

Navigating the Epistemic Impediments of Scientism and Fideistic Fundamentalism

Introduction

Teachers share a common goal of enabling young people to explore and identify their potential, and subsequently supporting their growth into that potential. In particular, teachers are committed to facilitate the learning process and enable students to think for themselves (Gasparatou, 2017; White, 2002). Science educators have a specific focus on enabling their students to integrate theory and data (Gasparatou, 2017). Christian teachers share these goals, but also have the spiritual focus of discipling young people to enable them to build a personal relationship and trust in Jesus Christ. This relationship results in wholistic growth, including the directive to love God with all of one's mind (Matt 22:37). Jesus Christ himself modelled this by growing in wisdom, as well as the other physical, social and spiritual dimensions (Luke 2:52).

However, there are two seemingly polar, yet related, epistemic impediments that teachers can be confronted with in fulfilling their goals, namely scientism and fideistic fundamentalism. Scientism holds that scientific knowledge is the only reliable, or possibly the most reliable, source of knowledge. Evidently, it is appropriate to acknowledge that the scientific enterprise has been enormously successful. The issue, though, is that this success can easily lead to a scientific view of the world and our knowledge of it. Due to the scientific success that we have experienced, scientism has become part of the milieu in which we live, work and have social being (Moreland, 2018). This view of scientific knowledge is often adopted uncritically and unwittingly, even in more moderate forms (Plantinga, 2018).

Scientism not only creates an unexpected impediment in the pursuit of knowledge—it also, surprisingly, undermines science itself (Moreland, 2018).

On the other hand, fideistic fundamentalism creates another, more well recognised impediment in the pursuit of knowledge. While teachers in general are frequently aware of the challenge that fundamentalism presents, fideistic fundamentalism can create challenges for Christian teachers as well, because it can create classroom environments where questioning is challenged or where conversations can end in an awkward and uncomfortable stalemate.

It is fascinating to observe that similar historical and psychological conditions have given rise to both scientism and fundamentalism (Principe, 2015). Both epistemic positions are fuelled by insecurities in the face of threats from opposing worldviews and challenges to their respective position in society. There is an arrogance, whether veiled or undisguised, in both positions which creates impediments to pursuit of true knowledge. Indeed, both philosophical systems have been described as rival and crusading fundamentalisms, endeavouring to establish their respective status and authority in social thought (Principe, 2015).

Discriminating Christian religious educators will be aware of the difficulties and dangers that fideistic fundamentalistic thinking presents to intellectual growth. However, there is the real risk that, in the effort to avoid the impediment of religious fundamentalism, that Christian leaders may end up unknowingly falling into the trap to scientism, thus limiting young people's epistemic growth in the opposite direction. Charting an effective way to navigate the epistemic impediments of the opposing poles of scientism and fideistic fundamentalism is the goal of this paper.

Scientism and its Assessment

Scientism in its strongest sense is the philosophical, or more specifically epistemic, view that science provides the only reliable and authoritative knowledge in comparison with any other discipline. Alex Rosenberg, a confident advocate of the view, defines scientism in this way (Rosenberg, 2018, p. 83):

We hold that science can answer all cognitively significant questions, and that such questions as it cannot answer are in one respect or another pseudo questions, based on mistaken presuppositions.

Rosenberg's confidence in science is evident. J.P. Moreland provides a more colloquial definition for scientism (Moreland, 2018, p. 26):

Roughly, *scientism* is the view that the hard sciences—like chemistry, biology, physics, astronomy—provide the only genuine knowledge of reality.

Peels and Plantinga note, however, that scientism is a phenomenon which can be defined in a number of ways (Peels, 2018; Plantinga, 2018). What this means is that Christian leaders, who would understandably reject the assertion that science and science alone can answer all significant questions and is the only source of genuine knowledge, may be unconsciously adopting and promoting a more moderate version of scientism.

Assessing Strong Scientism

To commence an assessment of scientism, let us first consider the problems with strong scientism. First, the epistemology that strong scientism is asserting is too restrictive (Craig, 2011; Kidd, 2018). There are significant areas of knowledge, such as logic, mathematical and moral knowledge, that is not generated by science.

Second, the demarcation problem of what exactly counts as science is stubborn and

enduring (Moreland, 2018; Plantinga, 2018). Counterexamples in science keep appearing for any proposed set of necessary and sufficient conditions for what amounts to science.

A fascinating and devastating problem with strong scientism is that it is self-refuting, or more formally stated as self-referentially incoherent, as most critics have pointed out (Craig, 2011; Moreland, 2018; Plantinga, 2018; van Woudenberg, 2018; to name a few examples). Strong scientism establishes a criterium for knowledge, which is that propositions that can be held to be true must be produced or testable by science. However, scientism itself fails to meet its own epistemic standard. It is not a product of science, but rather an epistemic view of scientific knowledge. Also, it cannot be tested by science. Hence, by its own standard, strong scientism cannot constitute genuine or reliable knowledge. This means that strong scientism is self-referentially incoherent and necessarily false.

Another concerning problem with strong scientism is that it destroys science itself by its own epistemic standards (Moreland, 2018). The reason for this is because science is based on a philosophical foundation, the presuppositions of which cannot be tested or validated by science. These presuppositions include (Moreland, 2018):

1. The objective existence of the external world, including its past history
2. The orderly nature of the world
3. The existence of objective truth
4. The reliability of our senses and cognitive faculties
5. The existence of moral values and duties
6. The existence of the laws of logic and mathematics

These are all philosophical presuppositions, and since they are philosophical propositions, strong scientism deems them as not constituting genuine knowledge. In this way, the foundation of science is demolished by strong scientism. By demolishing the philosophical foundations of science, scientism undermines the conclusions of science itself in the process. Thus, scientism is no friend of science, but rather its epistemic demolisher.

Considering More Moderate Forms of Scientism

Most Christian teachers, though, would not hold to strong scientism, even if they were not aware of the full extent of its epistemic problems. However, together with a significant proportion of parents and students in their classroom, they may be susceptible to, or have unconsciously adopted, a moderate form of scientism.

Plantinga defines moderate scientism in this way (Plantinga, 2018, p. 226):

[T]he idea that when any nonscientific belief comes into conflict with a scientific belief, it is always the scientific belief that should prevail. In any conflict between a scientific belief and a nonscientific belief, it is the latter that should give way.

Moreland describes another closely related form of moderate scientism, which he refers to as weak scientism, as follows (Moreland, 2018, p. 30):

Weak scientism acknowledges truths apart from science, granting them some minimal rational status even if they don't have scientific support. Nevertheless, weak scientism still implies that science is by far the most authoritative sector of human knowing.

This form of scientism would appear to be much more palatable for Christian parents, students and teachers, who would be aware of the need to acknowledge that divine revelation and individual conscience are genuine sources of knowledge, to name a couple of Christian examples. Moderate scientism is attractive to well

educated people who are impressed with the rational strength of science and its track record of success. Thus, even if Christian parents, students and teachers do not make an open and conscious commitment to moderate scientism, they can easily absorb it, whenever they live within a scientific culture (Moreland, 2018). For example, modern scientism would lead believers to conclude that a Christian belief has greater warrant if it has been scientifically confirmed. Also, moderate scientism would lead believers to seek hermeneutical solutions of biblical texts that can more easily accommodate standard scientific conclusions.

In spite of the rational appeal of these more moderate forms of scientism, they unfortunately fare no better than strong scientism. Weak scientism, as defined by Moreland, implies that scientific conclusions have greater epistemic warrant than the philosophical presuppositions on which those conclusions are based, which is epistemically confused and false (Moreland, 2018). Second, as Moreland points out, weak scientism underestimates the epistemic strength of the presuppositions that form the philosophical foundation of science. Indeed, it would be self-referentially incoherent for the conclusions of science to have greater epistemic warrant than the philosophical foundations of science. Thus, he argues that weak scientism should be rejected as well.

Considering Plantinga's version of moderate scientism, Plantinga notes that science itself does not say that its conclusion needs to be preferred, if there is a conflict between one of its conclusions and another belief (Plantinga, 2018). Scientific methods do not provide requirements on how their conclusions should be epistemically preferred. Thus, giving preference for scientific conclusions is an epistemic add-on, or an extra-scientific belief. The justification or grounds for such an epistemic add-on would need to be assessed epistemologically, and if the

justification is weak, then the epistemic add-on would need to be considered carefully or even rejected.

Furthermore, Plantinga points out that, ultimately, Christian beliefs have a different epistemic source, namely the internal testimony of the Holy Spirit. The Holy Spirit is omniscient and is, by his divine nature, necessarily committed to communicating truth. Jesus confirmed this a number of times by referring to him, as the author of the Gospel of John records, as the “Spirit of truth” (John 14:17, 15:26, 16:13). This means that the deliverances of the Holy Spirit would be more reliable than conflicting beliefs, even apparently reliable scientific ones.

In conclusion, we have seen that there are significant and even fatal reasons why scientism in all of its forms is false and should be rejected.

Why Science May Be Wrong

A question that immediately arises at this point is why standard scientific conclusions can be wrong or unreliable with respect to certain Christian beliefs, when it has clearly been so successful in so many ways. There are two significant reasons.

The first reason is due to the empirical underdetermination of scientific conclusions. Empirical underdetermination means that there can be more than one explanation that can adequately explain the available empirical evidence (Forber & Griffith, 2011; Quine, 1975; Vainio, 2016). This means that standard scientific conclusions that are held by the majority of scientists, such as:

- (1) the Big Bang cosmological model which suggests that the universe is expanding and that it has a finite history of approximately 13.8 billion years,
- (2) the geological age of our planet Earth of approximately 4.54 billion years,

(3) the account of our biological origins through common biological ancestry through neo-Darwinian processes, may not be the only explanations that adequately explain all of the available empirical evidence or, indeed, all of the empirical evidence that could be in principle obtained. There could be other explanations that can adequately explain the empirical evidence, such as supernatural creation *de novo* explanations.

The second reason why standard scientific conclusions can be wrong is because science is committed to methodological naturalism. Methodological naturalism holds that scientific conclusions must remain religiously neutral and cannot appeal to divinely inspired texts, supernatural causes or miracles within its explanation (Applegate, 2013; Poe & Mytyk, 2007; Vries, 1986). However, there are numerous epistemic issues with methodological naturalism which even atheistic scholars have observed (Boudry et al., 2010; Dilley, 2010, 2017; Larmer, 2003; Plantinga, 2001; Torrance, 2017). Plantinga has pointed out that arguments for methodological naturalism are weak, because the most rational approach for Christian scientists is to use all the evidence that they have available, including inspired texts and supernatural miracles, even in their pursuit of science. Larmer holds that methodological naturalism commits the fallacy of *petitio principii* which is begging the question (Larmer, 2019; Larmer, 2003). If science should not be limited, by definition, to methodological naturalism, supernatural explanations can be considered and may be more epistemically warranted than explanations generated by such a limited scientific methodology.

This critical analysis of methodological naturalism presupposes that there is an ontological distinction between events that follow natural laws and events within the metaphysical category of supernatural miracles. John Polkinghorne objects to

making this distinction because, as he reminds us, God continually and supernaturally sustains the world and all of the objects, events and laws that we observe in it (Luck, 2010; Polkinghorne, 2002, 2005). According to the Christian doctrine of divine conservation, no natural law, event or object exists without God's sustaining power. Polkinghorne's encouragement to avoid deistic approaches to science is to be commended, but his attempt to collapse the distinction between the miraculous events and events that follow natural laws still seems problematic, due to the uniqueness of miraculous events. It is logically possible for God to normally sustain the world according to natural laws which can be observed scientifically, yet occasionally see the need and importance of causing a miraculous event that does not follow those natural laws. The Bible itself describes numerous accounts of such events which have not been regularly repeated since and have not been observed within science. Polkinghorne's assertion that the distinction between the categories of miracles and natural events can now be collapsed seems to belie an unwarranted confidence that science can explain everything, rather than a genuine metaphysical insight. Also, for natural laws to be metaphysically comprehensive in the sense of including the possibility of miraculous events, these laws would need to be modified in such an ad hoc and unwieldy way as to render them so complex and of such limited predictive value to the point of being irrational (Swinburne, 2004). Hence, we maintain that the distinction between events that follow natural laws and supernatural miracles remains, which means that the critical analysis of methodological naturalism outlined above still stands.

First Navigational Insight

The navigational insight that this analysis of scientism has highlighted is that it is important to carefully evaluate and analyse the philosophical, epistemological and theological presuppositions that are being made in science. Teachers have both the opportunity and responsibility to lead students in exploring and evaluating these presuppositional foundations. This includes our epistemic presuppositions regarding scientific conclusions, that may constitute a form of moderate scientism, as well as theological presuppositions that may be embedded within a scientific methodology, such as methodological naturalism. As highlighted above, teachers need to carefully assess whether these presuppositions are warranted.

For example, teachers need to assess whether methodological naturalism is warranted in the situation in which a standard scientific conclusion is being claimed. While, ordinarily, such conclusions may be epistemically justifiable, if there are reasons to hold that supernatural miraculous events did occur in that particular situation, then the employing methodological naturalism may not be justifiable, and consequently, standard scientific conclusions may correspond with what actually occurred. This would potentially include biblical events such as Creation and the Flood. Hence the need for careful personal assessment and evaluation on the part of the teacher. A teacher could subsequently take his or her students on a similar journey of careful assessment and evaluation.

Fideistic Fundamentalism and Its Assessment

The other impediment to the goal of teaching students to think is fideistic fundamentalism. Fideism is the school of thought that faith provides knowledge that

is independent of, or possibly even in opposition to reason. Plantinga defines fideism as (Plantinga, 1983):

[An] exclusive or basic reliance upon faith alone, accompanied by a consequent disparagement of reason and utilised especially in the pursuit of philosophical or religious truth.

If one of the key goals of teaching is to encourage students to think for themselves, which is promoting reasoning, it is self-evident why fideism could become an impediment to teaching. Olli-Pekka Vainio has identified that fideism can be employed to create an impregnable shelter for irrational and false beliefs (Vainio, 2016). Also, fideism would not permit rational dialogue and negotiation with other worldviews. This raises the question of why a person would hold their particular beliefs fideistically, rather than hold an alternative set of beliefs. Consequently, it would appear that a person's commitment to their beliefs is rather arbitrary. This could easily descend into relativism.

Vainio summarises the key problems with fideism as being its (Vainio, 2016, p. 63):

- Unassailability
- Relativism
- The inability to engage in public discussion
- The impossibility of criticising beliefs within fideism

It would therefore appear to be potentially irrational for a person to be fideistic, though, no doubt, a fideist would simply accept this as a consequence of their philosophical system. From the perspective of education, though, fideism seems to be a significant epistemic impediment to teaching.

Closely related to fideism is the religious phenomena of fundamentalism. Fundamentalism is not necessarily an epistemic position, but rather originally

described a movement that developed within American Protestantism which took a defensive stance towards Christian doctrines in the face of cultural challenges such as Darwinian evolution and a growing moral liberalism (Bradbury, 1962).

Fundamentalism can also describe similar movements within other religions, such as Islam and Hinduism (Marty & Appleby, 1991). Though fideism and fundamentalism are not identical, they are frequently classed in the same category (Evans, 2008; Vainio, 2016). Due to the fact that fundamentalism creates a “distinction over against cognate” (Marty & Appleby, 1991), it is appropriate to refer to the epistemic impediment that teachers can face as being fideistic fundamentalism.

Why Fideistic Fundamentalism Can Be Wrong

With the sheer multitude of religions, and even the proliferation of Christian denominations, with their diversity of biblical interpretation, it may seem odd to address the issue of why fideistic fundamentalism can be wrong. However, identifying the deeper reasons is valuable and illuminating, particularly from a biblical perspective.

First, we are living in the midst of a great conflict between God and Satan. From the beginning, Satan has been intent on leading human beings to doubt God's intentions and to lead them to follow him instead. He does this by deceiving people with lies. As Jesus himself pointed out, Satan is a liar and the father of lies (John 8:14). The apostle Paul reminded the Christian believers in Corinth that Satan's purpose was to lead people astray from their devotion to Christ (2 Corinthians 11:3). The book of Revelation describes Satan as God's archenemy whose intention is to deceive the whole world (Revelation 12:9). When beliefs are accepted purely or primarily on faith alone in the midst of the conflict between God and Satan, there is

no wonder that fideistic fundamentalism can be wrong because people may inadvertently or knowingly accept Satan's deceptions.

There is not only the external reason why fideistic fundamentalism can be wrong. There is also an internal reason as well. Human beings face the noetic effects of sin (De Cruz & De Smedt, 2013; Launonen, 2021; Plantinga, 2000; van den Brink et al., 2018). As the prophet Jeremiah lamented:

The heart is deceitful above all things, and desperately corrupt; who can understand it? **Jeremiah 17:9 (RSV)**

This means that, when left to our natural selves, we have a sinful tendency to pursue destructive spiritual pathways. This includes accepting false beliefs, constructing false pictures of God, worshiping false gods that do not exist and acting immorally. Furthermore, we do not naturally desire to accept the truth, even if it is revealed to us.

This not only affects a fideistic approach to beliefs. The noetic effects of sin means that our rationality is affected as well. So, even when we attempt to use rationality to determine what is true, our sin-affected noetic capacity may lead us astray. The result is that we are caught in an epistemic trap which we are humanly unable to extract ourselves from, despite our most heroic efforts. However, the Christian message brings good news and hope. Plantinga points us to the biblical possibility and opportunity that the Holy Spirit can heal our cognitive faculties, enabling us to discern and accept what is true (Plantinga, 2000).

For Christian teachers, this is an important and valuable insight in the work of enabling students to think. The true goal is not just enabling students to think for themselves, which may ignore the fact that students' cognitive faculties are affected by sin. Instead, Christian teachers need to keep in mind that students need cognitive

healing and guidance, as Jesus promised, from the Spirit of truth who can lead them into all truth (John 16:13, 1 John 2:20,27).

Scientism: A Secular Fundamentalism

Before we move to the practical question of how to navigate the epistemic impediments of scientism and fideistic fundamentalism, it is valuable and intriguing to do a closer comparison. The fascinating observation is that they bear a strong resemblance, which is sufficiently close for scientism to be recognised as a secular form of fundamentalism (Gordon, 2017; Peels, 2022; Principe, 2015). Both Christian fundamentalism and scientism arose in the twentieth century in reaction to challenges to their epistemologies. Both were born out of social and political insecurities resulting from external threats. Both religious fundamentalism and scientism bear similar characteristics (Peels, 2022):

1. **Reactionary:** Religious fundamentalism and scientism are reactionary movements which are responding to developments in society that impinge upon their authority.
2. **Seeking to Establish Epistemic Certainty:** Religious fundamentalism and scientism seek to establish certainty regarding epistemology in the midst of rapid change.
3. **Offering Meta-narratives:** Religious fundamentalism and scientism offer overarching meta-narratives that seek to explain our existence and predict our future.

This comparison is insightful and illuminating because it identifies the common elements that both scientism and fideistic fundamentalism share. It also suggests a

less reactive and more interactive way to chart a path through the relevant epistemic space.

Second Navigational Insight

From the Christian perspective, if students and teachers attempt to depend on their natural cognitive capacity, with the noetic effects of sin, they will be left adrift in an epistemic space with a high probability of reaching wrong conclusions and adopting false beliefs. Jesus' promise to send the Spirit of truth (John 14:26; 16:17) applies to Christian teachers and their students as well. Being the spiritual leader in the classroom, it is therefore essential for teachers to pray for the Holy Spirit to guide both them and their students as they pursue both scientific and spiritual truth in the classroom. The Holy Spirit is not only the *parákletos* which Jesus promised in John 14:26, a Greek word that literally means 'one who is called to someone's aid', he is a teacher as well:

But the Helper [*parákletos*], the Holy Spirit, whom the Father will send in my name, he will teach you all things and bring to your remembrance all that I have said to you. **John 14:26 (ESV)**

But you have been anointed by the Holy One, and you all have knowledge.... But the anointing that you received from him abides in you, and you have no need that anyone should teach you. But as his anointing teaches you about everything, and is true, and is no lie—just as it has taught you, abide in him. **1 John 2:20,27 (ESV)**

Jesus has promised Christian teachers a compassionate, understanding and omniscient teacher aide. Teachers can prayerfully enlist the guidance of this teacher aide. This follows the example of Jesus, who prayed to his Father, asking for the Helper to guide his disciples into truth (John 14:26) and to sanctify them in the truth (John 17:17). Likewise, Christian teachers need to follow Jesus' model in praying for

their students in navigating their way through critical epistemic issues like scientism and fideistic fundamentalism.

An Epistemic Typology

In his study of fideism and how to move beyond it, Olli-Pekka Vainio developed an epistemic typology which shows both the two poles of pure rationalism and conceptual fideism, as well as the range of epistemic positions between these two poles (Vainio, 2016, p. 63). This typology is shown in Figure 1:

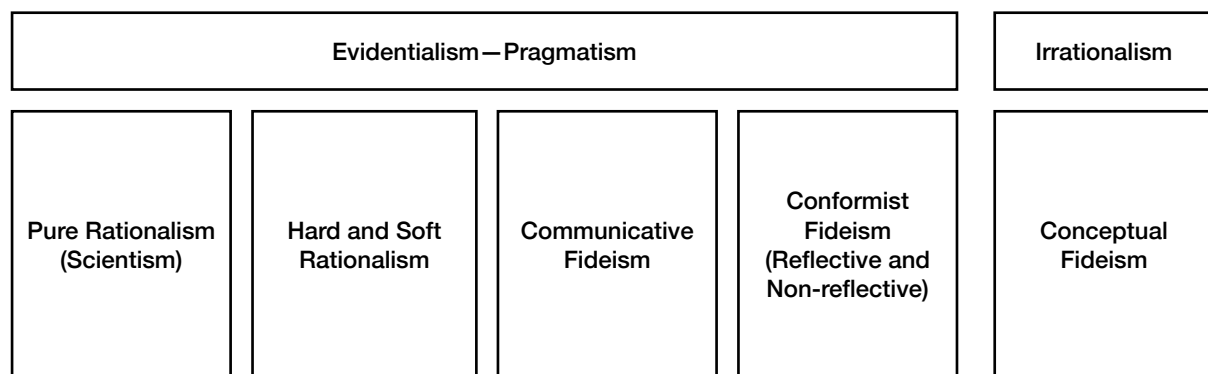


FIGURE 1: Vainio's epistemic typology

Vainio's typology provides insight into how to navigate between these two poles. As this analysis has shown, the two epistemic poles present impediments to the educational goals of teachers. It is clear that teachers need to navigate an educational journey between these two poles.

The two positions that are most conducive to facilitating the educational process are soft rationalism and communicative fideism. Teachers with a leaning towards a scientific approach are likely to favour soft rationalism. However, communicative fideism is an appropriate epistemic position as well.

As we evaluate the best strategies for navigating the impediments of scientism and fideistic fundamentalism by instead integrating science and the Christian faith, it

is important to keep in mind the reliability of the source of Christian belief. Plantinga has identified that the warrant for Christian belief is based on the internal testimony of the Holy Spirit (Plantinga, 2018). This means that justification for Christian belief is not ultimately based on scientific discoveries or conclusions.

As Plantinga has pointed out (Plantinga, 2011, p. 120):

If Christian belief is true, the warrant for belief in special divine action doesn't come from quantum mechanics or current science or indeed any science at all; these beliefs have their own independent source of warrant. That means that in case of conflict between Christian belief and current science, it isn't automatically current science that has more warrant or positive epistemic status; perhaps the warrant enjoyed by Christian belief is greater than that enjoyed by the conflicting scientific belief. Of course there could be defeaters for these Christian beliefs; but as we've seen, current science (at least as far as we've explored the matter) provides no such defeaters, and the theological objections proposed seem weak *in excelsis*.

This epistemic insight has led Moreland to make the following practical recommendation (Moreland, 2018, p. 123):

So when theologians and biblical scholars work with philosophers to make a carefully presented and defended thesis about the world..., we should not automatically accept the scientific claim and revise the Bible to harmonise with the latest science. Rather, this chapter [referring to his book (Moreland, 2018)] demonstrates that we often have more rational evidence and authority for the carefully developed theological claim than scientists do for their conflicting claim. So if a conflict arises between current scientific assertions and traditional interpretations of the Bible, we should take a deep breath and give our evangelical (or other) scholars time to address the issue, all the while having confidence that it is likely that the traditional interpretation of Scripture (if it is carefully done) will eventually win the debate. So we stay the course, admit that as of now there is a conflict, and remain confident that we have good reasons for not revising our views.

Teachers may wonder why Christian beliefs have this level of reliability.

Plantinga has argued out that these beliefs are properly basic (Plantinga, 2000, pp. 258-266) in the same way that belief in God is properly basic (Goetz, 1983;

Plantinga, 1981, 2000; Robbins, 1983). According to Plantinga, a properly basic belief can be defined as follows (Plantinga, 2000, pp. 177,178):

On the one hand, a belief can be properly basic for a person in the sense that it is indeed basic for him (he doesn't accept it on the evidential basis of other propositions) and, furthermore, he is justified in holding it in the basic way: he is within his epistemic rights, is not irresponsible, is violating no epistemic or other duties in holding that belief in that way.

What this means is that, if Christian beliefs are properly basic, a person can hold them even in the face of conflicting alternative beliefs, including conflicting scientific beliefs. The reason why Christian beliefs can be properly basic is because of the internal testimony of the Holy Spirit which, as Jean Calvin pointed out, means that Scripture is self-authenticating (Plantinga, 2000, pp. 260,261).

Singling out Christian beliefs as properly basic and giving them preferential epistemic treatment does smack of fideism and fundamentalism, as Terence Penelhum has suggested (Penelhum, 1983). However, Plantinga has defended his epistemology as not being fideistic nor fundamentalist because belief in God and Christian beliefs are deliverances of the testimony of the Holy Spirit and cognitive faculties supernaturally restored by the Holy Spirit (Plantinga, 1983, p. 90; 2000, pp. 244-246). Richard Askew supports his line of reasoning by highlighting that all epistemologies are built on the foundation of basic beliefs (Askew, 1988), as evolutionary epistemologists agree (Boulter, 2007; Moreland, 2018; Stewart-Williams, 2005). Evolutionary epistemologists, like Stewart-Williams and Boulter, take commonsense beliefs to be properly basic, like the following:

- The existence of a mind-independent external world
- The existence of other minds
- Reliability of perception

This highlights that both religious and scientific epistemologies will have basic beliefs in their foundation. The question is whether the basic beliefs are properly basic. It is important to note that scientific epistemology may assume, together with the reliability of perception, the reliability of cognitive faculties as being properly basic. However, Christian belief would challenge the proper basicity of this belief due to the noetic effects of sin. Assessing whether a particular belief, or indeed an entire worldview, corresponds to reality requires careful examination of the proper basicity of the beliefs in the foundation of the competing epistemologies.

Strategies for Navigating the Faith and Science Dialogue

J. P. Moreland has identified a number of strategies for navigating the faith and science dialogue to address the issues of scientism and fideistic fundamentalism (Moreland, 2018).

1. *Independence Strategy*: Identify domains where science and faith are distinct and allow them to operate independently. As Moreland points out, in a significant majority of areas, science deals with topics that the Christian is not focused on. For example, science addresses the nature of electrons and Christianity addresses the nature of the atonement. Such subjects are independent areas and do not concern each other.
2. *Complementary Strategy*: Consider ways that science and faith offer complementary perspectives of reality and hold both perspectives to be true. Moreland notes, though, that this strategy faces a significant risk of “de-supernaturalizing the world” and leading Christians to compartmentalise their faith (Moreland, 2018, pp. 184-186). Thus, while the complementary strategy may have quite an appeal, it should be considered carefully.

3. *Practical Application Strategy*: This approach holds that science can contribute to certain empirical and operational details to the discipline of theology. In this strategy, science is able to help other disciplines like faith in practical ways (Buckwalter & Turri, 2018).
4. *Direction Interaction Strategy*: In this strategy, theology and science directly interact with each other, and this interaction could be in either constructive or critical ways. In this strategy, Christian beliefs are recognised to hold warrant, which means that they can challenge scientific conclusions. Moreland views the direct interaction strategy as the best approach for Christians to take, though he acknowledges that it is the most controversial.

Third Navigational Insight

This exploration leads us to a third navigational insight. In order to avoid the impediments of either scientism or fideistic fundamentalism, it is necessary to carefully and courageously assess the epistemic structure of a belief system, in particular the proper basicity of the basic beliefs in the foundation. Adapting Vainio's epistemic typology, the following assessment is proposed and recommended:

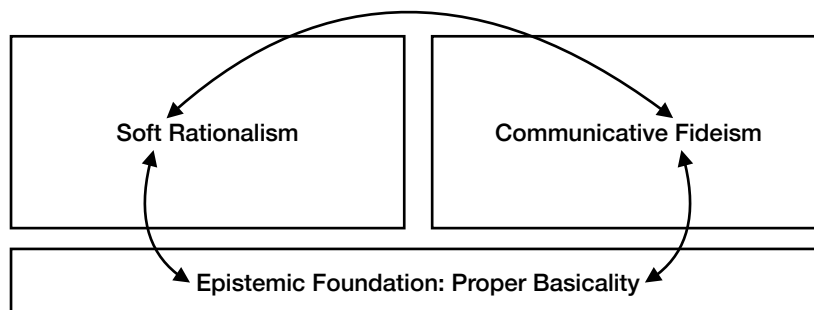


FIGURE 2: Assessing the derived beliefs and the proper basicity of basic beliefs in an epistemic structure.

Charting a Navigational Pathway

As we bring this paper to a conclusion, it would be valuable to draw together the navigational insights together to chart a navigational pathway which can be employed by teachers.

Step 1: Prayer

Christian teachers acknowledge that God is the omniscient source of truth and has the relational desire, capacity and commitment to reveal truth to both teachers and students who are searching to truly understand the world. Also, Christians teachers need to be aware of the noetic effects of sin. This means that the first and ongoing step of a navigational pathway is to pray for the Holy Spirit's guidance a teacher and for his or her students into all truth.

Step 2: Careful Evaluation

The second step in a navigational pathway that Christian teachers need to take is to carefully and prayerfully evaluate the core epistemic presuppositions within their worldview and methodology. As demonstrated by scientism in both its strong and moderate forms, some of the presuppositions which can subconsciously adopted from a scientific culture may have significant logical flaws. Also, careful and prayerful evaluation progresses beyond the antirational position of fideistic fundamentalism.

With this goal in mind, Principe addresses the search for certainty within both scientific and religious fundamentalism, and recommends cultivating a pinch of doubt (Principe, 2015, pp. 55,56). He recommends not developing too much doubt, as this

would collapse into self-referentially incoherent skepticism, but sufficiently enough doubt to promote growth. He claims that “it is doubt that gives strength to faith—without doubt there is in fact no faith.” (Principe, 2015, p. 56)

However, if faith should rather be defined as trust in Jesus, it appears to be contradictory to hold that faith cannot exist without doubt. It may be more accurate and effective to promote inquisitive questioning regarding the philosophical foundations of a person’s belief, rather than doubt. The goal of a Christian teacher is to develop students’ trust in Jesus, and cultivating doubt could undermine this emerging trust.

Step 3: Identification of Properly Basic Beliefs

The next step is to carefully and prayerful consider the basic beliefs within both the teacher’s and his or her students’ epistemic foundation. This involves undertaking a comprehensive stocktake of all of the basic beliefs and then determining whether these basic beliefs are properly basic beliefs. Many properly basic beliefs are innate and self-evident. However, there are some basic beliefs which are held to be properly basic that are challenged by the Christian worldview, such as the reliability of our cognitive faculties. Also, as both Plantinga and Moreland have asserted, the warrant for Christian beliefs is grounded in the internal testimony of the Holy Spirit. Furthermore, teachers need to keep in mind that scientific conclusions, such as geological dating models, are derived scientific beliefs and not properly basic. This means that properly basic beliefs, including Christian ones, need to be preferred in the situation where there is a conflicting alternative beliefs.

Step 4: Constructing Coherent Worldview

Having addressed the need for Spirit-led healing and guidance in the face of the noetic effects of sin as well as evaluating issues regarding any incoherence and the proper basicity of beliefs in epistemic foundations, a Christian teacher is now in a position to work on constructing a coherent worldview with his or her students. While this is no easy task, the Christian teacher has the unique spiritual advantage of accessing the opportunity and promise of being led by the Holy Spirit in this process. While confidence and certainty in his or her own epistemic ability to construct this worldview is unwarranted, the Christian teacher can have confidence in the Spirit's desire and commitment to provide this leading. As the Apostle Paul would agree, Christian teachers can be of good courage, for they can confidently walk by faith and not only empirically or rationally.

Conclusion

Christian teachers are faced with the epistemic impediments of both scientism and fideistic fundamentalism in their goal of enabling students to grow in genuine knowledge and in their relationship with Jesus. These epistemic positions can hinder this development process. It is important to understand the self-refuting nature of scientism and the irrationality of some fideistic fundamentalistic systems, but proceed to pursue effective strategies on ways to integrate science within the Christian faith. This paper recommends a direct interaction strategy that takes into account the success of the scientific enterprise while also understanding the warrant that the internal testimony of the Holy Spirit provides to Christian belief. By living with this understanding, Christian teachers are able to enable students to grow in their knowledge and faith in Jesus Christ and the world that he has gifted to us to explore.

References

- Applegate, K. (2013). A defense of methodological naturalism. *Perspectives on Science and Christian Faith*, 65(1), 37-46.
- Askew, R. (1988). On fideism and Alvin Plantinga. *International Journal for Philosophy of Religion*, 23(1), 3-16. <https://doi.org/10.1007/BF00139084>
- Boudry, M., Blancke, S., & Braeckman, J. (2010). How not to attack intelligent design creationism: Philosophical misconceptions about methodological naturalism. *Foundations of Science*, 15(3), 227-244.
- Boulter, S. J. (2007). The “evolutionary argument” and the metaphilosophy of commonsense. *Biology & Philosophy*, 22(3), 369-382. <https://doi.org/10.1007/s10539-006-9032-z>
- Bradbury, J. W. (1962). Curtis Lee Laws and the fundamentalist movement. *Foundations: A Baptist Journal of History and Theology*, 5, 52-58, 67.
- Buckwalter, W., & Turri, J. (2018). Moderate scientism in philosophy. In J. de Ridder, R. Peels, & R. van Woudenberg (Eds.), *Scientism: Prospects and Problems* (pp. 280-300). Oxford University Press. <https://doi.org/10.1093/oso/9780190462758.003.0013>
- Craig, W. L. (2011). *Is Scientism Self-Refuting?* Reasonable Faith. Retrieved 14 April 2023 from <https://www.reasonablefaith.org/writings/question-answer/is-scientism-self-refuting>
- De Cruz, H., & De Smedt, J. (2013). Reformed and evolutionary epistemology and the noetic effects of sin. *International Journal for Philosophy of Religion*, 74(1), 49-66. <https://doi.org/10.1007/s11153-012-9368-z>
- Dilley, S. C. (2010). Philosophical naturalism and methodological naturalism: Strange bedfellows? *Philosophia Christi*, 12(1), 118-141.

- Dilley, S. C. (2017). Why methodological naturalism sinks theistic evolution. In J. P. Moreland, S. Meyer, C. Shaw, A. Gauger, & W. Grudem (Eds.), *Theistic Evolution: A Scientific, Philosophical, and Theological Critique* (pp. 593-631). Crossway.
- Evans, C. S. (2008). Kierkegaard and the limits of reason: Can there be a responsible fideism? *Revista Portuguesa de Filosofia*, 64(2/4), 1021-1035.
- Forber, P., & Griffith, E. (2011). Historical reconstruction: Gaining epistemic access to the deep past. *Philosophy & Theory in Biology*, 3(20170609). <https://doi.org/10.3998/ptb.6959004.0003.003>
- Gasparatou, R. (2017). Scientism and scientific thinking: A note on science education. *Science & education*, 26(7-9), 799-812. <https://doi.org/10.1007/s11191-017-9931-1>
- Goetz, S. C. (1983). Belief in God is not properly basic. *Religious Studies*, 19(4), 475-484. <https://doi.org/10.1017/S003441250001550X>
- Gordon, E. (2017). Is fundamentalism just a problem for religious people? In *Philosophy, Science and Religion for Everyone* (pp. 93-104). Routledge.
- Kidd, I. J. (2018). Is scientism epistemically vicious? In J. de Ridder, R. Peels, & R. van Woudenberg (Eds.), *Scientism: Prospects and Problems* (pp. 149-166). Oxford University Press. <https://doi.org/10.1093/oso/9780190462758.003.0007>
- Larmer, R. (2019). Science, methodological naturalism and question-begging. In P. Copan & C. Taliaferro (Eds.), *The Naturalness of Belief: New Essays on Theism's Rationality* (pp. 85-103). Lexington Books.
- Larmer, R. A. (2003). Is methodological naturalism question-begging? *Philosophia Christi*, 5(1), 113-130.

- Launonen, L. (2021). Cognitive regeneration and the noetic effects of sin: Why theology and cognitive science may not be compatible. *European Journal for Philosophy of Religion*. <https://doi.org/10.24204/ejpr.2021.3398>
- Luck, M. (2010). On Polkinghorne's unification of general providence, special providence and miracle. *Sophia*, 49(4), 577-589. <https://doi.org/10.1007/s11841-010-0228-y>
- Marty, M. E., & Appleby, R. S. (1991). *Fundamentalisms Observed*. University of Chicago Press.
- Moreland, J. P. (2018). *Scientism and secularism: Learning to respond to a dangerous ideology*. Crossway.
- Peels, R. (2018). A Conceptual Map of Scientism. In J. de Ridder, R. Peels, & R. van Woudenberg (Eds.), *Scientism: Prospects and problems* (pp. 28-56). Oxford University Press. <https://doi.org/10.1093/oso/9780190462758.003.0002>
- Peels, R. (2022). Scientism and scientific fundamentalism: what science can learn from mainstream religion. *Interdisciplinary Science Reviews*, 1-16.
- Penelhum, T. (1983). *God and skepticism : A study in skepticism and fideism*. D. Reidel Pub. Co.
- Plantinga, A. (1981). Is belief in God properly basic? *Noûs*, 15(1), 41-51. <https://doi.org/10.2307/2215239>
- Plantinga, A. (1983). Reason and Belief in God. In A. Plantinga & N. Wolterstorff (Eds.), *Faith and rationality: Reason and belief in god* (pp. 16-93). University of Notre Dame Press.
- Plantinga, A. (2000). *Warranted Christian Belief*. Oxford University Press.

- Plantinga, A. (2001). Methodological Naturalism. In R. Pennock, T. (Ed.), *Intelligent design creationism and its critics: Philosophical, theological, and scientific perspectives* (pp. 339-361).
- Plantinga, A. (2011). *Where the conflict really lies: Science, religion & naturalism*. Oxford University Press.
- Plantinga, A. (2018). Scientism: Who needs it? In J. Ridder, R. Peels, & R. v. Woudenberg (Eds.), *Scientism: Prospects and problems* (pp. 220-232). Oxford University Press.
- Poe, H. L., & Mytyk, C. R. (2007). From scientific method to methodological naturalism: The evolution of an idea. *Perspectives on Science and Christian Faith*, 59(3), 213-218.
- Polkinghorne, J. C. (2002). The credibility of the miraculous. *Zygon*, 37(3), 751-758. <https://doi.org/10.1111/1467-9744.00451>
- Polkinghorne, J. C. (2005). *Science and providence: God's interaction with the world*. Templeton Foundation Press.
- Principe, L. (2015). Scientism and the religion of science. In *Scientism: The New Orthodoxy* (pp. 41-61). Bloomsbury Academic.
- Quine, W. V. (1975). On empirically equivalent systems of the world. *Erkenntnis*, 9(3), 313-328.
- Robbins, J. W. (1983). Is belief in God properly basic? *International Journal for Philosophy of Religion*, 14(4), 241-248. <http://www.jstor.org/stable/40012849>
- Rosenberg, A. (2018). Philosophical challenges for scientism (and how to meet them?). In J. de Ridder, R. Peels, & R. van Woudenberg (Eds.), *Scientism: Prospects and problems* (pp. 83-105). Oxford University Press. <https://doi.org/10.1093/oso/9780190462758.003.0004>

- Stewart-Williams, S. (2005). Innate ideas as a naturalistic source of metaphysical knowledge. *Biology & philosophy*, 20(4), 791-814. <https://doi.org/10.1007/s10539-004-6835-7>
- Swinburne, R. (2004). *The existence of God* (2nd ed.). Clarendon Press.
- Torrance, A. B. (2017). Should a Christian adopt methodological naturalism? *Zygon*, 52(3), 691-725. <https://doi.org/10.1111/zygo.12363>
- Vainio, O.-P. (2016). *Beyond fideism: Negotiable religious identities*. Routledge. <https://doi.org/10.4324/9781315569185>
- van den Brink, G., van Eyghen, H. M. R. A., & Peels, R. (2018). Cognitive science of religion and the cognitive consequences of sin. In *New developments in the cognitive science of religion*. Springer International Publishing AG.
- van Woudenberg, R. (2018). An epistemological critique of scientism. In J. de Ridder, R. Peels, & R. van Woudenberg (Eds.), *Scientism: Prospects and problems* (pp. 167-189). Oxford University Press. <https://doi.org/10.1093/oso/9780190462758.003.0008>
- Vries, P. d. (1986). Naturalism in the natural sciences: A Christian perspective. *Christian Scholars Review*, 15(4), 390.
- White, E. G. (2002). *Education*. Pacific Press Publishing Association.