are somehow different (see Perry and Leidenhag 2023, 9). During the writing of our book, we well remember us meeting over Zoom (this was during the pandemic) and wrestling with exactly this question: Why is a meta-narrative of secularization different than the other stories, like the conflict model, that historians rightly reject? Maybe it is because the term secularism is flexible, as in our quibble above. Maybe it is because it is a pattern that allows for the terms under consideration (science and religion) to change in intelligible ways that transhistorical conflict or complexity do not. Maybe it is because it seems to explain how we got to the conflict and independence models in the first place. Maybe it is just that we are fans of the work of Berger, Taylor, and MacIntyre. We do not feel we have quite got to the bottom of this oddity yet, and we welcome the fact Evers intuited this.

We still think Harrison is right. Positing a given theory of secularization as an explanation could be a fruitful way to avoid extremes in the pendulum: extremes like "conflict!" or "complexity!" But hearing Evers's point made so lucidly drives home to us that our thinking about science-engaged theology is still in process. The closest we have got so far is as follows. Harrison (2019, 230) once wrote: "This is not the place to set out a complete account of what the history of science–religion relations would look like when viewed through [a given theory of secularization], but it does point to one strategy for moving the discussion on from reiterations of 'the complexity thesis'." Yes, exactly, and the first half of our book was an attempt to get that process underway. That is, given the visibility and influence of post-Barthian, post-liberal, Radical Orthodox theologies—all of which turn to some degree on theories of modernity—what would an account of the history of science–religion relations look like when view through those lenses?

## Response to King-Ho Leung

We very much enjoyed King-Ho Leung's response as well, though for different reasons. He so thoroughly dove into two of our metaphors—policing and the EU—that it almost feels like *he* was the one who devised them, not us. He writes:

> if Perry and Leidenhag's theological vision may be said to be an act of "theological *de*-policing" both against any assertion of theological dominance over other disciplines and against any "secular policing" over theology, one may more generally question whether all acts of *de*-policing may always have a kind of policing as its flipside or complement. (Leung 2024, 889–90)

An excellent suggestion, one which we did not consider anywhere in the book! To put Leung's suggestion more pointedly, he is saying, *even though Perry and Leidenhag say they want to allow theology to stir up the reigning order, they have stacked the deck so that theology will be kept in its place*. The only theology that Perry and Leidenhag (2023, 24) will end up with is theology that has "learnt its lesson and now plays by science's rules." We hope that's not true, but we accept his challenge that our vision might lead to some things that we did not intend.

We have two reasons to believe otherwise. First, Leung (2024, 887) assumes that we object to "Milbank's rejection of 'pure nature'." If we believed nature was accessible to scientists via some "autonomous reason" (Leung 2024, 887), then Leung would be correct about us. Instead, we assume that knowledge of nature (or anything else) comes to us thanks to God's orderly creation of all things. So, we agree with Milbank's rejection of pure nature and autonomous reason, as far as we understand him. The quote from Milbank that we do challenge repeatedly, and which may have misled Leung to believe that we think that pure nature is accessible to human reason, is this notorious soundbite:

"unless other disciplines are (at least implicitly) ordered to theology . . . they are objectively and demonstrably null and void, altogether lacking in truth" (Milbank 2000, 45). *Implicitly* is doing an awful lot of work here! As we ask in the book about this very quote, what does "demonstrably null and void" imply about, say, a particular theory in biology or sociology? Further, what does it mean for another discipline to be ordered to theology? Is it working from or towards theological presuppositions? Does it make a difference whose theology is in view? If Leung or Milbank would answer these questions, perhaps giving us a demonstration (or example), we might be able to sort out our points of agreement and disagreement more fully.

Second, and relatedly, we speculate that part of Leung's worry originates in our willingness to accept the standard disciplinary boundaries of the university and—his implication seems to follow—controlling those that sneak across the disciplinary borders. We will get to this just below when we respond to Robyn Boeré, but we can say here that not all disciplinary divisions are consequences of modernity, that is, the policing strategy of Jefferson et al. We accept the division that originated in the ancient liberal arts not because of anything Jefferson said, but because of what the ancients and medievals believed. An academic discipline (*sciencia*) "treats only of one class of subjects" (Thomas Aquinas, *ST* 1:1.3, quoting Aristotle, *Posterior Analytics*, part 12). And why is that important? Not because the academic police might get you if you step out of line, but because what counts as evidence in, say, physics is not the same as what counts for evidence in biology, to say nothing about psychology or theology. Each has its own set of practices, traditions, virtues, and criteria for acceptance. This means that the boundaries, such as they are, are primarily internally drawn. Does that mean that our vision for science-engaged theology doesn't need a police department to enforce boundaries—which might alleviate Leung's worries? We think that our vision does not need a police force, but Leung's suggestions have us intrigued. It could be worth exploring in a later project.

## Response to Robyn Boeré

Two passages stood out to us from Boeré's response. The first reads:

> [B]y the end of the book, it is still unclear what is meant by an "empirical reality." A less charitable way of characterizing my response is that I am here to quibble about the basic principle laid out on page 1 . . . "The basic principle of science-engaged theology is that whenever theologians make claims about created, empirical realities, they should incorporate the insights of empirical investigation into their analysis." (Boeré 2024, 894; Perry and Leidenhag 2023, 1)

Let us start with her puzzlement about what we mean by empirical realities. Our meaning was nothing spooky; indeed, it is quite mundane. Empirical realities are what can be known through our senses, together with the tools extending and systematizing them, like microscopes and computers, and reasoning about them, like the process of cause and effect. And so, because new tools for extending our senses are always being developed, the scope of empirical realities may be subject to change. This is why empirical overlaps with, but is not identical to, material, created, or as discussed below, experiential. Empirical is a term defined by practice, not ontology.

Thomas calls this empirical knowledge (*scientiam experimentalem*). In fact, he even gives examples of this process, referring to how Jesus might have learned about ocean tides:

> Although all sensible things were not subjected to Christ's bodily senses, yet other sensible things were subjected to His senses; and from this He could come to know other things by the most excellent force of His reason, in the manner described in the previous reply; just as in seeing heavenly bodies He could comprehend their powers and the effects they have upon things here below, which were not subjected to His senses. (*ST* 3:12.1)

We can now answer Boeré's follow-up questions by some examples. "What is an empirical reality?" The moon and the ocean. "As opposed to a non-empirical reality?" Angels and the highest heaven. Why aren't the latter empirical? Because angels don't have bodies and, about heaven, "whatever we cognize about the heavens [ = the sky and outer space], this is either via observation or via change; but the highest heaven [ = where Jesus ascended to] is subject neither to change nor to observation" (Aquinas, *Scriptum super Sententiis*, lib. I, d. II, q. 1).

Perhaps an easier way to get at Boeré's puzzlement is via another passage from her reply: "Let us say, perhaps, that all created reality is empirical . . . for is there any part of reality that we cannot experience?" (Boeré 2024, 898). Not all experience is empirical. Following what we understand as Thomas' usage, we reserve *empirical* for what makes an impression on the *proper sensibles*, his term for the senses. Angels are not empirical realities, but humans can still experience them via a "prophetic vision—that is, according to imagination" (*ST* 1:51.2).[2] Nonetheless, the brains of humans who have experienced angels or God are empirical realities and could be studied, if Boeré or Thomas were interested enough, because they can be known through our senses, together with the tools extending and systematizing them.

Here is the other passage that stood out to us from Boeré (2024, 895):

> If one were to write a womanist account of theological anthropology, would one really want to turn to psychology, a field which not only has an acknowledged replicability crisis, but even more importantly, an acknowledged race and class issue? Similarly, there are good reasons to avoid scientific and medical data when writing on pregnancy.

Start with the first of these sentences. Why does she worry about scientific disciplines that have already acknowledged their problems? All that means is that there are disagreements among psychologists. Boeré's sentence works equally well the opposite way round:

> If one were to write a psychological account of the human person, would one really want to turn to womanist theology, a field which not only is rooted in texts that are acknowledged to be misogynist, but also has acknowledged race and class issues?

Of course, the point of much womanist theology is to critique these core texts, which, yes, proves that there is disagreement among theologians and biblical scholars, but so what? What we really should worry about is fields of inquiry that are not accountable to their own evidence and have no way of seeing and rooting out their own biases. The field of feminist science studies—which, we guess, is what Boeré is gesturing towards—depends profoundly on Thomas Kuhn and Helen Longino, who are two of the most important philosophers of science for our vision of science-engaged theology. Both take seriously and appreciate the socially situated nature of scientific knowledge.

We think that the point Boeré is aiming for may be better conveyed by the second sentence above. "Similarly, there are good reasons to avoid scientific and medical data when writing on pregnancy" (Boeré 2024, 895). She says this specifically regarding our passage in Chapter 5 that having clear success criteria allows theologians to prune wrong or idolatrous ideas from theological claims. In that passage, we (2023) wrote, "The tools of the empirical sciences allow theologians to be risky, and thus serve the church, in exactly this way." Boeré (2024, 895) responds: "much if not most scientific and medical writings on pregnancy begin from the assumption that pregnancy is gestation of a fetus in a container, not the intersubjective relationship between mother and child. What would empirical accountability then look like for that latter claim?" Excellent, precise question.

First, we affirm what Boeré is doing when she brings in perspectives beyond obstetrics in her understanding of pregnancy. We do not think, and never implied, that theology should only engage the empirical sciences. Multiple perspectives can be helpful in our quest for accountability. If Boeré is correct in her claim that pregnancy is an intersubjective relationship, then changing current obstetrics in line with this would not get rid of obstetrics, as she seems to hope; it would just lead to better, more accountable, medicine. Second, and even better, Boeré *is* making a risky claim! The claim that pregnancy is an intersubjective relationship is the sort of claim that can be tested, fitting better or worse with biological information about gestation as well as with the testimony of expectant mothers. That said, it seems to us that the two models of pregnancy (uterus-as-container vs. intersubjective relationship) are the kind of hidden background assumptions or models that can both make sense of some of the information currently available concerning pregnancy. As such, it is not something Boeré needs to give up on, just because it is not the prevailing model in obstetric practice and discourse. Switching the model or metaphor in use will be a matter of showing obstetricians and others that the intersubjective relationship has better explanatory power and better health outcomes for patients than the current model.

## Response to Mikael Leidenhag

Mikael Leidenhag's response first critiques the "metaphysical matching game" of other science-and-religion scholars for distorting the grammar of theology and consequently inviting scientism. We agree, and for exactly the reason Leidenhag identifies; namely, scientific pluralism undermines any notion that "science" can set the metaphysical or epistemological agenda. Second, Leidenhag outlines apophatic theology's (AT's) conviction that, because of divine transcendence, God, and the world do not share "logical space," such that science and theology will not use the same grammar or language. As Leidenhag (2024, 908) points out then, "there is significant agreement between [science-engaged theology] and AT in terms of how the science-engaged theology should *not* be conducted." But then he asks could there be a deeper partnership between science-engaged and apophatic theology? "Can there be a science-engaged apophatic theology?" (Leidenhag 2024, 906).

This brings us to our chosen quote to focus on from Leidenhag, which identifies a potential barrier to the idea of a science-engaged apophatic theology. He writes:

> [Perry and Leidenhag] stress the *entanglement* of theological and scientific concepts, whereby a concept "cannot be understood as either a scientific or theological in meaning and origin, but only as both," meaning that "the tools of more than one discipline" is needed to understand the phenomenon (2023, 13, 48). This may go contrary to the apophatic spirit of safeguarding the unique logical space of Christian theology, if the idea is that scientific and theological concepts ought to be used conjunctively to account for some phenomenon, thus, seemingly, implying that scientific and theological operate on the same level of reality or that they share the same logical space. (Leidenhag 2024, 909)

This is an excellent question, and the extended example from divine action debates drives the point home. What is the difference, he could have asked, between our notion of entanglement and Sarah Lane Ritchie's theistic naturalism, whereby "the physical is involved with God's active presence" (Ritchie 2019, 350; quoted by Leidenhag 2024, 904). Why couldn't Peacocke or Clayton simply claim that emergence is an entangled concept? If we say, *there is no real difference, apart from our rule of thumb to be as specific and local as possible*, then we too might justly be accused of piecemeal scientism.

However, we do not think that entanglement is a kind of localized matching game. Unlike the metaphysical matching-game, our notion of entanglement is not about fitting a phenomenon from one metaphysical system into a different system. Entanglement is about using different disciplinary tools, or a plurality of perspectives, to account for a single phenomenon. What is the difference? In the case of entanglement, the existence of the phenomena is not in doubt. Entanglement is quite different, therefore, from placement problems or attempts to save the phenomena. This is because placement problems, matching games, and saving the phenomena are all attempts to hold onto things that seem incompatible with a metaphysic system (one *map*) that is taken as the universal criterion of rational enquiry, such as naturalism. But science-engaged theology does not accept that any one metaphysical map has all the rules that would then place certain phenomena (e.g., ethics, miracles, angels) under threat and in need of saving.

The difference may become clearer through some examples. Let us see how far we get if we try and transform Clayton's proposal into an acceptable form of science-engaged theology. Science-engaged theology does not ask, *where can I fit divine action into the metaphysical picture of causal closure provided by physics?* Instead, a science-engaged theologian could take Clayton's proposal and check if his proposal captures the scientific theory accurately (see Leidenhag 2021, 15–34). Alternatively, the science-engaged theologian might try and examine specific instances of emergence from theological and scientific perspectives. For example, Tom McLeish (2023, 149–66) explored emergence in the fractional quantum Hall state/effect and entangled polymer ring fluids and linked these to wisdom-based theology of science from Job 28. There is no reason to presuppose that it takes the theologian to the area of special divine action. McLeish (2023, 163) even states that his approach "can circumvent the tortured issue of divine action." This is a very unlikely place for the enquiry to arrive at since, at least within the orthodox Christian tradition, divine activity is not a product of evolution or material complexity.

Is it a problem that Christian models of divine action do not seem to be entangled with the theory of emergence? Not at all. Because entanglement is about maximizing accountability, and not the need for verifiability or rationality, there is no problem with saying that something, namely the divine nature, is not entangled with quantum mechanics or emergent phenomena. There is no obvious reason to suppose that quantum mechanics or emergence theory are the right tools to hold theologians accountable to on the question of how God acts in the world. It matters very much for moral reasons that we are accountable to the right people and rules.

Let us try a more promising example, taken from our book. A science-engaged theologian might say, *how does what I am saying about race (perhaps, as a category invented by Christian supersessionism) relate to what biologists say about race?* Very plausibly, both discourses have something important to contribute to how we understand racial categories. Of course, the same question could be asked with false theologies of race, such as those based on the descendants of Ham. Science-engaged theology is not a guarantor of truth, in part because the theology that one starts with or the scientific theory one is engaging might be complete bullshit. There is no way around this problem. Science-engaged theology is not valuable because it offers certainty—it does not—but because it tries to minimize error by making theology open to critique from a wide variety of perspectives. Modern genetics can help theologians see the theory about Ham's descendants as wrong. Theology can help explain how and why we started to organize people into racial groups, thus showing that scientists searching for signs of natural superiority are wrong. Together, we are not only slightly less prone to error, but we get a fuller picture of how the variation of human morphology relates to the racist organization of society. Of course, theology and the sciences are not the only two voices in this trading zone of ideas, and others are also needed.

## Notes

[1] In contrast to our other respondents, Evers made six separate points in his piece, so us replying to only the one direct quote seemed a touch stingy. Let us briefly comment on Evers other five points. First, we do not know what to say about esotericism. Second, his examples of what happened in Germany in the nineteenth and early twentieth centuries fit very well with what we say about "the unifiers" (37–39), where the German context does make brief appearances—with Evers's help we clearly could have said more here. Third, Evers's argument that "good fences make for good neighbours," sounds correct to us, but makes us think Leung and Evers might have an interesting conversation. We agree with everything in the Hermeneutics as Foundation section (particularly the last sentence) and are thrilled Evers thinks that what we propose is "cool"!

[2] Thomas adds here that some angels sometimes assume "sensible" bodies, which would make them, by definition, empirical realities.

## References


Berger, Peter L. 2008. "Secularization Falsified." *First Things First*, February 2008. https://www.firstthings.com/article/2008/02/secularization-falsified.

Boeré, Robyn. "Empirical Realities? A Question of Basic Principle." *Zygon: Journal of Religion and Science* 59 (3): 893–900.

Evers, Dirk. 2024. "Good Fences Make Engaging Neighbors." *Zygon: Journal of Religion and Science* 59 (3): 871–83.

Harrison, Peter. 2019. "Conflict, Complexity, and the Secularization in the History of Science and Religion." In *Rethinking History, Science, and Religion: An Exploration of Conflict and The Complexity Principle*, edited by Bernard Lightman, 221–34. Pittsburgh, PA: University of Pittsburgh Press.

Leidenhag, Joanna. 2021. *Minding Creation: Theological Panpsychism and the Doctrine of Creation*. London: Bloomsbury/T & T Clark.

Leidenhag, Mikael. 2024. "Considering the Place of Apophaticism within Science-Engaged Theology." *Zygon: Journal of Religion and Science* 59 (3): 901–11.

Leung, King-Ho. 2024. "Theology and Policing." *Zygon: Journal of Religion and Science* 59 (3): 884–92.

McLeish, Tom. 2023. "Complementary Causation and Emergence: A Substrate for Conjunctive Explanations." In *Conjunctive Explanations in Science and Religion*, edited by Diarmid A. Finnegan, David H. Glass, Mikael Leidenhag, and David N. Livingstone, 149–66. London: Routledge.

Milbank, John. 2000. "The Conflict of the Faculties: Theology and the Economy of the Sciences." In *Faithfulness and Fortitude: Conversations with the Theological Ethics of Stanley Hauerwas*, edited by Mark Theisson Nation and Samuel Wells, 39–58. Edinburgh: T & T Clark.

Numbers, Ronald L. 2019. "Revisiting the Battlefields of Science and Religion." In *Rethinking History, Science, and Religion: An Exploration of Conflict and The Complexity Principle*, edited by Bernard Lightman, 183–90. Pittsburgh, PA: University of Pittsburgh Press.

Perry, John, and Joanna Leidenhag. 2023. *Science-Engaged Theology*. Cambridge: Cambridge University Press.

Taylor, Charles. 2018. *A Secular Age*. Cambridge, MA: Belknap Press.