

The Ground and Grammar of Theology, Chapter 5: “Theological Science”
Handout by Travis M. Stevick

[*Note that while this handout has some characteristics of an outline, it is mostly concerned with issues and topics that I find personally interesting. While I hope that it will be helpful for those who are reading this work for the first time, I am inescapably pragmatic in my perspective and my emphasis will be on what strikes me as helpful or noteworthy rather than a mere summary.]

In the 18th and 19th centuries, the church in the West sent missionaries around the world. It has been remarked upon from many quarters that, in many ways, the great fruit of that missionary movement today is the sending of missionaries FROM those other parts of the world back to the West, as Western culture has become increasingly secular and the Western church has lost some of its key focus.

Some in the West find this notion offensive. This sometimes takes the form of “Who do you think you are, teaching ME what it means to be a Christian.” This kind of offense is forgivable if indeed the West has nothing to be reminded of, but if indeed the church outside of the West has learned things that the West has forgotten, it would do us well to listen carefully, not because we have something new to learn, but because we have forgotten something that we need to RElearn, by whatever means necessary.

In some ways, Torrance’s epistemological project operates on a similar premise, that the church learned from the gospel what it needed to know in order for science as we know it to arise in the first place and it spread around the world. In the meantime, the church has largely forgotten what it knew in the first place and now it is the natural scientists who are most clearly living into these ultimate convictions. As such, we need to be reminded of them.

It is easy to read Torrance in general, and this chapter in particular, as if he is taking his cue for what science is and who God is from scientists such as Einstein. However, it would be more true to say that he is using epigrammatic sayings of Einstein to remind us of truths that Einstein could only glimpse as the “material cause” of natural science, but which Christians can know as a matter of the self-revelation of God. Perhaps this is a parallel to Paul hoping that the conversion of the Gentiles will provoke jealousy in his fellow Jews and have them turn to Christ (Romans 11:13-16). In this case, the idea that natural science has laid hold of ideas that are the birthright of Christians might spur us to jealously reclaim them as our own.

In many ways, this whole chapter is an extended meditation on the nature of ultimate beliefs and how they shape our engagement with reality. While Torrance alludes to such beliefs with some frequency, there are only a handful of places where he deals with concrete examples and this is one of them. There are two overlapping sets of ultimate beliefs in this chapter.

The chapter opens with Torrance recalling his discussion of “three masterful ideas” that were developed by the early church that made science as we know it possible. The original discussion was in chapter three, on pages 52-60.

The three "masterful ideas" that Torrance is referring to are:

1. The pervasive rationality of the universe
2. The contingent rationality of the universe
3. The contingent freedom of the universe

This has a profound impact on intellectual history. The fact of the matter is that these three ideas became so much a part of the scientific mindset that they were woven into the fabric and framework in which scientists thought. They became so deeply lodged in the mind of scientists that it became difficult if not impossible to see them and notice them. In such a case, we assume that we are being rational, that our methodology corresponds to what we think are our ultimate beliefs, when they might very well come from an entirely different source. We must ask "Why do we affirm these things and not other things?" It is when we ask this that we are confronted with their distinctly Christian pedigree.

1. If we do not affirm the pervasive rationality of the universe, then we have no reason to affirm that any difficulty we come up against in our scientific endeavors is not to be attributed to a "fault" in reality itself. It may be that the object of study is itself irrational and no effort on our part can make it rational. The fact that we do not operate this way is a testament to the fact that we actually do believe that the universe is deeply rational. Without it, we would stop our science before it started.

2. If we do not affirm that the rationality of the universe is contingent (that is, non-necessary), we would not trust so deeply in the need to investigate the universe with our empirical experimentation. If the universe was necessary, and truly isomorphic to a system such as Euclidean Geometry, we would have no need to engage in empirical science, we could merely manipulate our concepts and deduce the laws of nature through reason alone. Again, because we do not actually do our science that way and would find it preposterous to suggest that we do so, we can see that we actually do operate with this idea intact.

3. If we were to deny the (contingent) freedom of the universe, it would mean that the universe is not free to do anything new. In point of fact, we see that the universe surprises us almost continually.

A good portion of this chapter is taken up looking at three sayings of Einstein. Another discussion on these same sayings can be found in *Transformation and Convergence in the Frame of Knowledge*, pages 250-259 in an essay titled "Christian Theology in the Context of Scientific Change."

1. "God does not play dice." This idea is clearly related to the first of the "masterful ideas." The implication seems to be the conviction that any insufficiency in our models and means for understanding reality ought not to be read back into reality as if a weakness of our epistemology should lead us to conclude a similar and parallel weakness in reality itself.

Torrance is clear that to say that creation is not random is not the same as to say that it is deterministic. Einstein was a realist, as opposed to a determinist. It is interesting that Torrance is so committed to an Einsteinian view of the universe, especially because Einstein famously rejected the Copenhagen interpretation of the quantum theory, a few that, while not monolithic in the field today, is easily the view with the widest claim to “received orthodoxy.”

On page 115, Torrance makes a distinction between “prescientific” and “scientific” thinking that anticipates the stratification that he will make in the final chapter of this book (and revisit in *The Christian Doctrine of God*). For Torrance in this distinction, prescientific thinking deals only with how things appear to us but cannot transcend such a view, being concerned only with “subject-object relations.” Scientific thinking, however, attempts to penetrate beyond such appearances by utilizing “object-object” relations that can provide a check on our subjectivities.

It is worth noting that Torrance seems to imply that we can factor the knowing subject out of our knowledge, but this is not the case. That being said, there is still an advance made if we can extend our knowledge in this way, though it might more properly be called “subject-object-object relations.” Other discussions on the idea of “object-object relations” can be found in *Transformation and Convergence in the Frame of Knowledge*, 252 and *Christian Theology and Scientific Culture*, 48-49

In some ways, Prescientific thinking is parallel to the Evangelical and Doxological level of our understanding of God, where we are caught up in the mass of detail without necessarily trying to “make sense” of how everything is related. Scientific thinking in this sense is somewhat parallel both to the “first theological level,” where we attempt to organize our experience into a coherent system of thought, and also to the “second theological level” where we attempt to allow how things really are to control how we think of them. More on this in the next chapter of this book.

2. “God does not wear his heart on his sleeve.”

If the first Einsteinian aphorism expresses that, regardless of what we may think, there is indeed an order to the universe (an order that must be assumed in any attempt to prove or disprove it), then this one expresses the conviction that this order will normally not be something that can be read off the surface of reality. I have frequently read and heard people speak of being “critical realists” and contrast that to a “naive realism” that believes that there is a simple connection between experience and scientific knowledge. In point of fact, I am not familiar with ANY philosopher who actually affirms that. Even Protagoras had a more sophisticated epistemology than that.

On Page 122, Torrance asserts that empirical and theoretical issues are never separated (that is to say, we never have “facts” for which we have to impose an “interpretation” but rather “inherently significant” facts). This also gets at the “evangelical and doxological” level of our understanding from a slightly different angle.

What Torrance does with this is interesting, because it allows him to discuss the multi-leveled nature of reality and the nature of scientific theory (when applied to theological science, we call these theories “doctrines”). Specifically, it allows Torrance to speak of theories as being “disclosure models,” as opposed to “picturing models.” That is to say, for Torrance, our doctrines

and theories do not necessarily articulate “how things are,” but function as means by which we continue to discern the nature of reality.

A scientific theory is a compound question that we put to a particular field, and that we refine and adapt in the light of the answers we receive. But that is a progressive operation, for the theory or model is progressively changed and refined in the light of what becomes disclosed. A scientific theory or model of this kind is a sort of lens through which we allow nature in its intrinsic patterns to reveal itself to our apprehension. (125)

The order of the first aphorism can be explored through cross-level interaction through our theories which, at their best, carry the seeds of their own marginalization as they are discarded. However, it is crucial to note that they are not discarded because they have FAILED in their purpose, but precisely because they have SUCCEEDED in bringing us to a deeper encounter with reality. As such, the goal of such models is not to tell a “literally true account” of what reality is like, but to facilitate such encounter.

3. “God is deep but not devious.”

The first aphorism affirms there EXISTS order. The second aphorism affirms that we have to DIG for it. This aphorism affirms that our experience, though complex and not always easily understood, is fundamentally RELIABLE. We will never get to a depth of understanding that reveals everything that seemed to be the case was nothing of the sort. That is to say, reality will not turn out to be fundamentally different than we have discovered it to be. It could also be phrased (in opposition to Kant) that reality is not fundamentally different “in itself” than it is “to us.”

This aphorism is significant in practice partly because it explains why, when all the baffling results of quantum physics arose, scientists did not throw their hands up in despair of finding order, but continued to press forward and find that there was a deeper order to discover. Why should they do that? Such behavior only makes sense if we believe that, however obscured order might be, it still exists and can be discovered. However, why should that be the case? Why should not the natural world be characterized by chaos rather than order?

In many ways, this final question gets at the heart and soul of this chapter’s reflection (indeed, much of the remainder of the chapter is taken up with reflecting on it). No matter how much we may want to claim that we only follow empirical evidence or how much we want to say that theories must be verifiable and/or falsifiable, the fact remains that there are SOME beliefs that we MUST operate with or else our behavior is unintelligible.

Science is not theory-neutral. It cannot even begin if we believe that nature is random or chaotic. It cannot begin if we equate appearances with the entirety of reality. It cannot begin if we think of it as being deceptive (a view that, interestingly, would be consistent with a very different kind of theism).

The ancient Greek and Roman world could not have developed natural science in our modern sense in part because of its underlying Polytheistic convictions. Why should a creation ruled over by many gods have a single, overarching order? Science can equally not develop if there is an underlying conviction that the universe is necessary or deterministic.

The Einsteinian aphorisms illustrate that an analysis of scientific practice can uncover some basic, ultimate beliefs without which science cannot function (some “material causes” of science), and yet it is unable to give an account for them. Where did these ideas come from? Why should we affirm them rather than alternatives? The success of science to explain many things can never justify this seemingly arbitrary selection of basic convictions.

Of course, for Torrance, Christianity provides an account for these things. It affirms that nature is the creation of one God, a God whose interaction with creation is marked by faithfulness and reliability (“God does not play dice”). Indeed, in the purest example of God’s self-revelation, we have God come among us as a concrete human man and so we must probe into something that seems remarkably un-divine on the surface to understand God (“God does not wear his heart on his sleeve”). If we affirm orthodox Trinitarianism rather than a heresy that proposes a hiatus between God in God’s self-revelation to us and God in God’s own life, then we realize that, whether we always understand revelation or not, it is reliable and so, while we may occasionally be confused about God, this confusion lies in ourselves and our inadequate rationality, and not in the being of God (“God is deep but not devious”)