

**King's Evangelical Divinity School and  
University of Chester**

**Is the View of Faith Considered in Contemporary Discussions  
About Science and Religion Compatible with  
the Historical Reformation View of Faith?**

**A Dissertation**

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**by**

**Michael Brownutt**

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## **Abstract**

Faith is a key concept in Christianity. What is understood about faith suffuses our understanding of the rest of Christianity. There is currently a significant amount of public discussion about faith and the role it plays in science and religion. Christians generally claim that science and religion are not in conflict. If faith is understood to be a reasonable belief, without conclusive proof, where the individual lives their life as though what they believe were true, then faith necessarily plays a role in both science and religion. This view of faith, however, is strongly at odds with the view of faith held by the Protestant Reformers. This research compares and contrasts the views of faith held by contemporary Evangelicals with those of several key Reformers. Given the two groups use identical passages of Scripture to argue for in support of diametrically opposed conclusions about faith, the causes of the disagreement and its solution must be found elsewhere. To this end, the epistemological context of the two views is compared. Important aspects of the contemporary evangelical view are traced to assumptions tacitly imported from Enlightenment naturalism. By recognizing and correcting these implicit naturalistic assumptions a supernatural view of faith by revelation is proposed which harmonises well with key biblical passages, as well as with historical Christian views. This supernatural view of faith does not undermine the reconciliation of scientific with religious knowledge. Rather, it opens up new avenues for understanding what science is, or could be, and how it relates to theology.

**Key words:** faith, certainty, protestant reformation, science and religion, new atheism.

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## Chapter 1: Introduction

Faith lies at the very core of Christianity. Without faith it is impossible to please God [Heb. 11:6]. Faith saves us [Lk. 7:50], and by faith we stand [Rom. 11:20]. Moreover, whatever does not come from faith is sin [Rom. 14:23]. Clearly, therefore, what we understand by ‘faith’ is a key issue for what we understand about Christianity. This thesis will consider two views of faith, both of which are held by Christians, but which are nonetheless distinct. One is held by many Evangelicals today, and will be considered here in the context of contemporary discussions about the relationship between religion and science. This will be compared to a position held by the Protestant Reformers around the 16<sup>th</sup> century. Such a comparison helps to highlight a number of assumptions underlying each view. This allows a critical appraisal of some of the ideas which shape the contemporary discussion of the relationship between science and Christianity. It also raises possible future directions for that relationship.

A standard biblical text used to illuminate discussions about faith is Hebrews 11:1: “Faith is the substance of things hoped for, the evidence of things not seen.” This is often interpreted as meaning that faith is what we have in the stead of evidence. Regarding the word “evidence,” the People’s New Testament Commentary remarks, “*The Evidence*, or rather the conviction or persuasion of things not seen.”<sup>1</sup> Faith is that which *persuades* us of things which have not or cannot be seen. This seems entirely compatible with secular definitions, such as faith being “a firm belief in something for which there is no proof.”<sup>2</sup> That is to say, we have a firm belief in something (i.e. we are persuaded of it) even though we have no proof (i.e. it is unseen). This interpretation of faith, and its connection to Hebrews 11, was already known in antiquity. Thomas Aquinas noted the contention that “articles of faith are not demonstrable because the office of demonstration is to prove, but faith pertains only to things that are not to be proven, as is evident from the Epistle to the Hebrews, 11.”<sup>3</sup> Faith, then – in the absence of proof – necessarily

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<sup>1</sup> Boring and Craddock (2005). Hebrews 11.

<sup>2</sup> Merriam-Webster (2004). “Faith.”

<sup>3</sup> Aquinas (1274a, part 1, Q2, A2, Objection 1).

encompasses a degree of uncertainty. As Paul Tillich wrote, “Doubt isn’t the opposite of faith, it is an element of faith.”<sup>4</sup>

Such a view of faith has been invoked in contemporary discussions relating religion to science. Science has historically been portrayed as providing *proof* for particular claims and, with such proof, certainty. From such a standpoint it is easy to see why scientific knowledge – knowledge obtained by the scientific method: proven certain – might be in conflict with religious knowledge – knowledge obtained by faith: unproven and uncertain. This poses a particular problem for religious knowledge as, whatever else it might be, science is very successful. However, over the last century or so the philosophy of science has gradually and systematically shown that the positivist picture in which science provided certainty is a very poor account of what science is, or could ever hope to be.<sup>5</sup> Consequently, as scientific knowledge has become less certain, the apparent conflict between scientific knowledge and religious knowledge seems to have evaporated. It is now even argued that science and religion are, epistemologically at least, practically indistinguishable.<sup>6</sup> Given the success of science, this has widely been seen as a positive result for religious knowledge.

The view of faith outlined above apparently forges agreement between a biblical view of faith and secular views, as well as ostensibly unifying science and theology. It may therefore seem surprising that throughout much of Christian history theologians have used Hebrews 11:1 to support a very different view of faith. While Aquinas was aware of the view that faith pertains only to things which cannot be proven, he presented the view only so he could refute it. During the Protestant Reformation, theologians understood Hebrews 11:1 as showing that, far from faith being belief in the absence of proof, faith *was* proof. Faith does not stand in the stead of evidence: Hebrews clearly states that “Faith *is* the evidence.” Fallen man, it was argued, being separated from God has no way of comprehending God, let alone trusting Him. Unless something unseen and beyond ourselves had enabled us, we would never be able to have faith in God. As such, the existence of faith in fallen man *is the evidence* of God’s existence; of things unseen. Far from faith inhering doubt, faith was a “certainty, clear, undoubted and plain to us.”<sup>7</sup>

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<sup>4</sup> Tillich (1957, 20).

<sup>5</sup> Uebel (2014) demythologises some of the history of positivism. Curd, Cover and Pincock (2012) provide an overview of the various directions in which the discussion has now been taken.

<sup>6</sup> Polanyi (1946).

<sup>7</sup> Zwingli. Z VI/iii 171.14-15, quoted in Schreiner (2011, 64).

These two understandings of faith – certain against uncertain; proven against unprovable; reformation against contemporary – seem to be at odds. With each of the two views using one and the same biblical text for support, it appears that something interesting is going on. This thesis sets out to investigate in greater detail how this state of affairs came about, and what can be learned from it.

‘Faith’ is not the only contentious term to be used in this discussion. Before continuing, it is worthwhile clarifying the meaning and scope of two other terms which can cause difficulty. In talking about ‘scientific knowledge’ and ‘religious knowledge’ one might imagine (or hope) that the two terms actually had a meaning that was fixed, or at least agreed upon. This is, unfortunately, far from the case and these two terms will now be addressed.

The demarcation problem in science – separating what is scientific from what is not – is notoriously difficult.<sup>8</sup> To complicate matters further, even a single scientist or philosopher of science may simultaneously hold multiple contradictory views of how science works.<sup>9</sup> It is possible (though unlikely) that what scientists have done through the ages has remained roughly constant. It is, however, certain that what people thought scientists were doing has varied wildly. This holds true for what scientists thought they were doing, what philosophers of science thought scientists were doing, and what the general public thought was being done.<sup>10</sup> Acknowledging this variability, I will take ‘science’ at any given time to mean ‘what a significant number of scientists and philosophers of science understood by the term at that time.’ I will make clear at each juncture what are the salient aspects of science and the philosophy of science under consideration.

Regarding the meaning of ‘religion’ there is, if anything, less agreement in the literature than there is on the demarcation problem in science. For the sake of this essay, the only religion I consider is Christianity. The reason for this stems directly from the views under investigation. In the contemporary discussion it is often assumed that faith is a general concept: Faith “leads people to believe something — it doesn't matter what.”<sup>11</sup> Under this general conception,

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<sup>8</sup> See Laudan (1983) and Hansson (2014).

<sup>9</sup> A number of cases are illustrated by Brownutt (2012).

<sup>10</sup> A history focussing on the changes over the last century or so of the philosophy of science is given by Machamer and Silberstein (2002).

<sup>11</sup> Dawkins (2006, 330).

“faith...lies at the root of all authentic religion – and science.”<sup>12</sup> Consequently, ‘faith’ could equally well be considered with reference to faith in the Christian God, faith in science, or faith in the Flying Spaghetti Monster. This generality was absolutely not the case for the Reformers. Indeed, the Reformers’ argument sketched above – that the existence of faith is proof conclusive for the Christian God – becomes absurd if the argument can be generalised to non-Christian religions. Both contemporary Evangelicals and Reformers therefore hold that one can speak of ‘Christian faith,’ although the Reformers held that ‘non-Christian Faith’ would be an oxymoron. To compare the views on the common ground they share, ‘religion’ will therefore be restricted to Christianity. I shall, in fact, be more restrictive still, considering mainly only the discussions of faith held in reformation Europe and in modern-day Europe and North America. This decision is essentially pragmatic, to keep the scope of the topic manageable.

This thesis is organized as follows. Chapter 2 outlines what is understood by ‘faith’ by many contemporary Evangelicals. This will be compared with what is currently understood by ‘faith’ by those indifferent to, and antagonistic to, Christianity’s claims. In doing so, it will also lay out the present understanding of the role of faith in science. Chapter 3 outlines what the Reformers understood by ‘faith’, highlighting the differences between this view and the contemporary view. Chapter 4 considers some developments in epistemology over the last 150 years, and how this relates to the contemporary Evangelical understanding of faith. Chapter 5 then considers the epistemological framework held by the Reformers which allowed them to take such a radically different view of faith. Having explicitly identified the various positions, Chapter 6 considers where the root differences lie. It then suggests which aspects of the different views of faith should be accepted as being biblically Christian, and which have been foisted on us by non-Christian assumptions. Finally, Chapter 7 considers what the implications for science and religion would be if contemporary Christians adopted the view of faith mooted in Chapter 6.

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<sup>12</sup> Haught (2008, 47).

## Chapter 2: Faith in Contemporary Discussions

The relationship between science and religion is currently a hot topic. Most recently it has shot to prominence following the vocal assertions of ‘new atheists’ who claim that science and religion are anathema.<sup>13</sup> This has garnered rebuttals asserting equally strongly that they are not.<sup>14</sup> The history of the issue, however, is not confined to the past few years: the roots of the topic stretch to antiquity.<sup>15</sup> One central aspect of the discussion concerns what is to be understood by ‘faith’, and the role that faith plays both in science and in Christianity. This chapter considers a view of faith commonly propounded in contemporary discussions<sup>16</sup> about science and religion: Faith is ‘*A reasonable belief, without conclusive proof, where the individual lives their life as though what they believe were true.*’

Many aspects of this definition are accepted by atheists as well as by Christians. Even on the aspects over which there is disagreement, the definition still serves well as a reference to frame the discussion. This chapter considers how this definition of faith is used by Christians,<sup>17</sup> which aspects of the definition are accepted or disputed by atheists, and on what ground. For each point, it will be noted how these considerations impact on discussions about science and religion.

### 2.1 “A reasonable belief”

Contemporary Evangelical theologians are near-unanimous in their claim that faith is reasonable, and potentially rational. John Lennox, states that “faith, reason and evidence belong together.”<sup>18</sup> Lara Buchak, following a wonderfully mathematical derivation, concludes that “Faith is... rational, provided one has consistent credences and preferences”<sup>19</sup> The ‘faith’ that Buchak

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<sup>13</sup> Notable among these are Richard Dawkins (2007), Sam Harris (2007), Daniel Dennett (2007) and Chris Hitchens (2007).

<sup>14</sup> These come from a variety of positions including, but not limited to, evangelicals (McGrath and McGrath, 2007; Lennox, 2009), Catholics (Crean, 2007; Haught, 2008), secular Jews (Berlinski, 2009) and agnostics (Flew, 2009).

<sup>15</sup> See Brooke (1991) for a review.

<sup>16</sup> I say ‘contemporary’ as distinct from ‘early Reformation’. The points discussed in this chapter were already evident in some works from the mid-18<sup>th</sup> century.

<sup>17</sup> In highlighting these points I collocate quotes from people who disagree about a good deal. I do not by this intend to say that there are not significant differences between Kierkegaard, Tillich, and McGrath. Rather, I wish to highlight that in certain respects there are very similar assumptions underlying their respective views of faith.

<sup>18</sup> Lennox (2009, 16).

<sup>19</sup> Buchak (2012, 237).

considers includes statements of a religious nature (“I have faith that God exists”, and “I have faith in God”) as well as more temporal beliefs (“She has faith that her car will start” and “He has faith that his wife loves him”). In considering the scope of “reasonable faith”, Lennox goes so far as to draw a parallel between rationality in the traditional domain of science (nature) and in a traditional domain of Christianity (the Bible), saying “Francis Bacon talked of God’s Two Books – the Book of Nature and the Book of the Bible. Reason, rationality and evidence apply to both.”<sup>20</sup> Without needing to multiply example, Clarence Boomsma draws another illustration from science, claiming that, “Like Pluto before its discovery, God remains an unproven hypothesis of a reasonable faith.”<sup>21</sup>

Despite the unanimity among Christians, it is this aspect of the definition with which atheists often disagree. Bertrand Russell – logician and atheist – contrasted “belief based upon reason” with “belief based on faith.”<sup>22</sup> This theme is picked up by new atheists such as Sam Harris when he asserts that, “Religious faith... forms a kind of perverse, cultural singularity—a vanishing point beyond which rational discourse proves impossible.”<sup>23</sup> Similarly, Richard Dawkins claims that “The whole point of religious faith... is that it does not depend on rational justification.”<sup>24</sup> Instead, faith is “blind trust, in the absence of evidence, even in the teeth of evidence.”<sup>25</sup>

## **2.2 “Without conclusive proof”**

Regarding this aspect of the definition, Christians and atheists are in closer agreement. Søren Kierkegaard wrote that, “If I can grasp God objectively, I do not have faith; but just because I cannot do this, I must have faith.”<sup>26</sup> Christian faith, thus seen, is necessarily antithetical to objective proof. Martin Gardner, a theist, asserted that “When you believe in something, you don’t know it’s true.”<sup>27</sup> Alister McGrath states – more generally – that, “Every worldview – religious or secular – ends up falling into the category of ‘belief systems’ precisely because it

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<sup>20</sup> Lennox (2009, 44).

<sup>21</sup> Boomsma (2007, 20).

<sup>22</sup> Russell (1954/2010, 206-214).

<sup>23</sup> Harris (2005, 25), in the chapter headed “Reason in Exile.”

<sup>24</sup> Dawkins (2007, 45).

<sup>25</sup> Dawkins (2006, 198).

<sup>26</sup> Kierkegaard (1844/2009, 172). It should be admitted that, for a variety of reasons which are discussed in this thesis, Kierkegaard sits slightly uneasily with the full definition of faith I consider in this chapter. However, it is still worth mentioning his views as many of them – in adapted form – have made their way into the science-religion discussion.

<sup>27</sup> Gardner (1983, 209).

cannot be proved.”<sup>28</sup> This necessary lack of proof does not mean there is a necessary lack of evidence. The rationality of faith requires that evidence can be presented (as discussed in Section 2.1). However, the evidence cannot be of a form which is absolutely indisputable.

Among atheists and agnostics the mutually exclusive nature of faith and proof is also generally assumed. However, given they view faith as not being reasonable (as discussed in Section 2.1) some atheists strengthen the idea of “without proof” to “without evidence.” Russell said that “We may define ‘faith’ as a firm belief in something for which there is no evidence. Where there is evidence, no one speaks of faith.”<sup>29</sup> Again, Dawkins takes up Russell’s theme, claiming that, “If there were good supporting evidence then faith would be superfluous, for the evidence would compel us to believe it anyway.”<sup>30</sup>

With or without evidence, the lack of conclusive proof goes hand in hand with uncertainty. To the Christian polymath Michael Polanyi this uncertainty was unfortunate but unavoidable. His entire book *Personal Knowledge* is summarised by the single statement, “I am attempting to resolve... the apparent self-contradiction entailed in believing what I might conceivably doubt.”<sup>31</sup> Others see uncertainty as something desirable. As a Christian and scientist, Francis Collins tries to imagine how dull the world would be if “the opportunity to make a free choice about belief was taken away by the certainty of the evidence.”<sup>32</sup> Necessary evil or source of excitement, we may leave the last word to Kierkegaard: “If I wish to stay in my faith, I must take constant care to keep hold of the objective uncertainty.”<sup>33</sup>

### **2.3 “The believer lives their life as though what they believe were true”**

This aspect of the definition is rarely disputed. The contention lies in whether a commitment to an uncertain hypothesis is a good or bad thing.

For new atheists, to live as though something were true, when you have no proof that it really is, can seem delusional.<sup>34</sup> It can even be seen as being morally repugnant: William Clifford stated that, “It is wrong always, everywhere, and for anyone to believe anything on

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<sup>28</sup> McGrath and McGrath (2007, 41).

<sup>29</sup> Russell (1954/2010, 208).

<sup>30</sup> Dawkins (2006, 330).

<sup>31</sup> Polanyi (1958, 109).

<sup>32</sup> Collins (2007, 34).

<sup>33</sup> Kierkegaard (1844/2009, 172).

<sup>34</sup> Dawkins (2007).

insufficient evidence.”<sup>35</sup> Such atheists thus accept that faith requires a commitment to an unproven hypothesis and conclude that faith is therefore bad. Christian claims belief should – indeed must – be worked out in actions, and that this is a good thing. William James, in responding to and rebutting Clifford’s principle, stated that “We are willing to go in for life upon a trust or assumption.”<sup>36</sup> This is, and must be, more than mere mental assent, but an “infinite, personal, impassioned interestedness that is the condition of faith.”<sup>37</sup>

Regarding how this relates to science, there are then two clearly distinct views. If faith is bad, but science is good, it must be asserted that, “The scientist tries to rid himself of all faiths and beliefs. He either knows, or he does not know. If he knows there is no room for faith or belief. If he does not know, he has no right to faith or belief.”<sup>38</sup> This strident view of scientific confidence is now rather dated.<sup>39</sup> There is growing acceptance that science requires commitment to unproven statements. Polanyi, who did not hold that faith was bad, argued that scientists could – indeed had to – make such whole-hearted faith commitments.<sup>40</sup> If a scientist is 99% sure that his new particle accelerator will not destroy the planet, he cannot build 99% of a particle accelerator. Nor does he build it but only turn it 99% on, or only use it 99% of the time. The scientist is required to go all in, one way or the other, despite a lack of certain proof either way. An equivalent logic can easily be used to show that – whatever high ideals they claim to have – the atheist does in fact commit himself to an unproven position regarding religious claims: “He is actively playing his stake as much as the believer is; he is backing the field against the religious hypothesis, just as the believer is backing the religious hypothesis against the field.”<sup>41</sup>

## 2.4 Conclusion

In summary, it has been argued that contemporary Evangelicals, broadly speaking, adopt a definition of faith along the lines of it being “a reasonable belief, without conclusive proof, where the individual lives their life as though what they believe were true.” Any belief that fits this definition is considered to be faith, whether it is a religious belief (such that God has forgiven me) or a non-religious one (such that my wife loves me). Atheists accept the basic categories; that

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<sup>35</sup> Clifford (1877).

<sup>36</sup> James (1896).

<sup>37</sup> Kierkegaard (1844/2009, 26).

<sup>38</sup> Carlson (1931).

<sup>39</sup> A full discussion of this is given in Chapter 4.

<sup>40</sup> Polanyi (1958, 18-32).

<sup>41</sup> James (1896).

one should discuss whether faith is reasonable or not, evidence based or not, provable or not, and requiring commitment or not. That said, for some of the categories there is not perfect agreement between Christians and atheists about where on each scale faith should go.

Point for point, the definition of faith given here aligns well with what is currently accepted as scientific practice: the scientist never has indubitable proof, and yet draws conclusions which are reasonable, given the evidence, and to which he must commit himself wholeheartedly. By this understanding of faith, science and religion – from a purely epistemological view – seem to merge into a seamless whole. Polanyi expresses this in the claim that “the suppositions underlying our belief in science... appear to coextend with the entire spiritual foundation of man.”<sup>42</sup> Lennox underscores this unity by rejecting outright the suggestion that “faith in God is a different kind of faith from that which we exercise in science.”<sup>43</sup>

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<sup>42</sup> Polanyi (1946, 7).

<sup>43</sup> Lennox (2009, 17).

## Chapter 3: Reformation Faith

Chapter 2 outlined a view of faith which is held by many contemporary, evangelical Christians. However, not all Christians hold such a view of faith. It is not even held by all Bible-believing, contemporary Christians in the west. For example, far from accepting that faith requires a commitment to an uncertain hypothesis, Cornelius Van Til insisted that “belief can never be identified with conjecture.”<sup>44</sup> Similarly, given divine revelation, Robert Thomas insists that “At no stage is human knowledge uncertain or tentative.”<sup>45</sup> Rather, through faith, “we may know His will with certainty.”<sup>46</sup> This seems to be in marked contrast to the idea that faith inheres doubt. It is not simply a slight difference of emphasis to the view of Polanyi, Lennox and McGrath: it is the polar opposite. However, the views of Van Til and Roberts are not some radical perversion of conventional Christianity. In many respects they are part of a long tradition reaching back at least as far as the Protestant Reformation, and often beyond. It is to the reformation view of faith that we turn in this chapter.

Reformers in different countries had numerous disagreements with each other on many details. They were, however, unified in their belief that there were some things about which the individual Christian could be certain. Indeed, they agreed there were some things about which the individual Christian *had to* be certain. Interestingly, they were happy to cling to such certainty without a shred of demonstrable evidence.

Before considering their views in detail, it is worth clarifying what might be meant by ‘certainty’. One meaning of ‘certain’ is subjective, whereby a person has “no doubt about something: [they are] convinced or sure.”<sup>47</sup> This subjective meaning does not guarantee that the statement which a person believes to be true is in fact true: a gullible person may be fully convinced of something which is untrue. ‘Certain’ in this sense therefore says less about the object of faith than it does about the credulity of the believer. By contrast, a second meaning of ‘certain’ is objective, referring to something which is “known to be true or correct.”<sup>48</sup> This

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<sup>44</sup> Van Til (1997). He explicitly and repeatedly contrasted his own view with that of William James, which was discussed here in Chapter 2 (1896).

<sup>45</sup> Thomas (2002, 51).

<sup>46</sup> Ibid. (p.50).

<sup>47</sup> Merriam-Webster (2004) “Certain”, Definition 1.

<sup>48</sup> Ibid. “Certain”, Definition 2.

objective certainty speaks, not of the *feeling* of being right, but of the *knowledge* of being right. This difference is widely acknowledged in the contemporary literature already discussed; Kierkegaard, for example, was prepared to speak of subjective certainty, provided he could hold to objective uncertainty. These two possible meanings of certainty must be borne in mind in the following discussion. It is a potential ambiguity of which the Reformers were well aware, and which they went to great lengths to avoid.

### 3.1 James Arminius

In the Netherlands, James Arminius (1560-1609) set out his terms, to make it clear that he was discussing objective certainty, rather than mere subjective certitude: “Certainty, then, is... a mode of knowledge according to which the mind knows an object as it is, and is certain that it knows that object as it is.”<sup>49</sup> He continues, with similar clarity regarding the relation of certainty to faith, and regarding God’s expectations of the Christian:

“The Certainty with which God wishes this word to be received, is that of faith... *doubtful opinion [is] opposed to faith... certainty [is] attributed in the scriptures to a true and living faith... and it is God who requires and demands such a species of certainty and of faith.*”<sup>50</sup>

The view that “doubtful opinion [is] opposed to faith” is simply irreconcilable with the view that “doubt... is an element of faith.”<sup>51</sup> Moreover, according to Arminius, certainty is not simply something which is possible for the believer: it is something which is demanded. Significantly, Arminius was not alone in such assertions. Other Reformers made their position equally clear.

### 3.2 Ulrich Zwingli

The Swiss Reformer, Ulrich Zwingli (1481-1531), in his “swan-song on the true faith”<sup>52</sup> claimed that “we confess and declare that we have an infallible faith.”<sup>53</sup> This seems unambiguous. He went on to say that this “absolute assurance” has significant consequences:

“Through the light and *confidence* of faith [the Christian] is *sure* of pardon, because he *knows* that God has forgiven him, through Jesus Christ and is *sure* of

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<sup>49</sup> Arminius (1629/2005, 44-45).

<sup>50</sup> Ibid. (p. 50), emphasis mine.

<sup>51</sup> Tillich (1957, 20).

<sup>52</sup> Zwingli’s booklet (1536) was given this moniker in the original published prefatory note by M. Bullinger.

<sup>53</sup> Zwingli (1536, chap. I).

this remission so that he has *not the slightest doubt* about the pardoning of his sins... It *cannot but be* that all who trust in God... *know* that pardon for their wrong doings has been forgiven them.”<sup>54</sup>

To make the logic of this claim clear, all who trust in God are necessarily certain that their sins are forgiven. If a person is not certain – absolutely and infallibly certain – that they are forgiven, then they evidently do not trust God. Zwingli was also clear on the position of those who do not trust God:

“The heathen and the unbeliever who trust in created things are forced to confess that they may be deceived in their faith or belief, seeing that they trust in created things. But they that trust in the creator and Source of all things... these cannot be convicted of error.”<sup>55</sup>

This does not leave much room for ambiguity. For Zwingli, it was unthinkable that the faithful might “hold fast to objective uncertainty.”<sup>56</sup> It was absolutely not the case that “doubt... is an element of faith.”<sup>57</sup> Such admissions, said Zwingli, were forced only on heathens.

The certainty Zwingli envisaged, however, is rather difficult for the contemporary discussion to accept. While Zwingli claimed that the individual had to be certain that they were forgiven, “no one knows about anybody [else] whether any one’s sins have been remitted... The election and faith of other men are hidden from us.”<sup>58</sup> That is to say, Zwingli himself – by faith – was certain (even infallibly certain) that he was forgiven, and yet he could not offer any evidence to anyone to demonstrate the truth of his claim. This aspect of reformation certainty is sufficiently paradoxical to cause some people<sup>59</sup> to reject the view out of hand. We shall return to it in Chapter 5.

### **3.3 Martin Luther**

Finally, in Germany, Martin Luther (1483-1546) is well known for leading the charge against Rome. He railed against indulgences and abuses of power, but also against uncertainty:

“I am saying this in order to refute the dangerous doctrine... that no one can know for certain whether he is in a state of grace... With this wicked idea of theirs they

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<sup>54</sup> Ibid. (chap. VIII), emphasis mine.

<sup>55</sup> Ibid. (chap. I).

<sup>56</sup> Kierkegaard (1844/2009, 172).

<sup>57</sup> Tillich (1957, 33).

<sup>58</sup> Zwingli (1536, chap. VIII).

<sup>59</sup> Dawkins.

utterly ruined the doctrine of faith, overthrew faith... If everything else were sound [in the papacy] still this monster of uncertainty is worse than all the other monsters.”<sup>60</sup>

Again, Luther’s view is the polar opposite of the claim that uncertainty is necessary for faith. Rather, uncertainty utterly ruins and overthrows faith.

Having demonstrated that the Reformers disagreed in a unified and categorical manner with the notion that Christian faith could involve anything less than absolute and infallible certainty, it is instructive to turn briefly to other aspects of faith over which the definition of faith laid out in Chapter 2 does not mesh with reformation thought.

As highlighted in Chapter 2, contemporary Evangelicals and new atheists disagree on the relationship of faith to rationality: new atheists hold that faith is not rationally defensible, while contemporary Evangelicals defend faith’s rationality. Dawkins delights in Tertullian’s claim that “It is to be believed because it is absurd.”<sup>61</sup> McGrath avoids the problem by suggesting that Tertullian’s comment “was probably meant to be a rhetorical joke, for those that knew their Aristotle.”<sup>62</sup>

Tertullian’s remark is not, however, so easily cast aside, given that the Reformers seem to supply Dawkins with a wealth of further support for his views. When addressing whether infants – not having reason – could be baptised, Luther responded that children were, for exactly that reason, “all the more fit and proper recipients of baptism” as “reason in no way contributes to faith... reason is the greatest enemy that faith has: it never comes to the aid of spiritual things”<sup>63</sup> Furthermore he insisted that “natural wisdom and understanding... must be set aside in matters of faith.”<sup>64</sup> Luther was not, however, against reason.<sup>65</sup> In fallen man, he argued, “The natural wisdom of a human creature in matters of faith, until he be regenerate and born anew, is altogether darkness.”<sup>66</sup> Thus, when coming to faith, reason is of no use because reason (in the unregenerate mind) is simply not reasonable. However, once a person has come to faith, once their mind is regenerated, “the understanding, through faith, receives life from faith; that which

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<sup>60</sup> Luther (1535/1962, 377; 386).

<sup>61</sup> Dawkins (2003, 139), quoting Tertullian (c. 200, “On the Flesh of Christ,” chap. 5). For a careful analysis of Tertullian see González (1974).

<sup>62</sup> McGrath (2005, 101).

<sup>63</sup> Luther (1566, §CCCLIII).

<sup>64</sup> Ibid. (§CCXCIV).

<sup>65</sup> Luther’s opinion on reason is analysed by Lohse (1958).

<sup>66</sup> Luther (1566, §CCXCIV).

was dead, is made alive again.”<sup>67</sup> For the Christian, therefore, reason “strives not against faith... but rather furthers and advances it.”<sup>68</sup>

In the contemporary discussion, the question under consideration is, ‘Is faith reasonable?’ The Christian says ‘Yes’, the atheist says ‘No’. Luther would have sided with neither McGrath nor Dawkins as, to his thinking, they are asking the wrong question. Luther asked, ‘Is reason faithful?’ He answered, for the Christian: Yes; for the atheist: No.

### **3.4 Conclusion**

There are four main points which may be noted from this chapter:

- Contemporary Evangelicals hold that faith is necessarily uncertain. By contrast, the reformation view held that faith is necessarily certain.
- Contemporary Evangelicals hold that, despite their uncertainty, statements asserted by faith are nonetheless supported (though never proven) by demonstrable evidence. By contrast, the reformation view held that, despite their certainty, statements asserted by faith could not be supported (let alone proven) by demonstrable evidence.
- Contemporary Evangelicals hold that faith can (indeed must) be exhibited by Christian and atheist alike. By contrast, the reformation view held that having faith is a defining characteristic of the Christian, and so can never be exhibited by atheists.
- In the contemporary discussion there is disagreement about the reasonableness of faith: for the Christian, faith seems reasonable while, for the new atheist, it does not. By contrast, the reformation view inverted the priority of faith and reason, asserting that, for the Christian, reason was faithful while, for the atheist, it was not.

At this stage, we may ask whether the view of faith considered in the contemporary discussions about science and religion is compatible with the historical reformation view of faith. The answer must be a resounding, No: they are not. The remainder of this thesis considers how two groups of Christians came to have such different views of faith, and what implications this has for discussions about science and religion.

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<sup>67</sup> Ibid.

<sup>68</sup> Ibid.

## Chapter 4: Contemporary Context

It was seen in Chapter 3 that the Reformers took ‘faith’ to be something imbued with certainty. That said, from Chapter 2 many contemporary Evangelicals, and particularly those involved in discussions about the relationship between science and religion, take faith to mean something which is necessarily not certain. Both groups have high views of Scripture, and use the same Scripture to support their diametrically opposed views. This adds an important dynamic to the resolution of the issue. When a Christian and a Buddhist disagree it may be tempting for the Christian to simply discard the Buddhist view, because the Buddhist does not accept the authority of Scripture; one can always hope that if they accepted the truth of the Bible then they would see sense. Disputes between contemporary Evangelicals and Reformers are not so easily cast aside: both groups share and revere the same Scripture. Nonetheless, the conclusions they draw are radically different.

In this chapter I consider the broader context of the contemporary view, noting the epistemological assumptions pervading much of the contemporary discussion about science and religion. In overview, I argue that the similarities present observed for ‘faith’ in science and in religion are not a coincidence, but flow from the two subjects having adopted (the same) particular assumptions. Since the start of the enlightenment, it was held that all meaningful knowledge could be traced ultimately to reason or observation. During the 20<sup>th</sup> century it was shown that neither reason nor observation could lead to certainty. Consequently, any meaningful claims – be they scientific or religious – are necessarily uncertain. Faith, being meaningful, must therefore be uncertain.

### 4.1 Meaningfulness: reason and observation

This chapter considers two ways of knowing: knowledge obtained via rationality (i.e. reason) and knowledge obtained via the senses (i.e. observation). Since the start of the enlightenment, these two sources of knowledge have been seen to logically cover all possible options: *a priori* knowledge regards statements which are logically necessary, and thus require no observational corroboration; *a posteriori* knowledge regards statements which are only known through

experience, and thus require observational corroboration.<sup>69</sup> Any claim to knowledge must therefore be ultimately traceable to these two ways of knowing, used individually or in combination. Stated alternatively, anything which cannot be traced to reason or observation cannot be known. The positivist programme took this idea to its logical extreme and declared that if a statement could not be checked against either reason or observation then it was not even wrong: it was meaningless.<sup>70</sup> In this vein, Hume proposed the following test to divide between meaningful and meaningless claims:

“Does it contain any abstract reasoning concerning quantity or number [i.e. reason]?  
No. Does it contain any experimental reasoning concerning matter of fact and  
existence [i.e. observation]? No. Commit it then to the flames, for it can contain  
nothing but sophistry and illusion.”<sup>71</sup>

Having drawn such categorisations to demarcate what is meaningful, Hume claimed that religious statements were meaningless.

Contemporary Christians accept the Enlightenment categories (why wouldn't they?) but claim that religious statements can still be meaningful. If the categories of reason and observation are accepted, then the only way to make statements about faith meaningful is to insist that “faith, reason and evidence belong together.”<sup>72</sup> Similarly, when considering miracles (which Hume so roundly rejected) C.S. Lewis countered by claiming that “every event which might be claimed to be a miracle is, in the last resort, something presented to our senses, something seen, heard, touched, smelled or tasted.”<sup>73</sup> Because they can be traced to observation, claims about miracles are meaningful, even under Hume's categories. One could imagine proceeding to show that all religious claims (at least, all meaningful religious claims) are susceptible at some level to either reason or observation.

## 4.2 The fall of certainty

It was long assumed and hoped that, having divided statements into the categories of ‘meaningful’ and ‘meaningless,’ such a programme of reason and observation would be able – ultimately – to divide all meaningful statements into being ‘true’ or ‘false’. The highpoint of this

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<sup>69</sup> Kant (1781/1922, 1).

<sup>70</sup> Hume (1748/2011).

<sup>71</sup> Ibid. (p.162).

<sup>72</sup> Lennox (2009, 16).

<sup>73</sup> Lewis (2002, 1).

process came with thinkers such as David Hilbert,<sup>74</sup> Bertrand Russell and Alfred North Whitehead<sup>75</sup> being confident that formal logic was close to being completed.<sup>76</sup> Given the possibility of rigorous, logical certainty it was considered “wrong, always, everywhere, and for anyone, to believe anything upon insufficient evidence.”<sup>77</sup> Science itself – as a rigorous, rational, pursuit of truth – also came to be about certainty: “The scientist tries to rid himself of all faiths and beliefs. He either knows, or he does not know. If he knows there is no room for faith or belief. If he does not know, he has no right to faith or belief.”<sup>78</sup> During the first half of the 20<sup>th</sup> century, however, the positivist programme started to come unstuck as a number of scientists, philosophers, and logicians began to point out significant shortcomings to the ‘certainty’ provided by observation and reason.

In 1906 Pierre Duhem highlighted a fundamental problem with the positivist programme.<sup>79</sup> One never puts a single statement to the test, but rather an entire array of statements. For example, to test the statement “It is raining” one might hope to simply look out of the window and check. But in doing so a whole group of statements is being tested in combination, including (but not limited to) “It is raining”, “My eyes work properly”, and “No one installed a sprinkler system above my window while I wasn’t watching.” Irrespective of how many of these statements one may check, there remain an infinite number of additional assumptions which are left unchecked. One cannot, with any finite number of observations, rule out all possible alternative explanations. Consequently, observation is not sufficient to provide certainty that one particular explanation is correct.

While Duhem applied such thinking only to the physical sciences, W.v.O. Quine extended the remit to “the totality of our so-called knowledge or belief.”<sup>80</sup> Thus *any* statement or set of statements is susceptible to the accusation that there is always an alternative explanation possible. To take another example, I observe that my wife is kind to me, and conclude that she loves me. However, the observation of my wife’s kindness is also consistent with her not loving me, but rather wanting to ensure she inherits the house when I die. I could test this by burning the house to the ground and seeing if she is still kind to me. Even if she is, I have not excluded the

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<sup>74</sup> Hilbert (1902).

<sup>75</sup> Whitehead and Russell (1910, 1912, 1913).

<sup>76</sup> See Irvine (2013) for a review.

<sup>77</sup> Clifford (1877).

<sup>78</sup> Carlson (1931).

<sup>79</sup> Duhem (1906).

<sup>80</sup> Quine (1951). See Gillies (2012) for a discussion of the similarities and differences between Duhem and Quine.

possibility that she is a spy, paid to be kind to me by a foreign government, for reasons I do not know. This process of “but what if...” can be continued indefinitely. Summarised, then, the Duhem-Quine thesis states that *for any finite set of observations or statements there exists an infinite number of theories with which they are entirely consistent.*<sup>81</sup>

Positivist hope for reason were dealt a fatal blow when, in 1931, the mathematician Kurt Gödel developed his so-called *Incompleteness Theorem*. Broadly speaking, he proved that for any logical system powerful enough to be useful, there would always be statements which could be neither proved nor disproved within that system: they would be “undecidable”.<sup>82</sup> The impact of this theorem was enormous: the hope that reason and logic were sufficient tools to sort all statements as either being ‘true’ or ‘not true’ was conclusively quashed, and quashed using reason and logic. One may have held out hope that the undecidable statements were highly contrived and irrelevant for all practical purposes. However, Gödel went on<sup>83</sup> to show that, in a consistent system, one of the statements which is undecidable is that the system is consistent. If logicians were to hold on to something even as basic as non-contradiction, they would have to do so without proof. This has led some to quip that, “If religion is something whose foundations are based on faith, then mathematics is the only religion that can prove it is a religion.”<sup>84</sup>

### 4.3 Redefining rationality

Following this, strict positivism – the notion that scientists, being rational, should either be certain or withhold judgement – could only render science entirely impotent. We are thus faced with the choice of either declaring science to be useless, or declaring science to be irrational, or quietly redefining ‘rational’. Invariably, people opt for redefinition, though rarely is it done so consciously or stated as explicitly as by John Polkinghorne, when he writes,

“If one were to equate rational with purely deductive then... I think one would have to classify science as ‘non-rational belief’. Since I regard the latter judgement as unacceptable, I think there is a broad territory of rationally motivated belief,

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<sup>81</sup> See Gillies (2012) and Laudan (2012) for careful discussions of this summarising statement.

<sup>82</sup> Gödel (1931, theorem VI).

<sup>83</sup> Ibid. (theorem XI).

<sup>84</sup> Lennox (2009, 53).

lying between absolutely certain on the one hand and irrational assertion on the other.”<sup>85</sup>

Being pragmatic, we convince ourselves that this shift in meaning is acceptable. I may observe my wife to be consistently kind to me, and yet it is still not strictly rationally possible to prove that she is not a spy who will ultimately kill me. I might, out of an abundance of caution, refuse to speak to her, just in case she passed the content of our conversations to a foreign government. Despite Clifford’s approval, such an action would be almost universally condemned today as irrational. Thus ‘irrational’ has come to mean simply ‘reasonable’ or ‘sensible’.<sup>86</sup> This redefinition does not, of course, save us from the possibility of being wrong. It simply affirms that a reasonable man can still be wrong but is not allowed the sceptic’s luxury of withholding judgement: “We must commit ourselves to the risk of talking complete nonsense, if we are to say anything at all.”<sup>87</sup>

Consequently, while we cannot absolutely and unambiguously declare what may or may not be true, there are particular ideas which one can – indeed should – hold to be correct. To do otherwise would be irrational as “individuals who lack faith because they insist on gathering all of the available evidence before making a decision stand to miss out.”<sup>88</sup> For the scientist to sit on the fence would be “unreasonable and contrary to scientific good sense.”<sup>89</sup> However, if what is ‘reasonable’ is no longer directly attested by reason, and what is ‘sensible’ is no longer directly attested by the senses, from where does this “good sense” come?

This, at root, comes to a leap of faith.<sup>90</sup> Any knowledge based on reason or observation requires the belief, hope and trust that one’s conclusions are correct, or at least that they may be relied upon, despite there being no possibility of a sure guarantee that this should be so. Lennox states this by saying that, “At some point, in the validation of every truth claim or hypothesis, a

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<sup>85</sup> Polkinghorne (1991, 52). Many of the important issues for this shift were already laid out by James (1896). However, while previously such a position might be dismissed as an excuse for sloppiness, the demise of positivism turned the position into a necessity.

<sup>86</sup> Of course, both “rational” and “reasonable” are rooted in the meaning “attested by reason.” “Sensible” is rooted in the meaning “attested by the senses”. As reason and observation have come in for a battering, all three words have had to be devalued from their original connotations of certainty.

<sup>87</sup> Polanyi (1958, 94).

<sup>88</sup> Buchak (2012, 246).

<sup>89</sup> Duhem (1906/2012, 248).

<sup>90</sup> A notion attributed to Kierkegaard, though the exact phrase never appeared in his work [as pointed out in Kierkegaard (1844/2009, xxvii)]. The extent to which Kierkegaard would endorse the uses to which his ideas have been put is beyond the scope of this thesis. Kierkegaard took faith to be “non-rational” at a time when “rational” meant “absolutely certain, attested to by reason.” When the contemporary discussion of faith picks up Kierkegaard’s ideas regarding a leap of faith [e.g. Lennox (2009, 62)] - while also claiming that faith is rational - this is not as incongruous as it might seem, given that “rational” has now changed its meaning.

leap of faith is an inescapable ingredient. At the foundation of every human search for understanding and truth, including the scientific [and religious] search, an ineradicable element of trust is present.”<sup>91</sup>

This may seem to hold reasonably enough for science, but could God not, in principle, give some utterly convincing proof? C.S. Lewis argues that He could not. Even if I should think that God has manifestly appeared before me in bodily form, flanked by a thousand angels and pillars of fire, “every event which might be claimed to be a miracle is, in the last resort, something presented to our senses, something seen, heard, touched, smelled or tasted, *and our senses are not infallible.*”<sup>92</sup> There is always – there must always be – an element of uncertainty; there is always another possible explanation. And thus there is always the need for a leap of faith.

#### **4.4 Speakability of meaning**

There has been an assumption made in this chapter which should be explicitly highlighted. At this stage of the discussion it may seem so obvious that it hardly needs saying, though its importance will become apparent when contrasted with the reformation assumptions in Chapter 5. It was stated at the outset of this chapter that *a priori* knowledge regards statements which are logically necessary, *a posteriori* knowledge regards statements which are only known through experience, and that this covered all options. As has been discussed, this restricts us to two ways of knowing: reason and observation. However, it also restricts us to one kind of *thing* which may be known: statements.<sup>93</sup>

From the standpoint of formal logic, ‘statement’ is defined as ‘any sentence which has a truth value, i.e. which is either true or false.’<sup>94</sup> Claiming to ‘know *X*’, is synonymous with claiming to ‘know that *X* is true’. A thing can therefore only be known if it has a truth value. A thing only has a truth value if it is a statement. Statements, as their name implies, can be stated. ‘Being stated’ implies use of language or, in the broadest possible sense of language, some means of communication. It is therefore not possible to know something which you are unable to

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<sup>91</sup> Lennox (2009, 62), quoting Haught (2008, 47).

<sup>92</sup> Lewis (2002, 1), emphasis mine. Dawkins (2007, 112-117) uses exactly this argument to say that it is always possible to reject accounts of miracles, however well corroborated they are by observational evidence. Hume (1748, chap. X). used the same argument to claim it was not only always possible, but always right to reject accounts of miracles.

<sup>93</sup> A highly influential treatment of the issue was given by Wittgenstein (1921, thesis 7; and 1953 §§244-271), which is summarised here.

<sup>94</sup> See Hamilton (1988, 1). Gödel complicates the picture slightly, but not in any manner relevant for the argument of this section.

communicate. It is from this reasoning that Wittgenstein arrived at the conclusion, “That of which one cannot speak, thereof must one remain silent.”<sup>95</sup>

Consequently, should one have the feeling of having ones heart strangely warmed, the experience can be divided into two distinct parts: those parts which you are able to communicate, and those ineffable parts which defy words. The latter parts are to be summarily dismissed, as they are meaningless according to Wittgenstein. The former parts are to be analysed to see if they stand the test of being amenable to reason or observation. If they do, well and good; if not, they are to be dismissed as meaningless according to Hume.

#### **4.5 Summary**

It was imagined at the height of the enlightenment that, using the combined tools of reason and observation, it would be possible to arrive at statements which were certain. Gödel, however, demonstrated that reason is insufficient to arrive at statements which are certain. Duhem and Quine demonstrated that observation is similarly unable to lead to certainty. These limitations apply to all spheres of knowledge, be they reasoning about physics or reasoning about God, observation of a falling apple or observation of a man raised from the dead. We are left with no possible proof, only the necessity of forming reasonable beliefs, in the absence of proof, where the individual lives their life as though what they believe were true: we are left with faith.

Alternatively stated – following the logic in the opposite direction – given that any meaningful claims must be grounded either in reason or observation, and given that reason and observation are not sufficient to provide certainty, it follows that there is no meaningful claim of which we can be certain. Faith therefore cannot be both meaningful and certain. The interpretation of Hebrews 11 thus comes down to a simple choice: either the Bible speaks of a faith which is uncertain, or the Bible speaks of a faith which is meaningless. The subtleties of how best to interpret *pistis* do not alter this dichotomy in any way. If the evangelical Christian wants a faith that is meaningful, it must be a faith that is uncertain.

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<sup>95</sup> Wittgenstein (1921, thesis 7).

## Chapter 5: Reformed Context

It was seen in Chapter 2 that faith is often understood today as being necessarily antithetical to certainty. Chapter 3 showed that the Reformers took exactly the opposite view: faith entailed and required objective certainty. In a first step towards understanding this apparent contradiction, Chapter 4 considered the historical context of why many Christians today may believe that one cannot be certain. It was rigorously demonstrated that – given any possible reasoning or observation – we simply cannot attain certainty. This holds for any area of knowledge; for science as for religion. This chapter considers how the context of the reformation view permitted such radically different conclusions to be reached.

In overview, Hume placed limits on meaningful statements: they should ultimately be traceable to reason or to observation. Reformation theologians did not accept these limits; they held that, by faith, things could be meaningfully known which were traceable to neither reason nor observation. Wittgenstein placed another limit on meaningful things: they should be statements. Reformation theologians did not accept this limit either; they held that, by faith, things could be meaningfully known which could not be said.

### 5.1 Knowing by reason and observation

To begin, we must revisit the possible ways of knowing. It is generally accepted that knowledge may be obtained by means of reason and observation, as has been discussed in Chapter 4. It may be asked, however, which of these two means is superior: reason or observation?<sup>96</sup> Rationalists believe that reason is superior. Empiricists believe that observation is superior. Despite such apparent dichotomies, it is usually accepted that both reason and observation have their place. This is relatively simple to demonstrate.

There are some statements which are justified by reason alone. A child may initially learn mathematics by observation. They can see that  $1+1=2$ , by taking one Lego block and one more Lego block, and putting them together and seeing that they have two Lego blocks. However, the basic rules are rapidly abstracted. This may be done for practical or fundamental reasons: In considering the future of the global population it could be asked, “If there were ten billion people

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<sup>96</sup> See Markie (2013) for a review.

in the world and one more were born, how many people would there be?” To answer this question, one does not start counting people. Practically, it would take too long and, fundamentally, there are not yet ten billion people to count. Nonetheless, one could confidently assert that ten billion people plus one person is ten billion and one people. A person suffering from acalculia may be surprised, and may even not accept the answer, but that would not normally deter someone from accepting a conclusion obtained by reason.

By contrast, some statements are justified by observation alone. All the maths in the world will not show that fire is hot. The briefest experiment of putting ones hand in a flame, however, will demonstrate it to be so. One could confidently assert – without further rationalisation – that fire is hot. A person whose ability to feel heat was somehow deficient may be surprised, and may even not accept the answer, but that would not normally deter someone from accepting a conclusion obtained by observation.

There are some statements for which both reason and observation are required. If a scientist measures the resistance of a wire, they make an observation, in as much as they look at the reading on an ohmmeter. But there is theoretical reasoning behind the operation of an ohmmeter such that almost all observations are “theory laden.”<sup>97</sup> It is often difficult to separate out how much of a measurement is, in fact, sensory observation, and how much of it is rational reasoning. This is generally unproblematic as the exact divide is usually unimportant.

What should be done, though, when reason and observation seem to disagree? Which way of knowing takes precedence? If a wire is measured to have zero resistance, then theoretical considerations dictate that this is almost certainly impossible. It would seem more likely that the apparatus is faulty: reason trumps observation. If, however, the observation is corroborated using different methods, it may be accepted that the observed result is correct, even without theoretical explanation: observation trumps reason. It is in no way considered problematic that there exist two entirely separate and yet equally valid ways of obtaining knowledge. These ways of knowing are irreducible: reason is not a form of observation, nor is observation a form of reason. Nonetheless, either separately or in conjunction, they are considered to constitute evidence. Given there are no issues with a plurality of ways of knowing, one may ask if we must restrict ourselves to only two? Could we not have more? The Reformers thought that we could.

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<sup>97</sup> Hanson (1958, 19).

## 5.2 Knowing by faith

Arminius, with his usual clarity, explicitly laid out that the ways of knowing “are three. For it is produced on the mind, either by the senses, by reasoning and discourse, or by revelation. The first is called the certainty of experience; the second, that of knowledge; and the last, that of faith.”<sup>98</sup> Faith then, in the view of Arminius, is a way of knowing, alongside and independent of reason and observation. To cast this idea in the terminology so far used throughout this thesis, the three possibilities are summarised as follows:

Knowledge produced by	And called
Rationality	Reason
Senses	Observation
Revelation	Faith

This immediately helps to clarify the reformation interpretation of Hebrews 11:1: Faith *is* the evidence of things unseen. To illustrate this, consider first a situation in which there are nine people in a room and then one more person enters. I can – without looking – say that there are ten people in the room.

A sceptic may ask, “But you did not look in the room. You did not see these ten people. What evidence do you have for your belief?”

The reply is simple: “ $9+1=10$ . Rationality says it must be so. Reason is the evidence of things unseen.”

It would be very strange for anyone to reply, “So you have no evidence! You have not seen it! You have *reason* instead of evidence!”

No, of course not: “Reason *is* the evidence!”

Equivalently, consider a situation in which God forgave me of my sin, and then revealed to me that He had done it. I can – without looking – say that my sins are forgiven.

A sceptic may ask, “But you have not seen – cannot see – the forgiveness of your sins. What evidence do you have for your belief?”

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<sup>98</sup> Arminius (1629/2005, 46).

The reply is simple: “My heart was strangely warmed.”<sup>99</sup> Revelation says it must be so. Faith is the evidence of things unseen.”

It should, on this view, be very strange for anyone to reply, “So you have no evidence! You have not seen it! You have *faith* instead of evidence!”

No, of course not: “Faith *is* the evidence!”

According to the reformation view these two examples are analogous. Reason does not require observational evidence before it is accepted. Similarly, faith does not require reasoned evidence or observational evidence before it is accepted. Furthermore, there are instances in which reason (because of practical or fundamental constraints) *cannot* be aided by observational evidence. So too, there are instances in which faith cannot be aided by reasoned evidence or observational evidence. It is, of course, nice if the evidence of my eyes aligns with what I understand by reason, but even if it does not (either because it contradicts reason, or because reason is mute on the subject) direct observation is a perfectly acceptable basis for saying I know something to be true.<sup>100</sup> Similarly, it is definitely nice if faith aligns with reason and observation but, even if it does not, faith is a perfectly acceptable basis for saying I know something to be true.

### **5.3 Supernatural faith, supernatural certainty**

Just as reason and observation – being distinct ways of knowing – have particular attributes, it may be expected that faith – as another distinct way of knowing – would also have its own peculiar characteristics. One such characteristic on which the Reformers universally agreed<sup>101</sup> was its supernatural nature. Given faith came from revelation, and given that revelation came supernaturally from God, faith was first to last supernatural: “Only the eternal, the infinite, and uncreated God, is the true basis of faith...None but the Holy Spirit can give faith.”<sup>102</sup> The Reformers held that the supernatural nature of faith had a number of consequences: firstly, it freed faith from the necessary uncertainty that attends reason and observation. Secondly, it allowed faith to be certain. Thirdly, it required faith to be certain.

Regarding the first point, the Reformers would have agreed with Duhem, Quine and Gödel (against enlightenment wisdom) that neither reason nor observation could lead to certainty.

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<sup>99</sup> It worked for John Wesley (1749-1789/1951, 55).

<sup>100</sup> Should anyone dispute this, put their hand in a fire.

<sup>101</sup> Schreiner (2011, 5).

<sup>102</sup> Zwingli (1536, chaps. I; VIII).

They also saw that faith, coming from God's supernatural revelation and not reducible to reason or observation, was not limited by this uncertainty. Reason relies on man's rationality, which is created; observation relies on man's senses, which are also created; faith relies on revelation, which is directly from God. By this categorisation we may understand Zwingli's claim that,

“The heathen and the unbeliever who trust in created things [such as their rationality and their senses] are forced to confess that they may be deceived in their faith or belief, seeing that they trust in created things. But they that trust in the creator and Source of all things... these cannot be convicted of error.”<sup>103</sup>

Having argued that faith need not be limited by the same uncertainty that limits reason and observation, how did the Reformers then argue that faith allowed certainty? The Reformers held that certainty was impossible; alternatively stated, certainty would take a miracle. They were very clear that it was only direct divine intervention which permitted certainty. Arminius stated that, with reason and observation having failed, “All our hope, then, of attaining to this knowledge is placed in Divine revelation.”<sup>104</sup> It was exactly and only this Divine revelation which lead to certainty: “We declare, therefore, and we continue to repeat the declaration, till the gates of hell re-echo the sound, ‘that the Holy Spirit... is the Effector of that Certainty.’”<sup>105</sup>

This shows that faith *could* be certain. To show that faith *is necessarily* certain, it must be argued, not only that God can provide certainty, but that he would, and even had to. This came down to consideration of God's character. Firstly, it was asserted that if God were to do anything then He would – of necessity – act to generate certainty, rather than sow confusion. Luther stated that, “I know for certain that I am united and made one with my Lord and Saviour Christ; I have his word to assure me of the same, which can neither fail nor deceive me, for God is true.”<sup>106</sup> When God speaks His words are true. If God were to act in any way which led to us believe something which was not true, this would be deceit, and God would not act in a deceitful manner.

To rule out the possibility that God would simply refrain from acting, allowing uncertainty to arise from His non-action, it must then be argued that God – of necessity – acts. Arminius stated that, “Revelation is necessary, if it be true that God and his Christ ought to be known... [And it is true that] both of them ought to be known and worshipped; the revelation, therefore, of both of them is necessary; and because it is thus necessary, it has been made by

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<sup>103</sup> Ibid. (chap. I).

<sup>104</sup> Arminius (1629/2005, 44).

<sup>105</sup> Ibid. (p.65).

<sup>106</sup> Luther (1566, §DCXXVII).

God.”<sup>107</sup> If God failed to provide revelation then He would be “deficient in the things that are necessary; how... ought we even to suspect such a deficiency in God?”<sup>108</sup>

In summary, the contemporary arguments showing the necessary antithesis of faith and certainty apply only to a naturalistic interpretation of faith, and are irrelevant to the Reformers’ supernatural interpretation of faith by revelation. Reformation faith is therefore not necessarily uncertain. The Reformers furthermore argued that faith is certain, and necessarily so, given God’s character: it is necessary that God reveal Himself, and it is necessary that God’s self-revelation leads to true belief.

#### **5.4 Ineffable meaning**

Hume stated that the only meaningful things are statements which could be traced to reason or observation. It has been shown that, allowing for revelation as a way of knowing, it is possible to have meaningful statements which are not traceable to reason or observation. We now turn to Wittgenstein’s restriction on meaning: that the only meaningful things are statements.

Wittgenstein stated that meaning was a communal activity: meaning happens between people. There is not – there cannot be – any such thing as a “private language”, the words of which “refer to what can only be known to the person speaking; to his immediate, private, sensations. So another person cannot understand the language.”<sup>109</sup> In the same vein, the modern worldview requires things to be demonstrable: if I say “I am in pain” then modern science can measure my brain-wave patterns. And yet, one might think that there is some quality of pain which is not fully conveyed by a print-out of brain-wave patterns. A scream may better convey the visceral character of the experience. Still, there is a difference between, on the one hand, hearing someone scream as they are stabbed and, on the other, being stabbed. Nonetheless, Wittgenstein held that if there is any quality of ‘pain’ which cannot be communicated, then that quality is simply not meaningful. Given it is obviously impossible to know a thing which is meaningless, “It can’t be said of me at all... that I *know* I am in pain. What is it supposed to mean?”<sup>110</sup>

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<sup>107</sup> Arminius (1629/2005, 47).

<sup>108</sup> Ibid. (p.48).

<sup>109</sup> Wittgenstein (1953, §243). See Candlish and Wrisley (2012) for a discussion of the issues.

<sup>110</sup> Wittgenstein (1953, §246).

The epistemological context of the reformation did not accept this reasoning. Direct experiences such as pain were considered to be meaningful. Arguably, they were the most meaningful experiences and most definite knowledge one could have.<sup>111</sup> Descartes, for example, knew that he existed.<sup>112</sup> He was incorrigibly sure. For him to doubt for an instant that he existed would raise the question, “who is doing the doubting?” The force of such knowledge, however, is necessarily internal: Descartes knew he existed, but the method by which he knew it could not be used to demonstrate the fact to anyone else.

With this in mind, we can return to the issue raised in Chapter 3 of the certainty with which Zwingli knew of his own election, while denying knowledge of others’ election:

“As, therefore, no one knows about anybody whether he believes, so no one knows whether any one’s sins have been remitted, save only the one who through the light and confidence of faith is sure of pardon...none obtains this remission except the believer and the elect. Since therefore the election and faith of other men are hidden from us, however much the Spirit of the Lord makes us sure of our own faith and election, it is also hidden from us whether another man’s sins have been remitted.”<sup>113</sup>

Descartes claimed to be certain that he was thinking, while at the same time being unable to prove to anyone else that he was thinking. Zwingli claimed to be certain that he was saved, while at the same time being unable to prove to anyone else that he was saved. Wittgenstein claimed that if he could not demonstrate that he was thinking, then thinking was not a meaningful notion.

## 5.5 Summary

During the reformation, faith was not viewed as being some watered down version of knowledge to be subsumed under reason and observation. Rather it was seen as being a way of knowing in its own right, alongside – or even superior to – reason and observation. Faith, coming only from divine revelation, was seen as being supernatural from beginning to end, and as such avoided the limitations of natural knowledge. Being communicated directly to the believer by God, who by his nature is incapable of deceit, knowledge obtained by revelation was necessarily infallibly correct. However, while the individual believer could be objectively certain that their beliefs

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<sup>111</sup> Schreiner (2011, 15-23).

<sup>112</sup> Descartes (1637, part IV).

<sup>113</sup> Zwingli (1536, chap. VIII).

were correct, there was no way for a person to demonstrate or communicate the surety of their belief to anyone else.

The interpretation of Hebrews 11 thus had an entirely different complexion. Faith *is* the evidence of things unseen. Indeed, faith is the best possible evidence. The evidence of reason and the evidence of observation can fail, but faith cannot. The testimony of man could deceive the believer, but the need to know by faith drives the believer back to Jesus alone, the only author and finisher of our faith.

## Chapter 6: Considering the Options

Chapters 2 and 3 demonstrated that the view of faith generally adopted in contemporary discussions about science and religion is radically different from the view historically adopted by the Protestant Reformers. Chapters 4 and 5 identified a number of the assumptions underlying each of the worldviews which lead to these differences. The two views are clearly incompatible, and a simplistic response may be to insist that one chooses between them. Rather than jump too hastily to such a dichotomy, this chapter seeks to examine whether it really is an all-or-nothing choice. I shall argue that there are several distinct facets of the differences between the views. Laying out what each of these is, I shall consider their interdependencies, and explain why I select particular options. The view of faith thus derived, which hopefully takes the best aspects from both the contemporary and reformation view, will be used to inform the concluding discussion of science and religion in Chapter 7.

### 6.1 Natural / supernatural knowledge

The clearest difference between the two views is that the reformation view of faith accepted revelation (which permitted faith) as an entirely legitimate and independent source of knowledge alongside rationality (which permitted reason) and the senses (which permitted observation). By contrast the contemporary view permits only reason and observation, subsuming faith under these categories. Why did this shift come about, and is it a shift that Christians should accept?

The reformation stood at a turning point in western history. Occupying what could be called the ‘early modern’ era, straddling medievalism on the one side, and the modernism of the subsequent enlightenment era on the other. With the rise of modernism and the enlightenment the very grounds of discussion shifted. “That which has essentially defined the modern era was the belief that it could base itself on human self-assertion rather than divine intervention or dispensation.”<sup>114</sup> With this realisation, the issue is thrown into sharp relief: if faith comes from revelation, and if revelation comes from God, and if God has no place in the modern world, then faith and revelation must go. If the very concept of ‘a higher power’ is simply not acceptable, then ‘revelation from a higher power’ is ruled out of court. Polanyi identifies this key shift when

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<sup>114</sup> Schreiner (2011, 4).

he noted that, during the modern era, “faith declined and demonstrable knowledge gained superiority over it... Belief here is no longer a higher power that reveals to us knowledge lying beyond the range of observation and reason, but a mere personal acceptance which falls short of empirical and rational demonstrability.”<sup>115</sup> It is thus clear that the subsumption of faith under reason and observation had nothing to do with an improved understanding of Christianity and the Bible, and everything to do with enlightenment naturalism. Nonetheless, contemporary evangelical Christians have tacitly imported these naturalistic categories.

To be clear on what I mean by this, I must stress that writers whom I have considered to represent the contemporary Evangelical position, such as C.S. Lewis, Alister McGrath and John Lennox, do not generally adopt a naturalistic view of things. They accept that God can and does work miraculously. They assume, however, that there is no supernatural aspect to knowledge: our knowledge of events, even of supernatural events, is natural knowledge. Recall C.S. Lewis: “Every event which might be claimed to be a miracle is, in the last resort, something presented to our senses, something seen, heard, touched, smelled or tasted.”<sup>116</sup> Miracles – on this view – are external to us; they do not happen within our heads. All statements about knowledge of God, miracles, faith, belief, and certainty must then be understood and made to be meaningful within a naturalistic epistemological framework.

The reformation view that there is a supernatural aspect to knowledge shows that the naturalistic assumption is not necessary. There is little support for the naturalistic view throughout the history of Christianity, from Augustin and Aquinas, to Van Til and Plantinga. Once the naturalistic assumption is explicitly highlighted, it is also difficult to find Biblical support for the idea that God should be excluded from our knowledge. Quite the contrary: the Bible clearly speaks of a supernatural mode of knowing: “The natural man does not receive the things of the Spirit of God... nor can he know them, because they are *spiritually discerned*.” [1 Cor. 2:14.] And again, “We have received... the *Spirit* who is from God, *that we might know* the things that have been freely given to us by God.” [1 Cor. 2:12.]

It seems that the naturalistic view arrived with enlightenment humanism, and has little place in Christianity. For the discussion that follows, I shall therefore adopt a view that faith by supernatural revelation is an acceptable form of knowledge, which stands alongside but independent of reason and observation.

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<sup>115</sup> Polanyi (1958, 266).

<sup>116</sup> Lewis (2002, 1).

Having chosen this option, there are two concerns which should be addressed. Firstly, adopting this understanding of faith does not negate the many important insights of recent times that science and some aspects of religion require a reasonable belief, without conclusive proof, where the individual lives their life as though what they believe were true. These insights, broadly speaking, still stand. However, such a reasonable belief, important though it is, should not be conflated with faith.

Secondly, such a view of faith seems to walk into new atheist accusations that “Faith... does not depend on rational justification.”<sup>117</sup> It is guilty as charged. This does not, however, mean that faith drags us into unthinking unreason as the new atheists fear. This can be seen in that observation (like faith) is independent of reason, and does not – cannot – depend on rational justification. Putting my hand in a flame I make an observation: HOT. As soon as I attempt to justify this by rational argument (perhaps by talking about neurons and qualia) I am no longer talking about observation but about reason. It is permissible to give reasons, but I cannot say that they are observations. By the same token, faith does not depend on reason. It is often good to use faith and reason together, as we observation and reason together, but they do not depend on each other. Rather than reinventing the wheel, the uses and even necessity of reason in an epistemology where faith and reason are independent, is excellently laid out by Aquinas.<sup>118</sup>

## **6.2 The character of God**

If we reject naturalistic epistemological assumptions it is not automatically required that we adopt the reformation view of the certainty of faith. Naturalism is sufficient, but not necessary, for uncertainty. In Chapter 5 the argument in favour of certainty (based on God’s character) is entirely separate from the argument against uncertainty (based on the supernatural nature of revelation). There are three options which might be considered:

- Despite faith not being limited by the same restrictions as reason and observation, there are other limitations (as yet unspecified) which prevent revealed knowledge from being certain knowledge.

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<sup>117</sup> Dawkins (2007, 45).

<sup>118</sup> Aquinas (1264, chap. III-VIII). If the publication date were not known, one might imagine this text was a rebuttal of Dawkins (2007).

- Faith is not limited to being uncertain, and God could provide certainty. However, there are at least some occasions when He does not provide certainty, and this is perfectly in keeping with His character.
- Faith is not limited to being uncertain, and God could provide certainty. Moreover, He does provide certainty to those who are saved.

Accepting the third view would entail the fact that I am not saved, and neither was C.S. Lewis. Zwingli may have been so bold, but I confess I do not find that conclusion easy to accept. There exist a variety of supposedly watertight arguments both for and against necessary certainty.<sup>119</sup> However, for the sake of this thesis, I shall simply say that while I cannot rule out the third option, I shall concentrate on the first two.<sup>120</sup> I shall remain agnostic regarding which of the first two might be correct, and say simply that God does not necessarily provide certainty.

### **6.3 Demonstrable / indemonstrable knowledge**

Polanyi has argued convincingly for the validity of personal (indemonstrable) knowledge in natural endeavours.<sup>121</sup> This is already a powerful argument for its admissibility in matters religious. Additionally, there is further reason to accept the (natural) indemonstrability of knowledge obtained by (supernatural) revelation.

Accepting, for the sake of argument, that meaning is created between individuals, and so there is nothing meaningful which is knowable by only a single individual. There is a naturalistic assumption implicit in Wittgenstein's argument against a personal language which "another *person* cannot understand."<sup>122</sup> If God can communicate directly with an individual person then there are two individuals involved in the communication act, despite there only being one person involved. Consider that "the Holy Spirit Himself makes intercession for us with groanings which cannot be uttered." [Rom 8:26.] Despite the unutterability of the communication act, the fact that two individuals (if not two persons) were involved undercuts much of the no-personal-language argument.

There are some things (such as the hotness of flames) which can be discovered by the senses, but not by reason. There are other things (such as the forgiveness of sins) which can be

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<sup>119</sup> Several sides of this are discussed by Schreiner (2011).

<sup>120</sup> Ironically, the reformers believed it was possible to be certain, and they were certain of this; I believe it is not possible to be certain and, being consistent, I must accept I could be wrong in this belief.

<sup>121</sup> Polanyi (1958).

<sup>122</sup> Wittgenstein (1953, §243), emphasis mine.

learned by revelation, but not by the senses. If God can speak to a person by supernatural revelation, but people can only speak to each other by natural means, then any knowledge which can only be conveyed by supernatural means can only be conveyed by God. It is necessarily the case that one person cannot demonstrate such knowledge to another. Given that it is “The Spirit Himself [that] bears witness with our spirit that we are children of God,” [Rom 8:16.] it should be expected that there are some things which are known by faith which are not demonstrable. This is the essence of Zwingli’s argument that “The election and faith of other men are hidden from us.”<sup>123</sup>

For the discussion that follows, I shall therefore adopt a view that knowledge which is not demonstrable to another human being should not, for that reason, be rejected as being not meaningful or not proper knowledge.

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<sup>123</sup> Zwingli (1536, chap. VIII).

## Chapter 7: Where Now for Science and Religion?

In the ‘science and religion wars’ new atheists such as Richard Dawkins claim that science is, and for ever must be, opposed to religion.<sup>124</sup> Science, through reason and sceptical enquiry, arrives at demonstrable – albeit provisional – answers. Religion, by contrast, ignores reason and any ‘facts’ that would get in the way, clinging instead to that answers it knows by faith. Such answers are held unquestioningly, despite being patently indemonstrable. There can, he argues, never be agreement between two such polar opposites.<sup>125</sup> Despite such assertions, many participants in the discussions about the relationship between science and religion see no such antagonism. Indeed, some go so far as to say that, epistemologically speaking, the methods of science and the methods of religion are all but indistinguishable. Both religion and science, they argue, require faith. The war is apparently over.

In this thesis I have argued that the view of faith considered in much of the contemporary discussion about science and religion is radically at odds with the historical Christian view of faith. The contemporary scientific and religious epistemologies only look so similar because both of them have taken on the same naturalistic assumptions. In as much as those assumptions are unbiblical I have argued that evangelical Christianity must rethink a number of aspects of what it means when it speaks of ‘faith’. If, under a naturalistic conception of faith, the war between science and religion seemed to be over, it is only natural to ask how the adoption of a supernatural conception of faith would impact this *détente*.

This chapter discusses several possible ways of viewing the relationship between science and Christianity once supernatural aspects of knowledge are considered. The most restrictive of these is methodological naturalism; the idea that, while we can know things supernaturally, such knowledge is inadmissible in the scientific process. This is followed by consideration of justificational naturalism; the idea that supernatural knowledge is admissible to science in the context of discovery, but must play no role in context of justification. Finally I wonder what supernatural science might look like; whether it is even meaningful to suggest that faith by revelation can stand alongside reason and observation as a part of the scientific process.

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<sup>124</sup> Dawkins (2012) is even more blunt about this than most new atheist writings.

<sup>125</sup> *Ibid.* (pp.12-32), particularly the section, “Science and the Supernatural: explanation and its enemy.”

## 7.1 Methodological naturalism

Accepting that it is possible to have supernaturally revealed knowledge, one option of relating science to religion is to say that science should simply ignore all such supernatural knowledge. In considering such methodological naturalism,<sup>126</sup> Alvin Plantinga conceives of science as involving a set of data, a theory, and an evidence base. Roughly speaking, the data set provides an explanandum, the theory provides the explanans, and the evidence base provides an additional set of beliefs to which one may appeal.<sup>127</sup> Methodological naturalism places constraints on each of these three aspects: In order to be considered scientific, the data set may not invoke God or supernatural agents; the parameters for a scientific theory are not to include reference to God or supernatural agents; and the evidence base of a scientific enquiry will not contain propositions obviously entailing the existence of God or supernatural agents. Additionally, under methodological naturalism, the data set, the theory and the evidence base cannot include or appeal to anything one knows or thinks one knows by revelation.<sup>128</sup>

Under such a system, “science neither denies nor opposes the supernatural, but ignores the supernatural for methodological reasons.”<sup>129</sup> Methodological naturalism definitely provides a possible demarcation of science, given the prospect of supernaturally revealed knowledge. In as much as it ignores the supernatural it also keeps science democratic: methodologically naturalistic science can be done equally well by Christians, atheists and Hindus. However, I suggest that Plantinga’s depiction of science as data, theory, and evidence base is over simplified. There is a richness to the scientific process to which Plantinga’s account does not do justice. Rather than ignoring the supernatural, a richer view of how science works provides significant opportunities for science to engage with, and even benefit from, the supernatural.

## 7.2 Justificational naturalism

Viewing science as an explanation of a data set, by a theory, with appeal to a particular evidence base is, admittedly, in line with how science is often presented. However, major strides have been

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<sup>126</sup> Plantinga (2011, 168-174).

<sup>127</sup> Plantinga (2011, 171) appeals to van Fraassen (2004) for this structure.

<sup>128</sup> It should be stressed, Plantinga holds that revelation is an acceptable form of knowledge, and one which cannot be subsumed under natural forms of knowledge such as observation and reason. Furthermore, he insists that people should pursue revealed knowledge. It is simply that such knowledge would not be called ‘scientific’, according to a methodological-naturalistic definition of science.

<sup>129</sup> Plantinga (2011, 170).

taken over the last half century to include the legitimate place of human passion in the scientific process.<sup>130</sup> While scientific papers attempt to justify their conclusions in an objective, rigorous, codified fashion, the process used to arrive at those conclusions is a long way from the sanitised reporting of the final paper.<sup>131</sup> The actual process by which scientists arrive at a particular set of beliefs is in fact, according to Polanyi, impossible to codify. Consequently, “We remain ever unable to say all that we know.”<sup>132</sup> Modern science, like modern theology, had long tried to conform to Wittgenstein’s insistence that only that which is speakable is permissible. The fact that there is an argument for a legitimate, and even necessary, place for the unspeakable in science should immediately give us pause for thought.

Justificational naturalism stipulates that the formalised arguments justifying a particular conclusion may appeal only to reason or observation. However, the process by which the scientist arrives at those beliefs may include such creative steps as gut-feelings, brizomancy, or prayer and fasting. Obviously, a scientific paper can never justify a claim using statements such as “It just felt right, so I tried it.” This, however, is not to say that such a procedure does not have a place in the fullness of the scientific endeavour. The use of (natural) inspiration in science is entirely acceptable. The most famous example of this is Kekulé’s discovery of benzene’s structure.<sup>133</sup> A dream cannot replace – or even stand alongside – reason and observation when justifying one’s beliefs in a scientific journal, but it should not be discounted from being a part of the scientific process. Similarly, justificational naturalism asserts that, while a scientific paper cannot justify a claim using statements such as “God told me,” supernatural revelation may nonetheless have a legitimate role in the fullness of the scientific endeavour. Under this view it is acceptable, even advisable, for a scientist who is a Christian to enter the lab each morning and pray over his apparatus, entreating God to aid him in finding the correct result, and remaining attentive throughout the day to the prompting of the Spirit.

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<sup>130</sup> This arguably all started with Polanyi (1958). Interestingly, van Fraassen (2004), whose description of science Plantinga (2011, 171) claims to follow, is well aware of these additional aspects: van Fraassen highlights and champions the role of emotion in the epistemic process (2004, 108).

<sup>131</sup> Whether there is, and whether there should be, a distinction between the context of discovery and the context of justification in science is hotly debated (Schickore, 2014). For the sake of this section it is assumed that there are particular beliefs at which scientists arrive, these beliefs are then explained and justified to the wider community, and the wider community may or may not adopt such beliefs. The rules governing the process by which scientists arrive at their beliefs are not the same as the rules governing the arguments used to justify those beliefs in scientific publications. The justifications provided in scientific publications also may not tell the whole story about what ultimately convinces the scientific community at large to adopt particular beliefs.

<sup>132</sup> Polanyi (1958, 95).

<sup>133</sup> Rothenberg (1995).

That justificational naturalism is a reasonable position can be seen by analogy with mathematics, which makes a similar argument in excluding observation from justifications: while reason and observation are both perfectly acceptable ways of knowing, the mathematician will endeavour to see what can be justified using reason alone. A mathematician may know by observation that  $1+1=2$  but, within a work environment, he will not consider observation to be an acceptable justification, and will go to great lengths to demonstrate it by pure reason.<sup>134</sup> There may be propositions which have not been, or cannot be, demonstrated by reason alone (such as that fire is hot) and there is no hypocrisy in a mathematician accepting such propositions. He might act in accordance with the acceptance of such propositions both inside and outside of a work environment.<sup>135</sup> He might even use observation to inspire the direction of his mathematics, maybe seeing a pineapple and then researching Fibonacci numbers. However, in justifying his mathematical conclusions he would entirely ignore observation as an acceptable form of argument; the instant he did otherwise he would cease to be a mathematician and become a scientist.

By analogy, while reason, observation and faith are all perfectly acceptable ways of knowing, the scientist will endeavour to see what can be justified by reason and observation alone. A scientist may know by revelation that in the beginning God created the heavens and the earth but, within a work environment, he will not consider faith to be an acceptable justification, and will go to great lengths to investigate what happened in the beginning purely by reason and observation.<sup>136</sup> There may be propositions which have not been, or cannot be, demonstrated by reason and observation (such as that murder is morally wrong) and there is no hypocrisy in a scientist accepting such propositions. He might act in accordance with the acceptance of such propositions both inside and outside the work environment.<sup>137</sup> He might even use revelation to inspire the direction of his science, maybe reading about man's responsibility as a steward of creation and then researching climate change. However, in justifying his conclusions he would

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<sup>134</sup>Whitehead and Russell made it to p.86 of Vol. II of the *Principia* (1912) before being able to demonstrate that  $1+1=2$ .

<sup>135</sup> For example, if his desk was on fire.

<sup>136</sup> The literature on science and the creation of the universe is vast. Here it is sufficient to note that much early work on big-bang cosmology was done by Georges Lemaître, who was both a physicist and a Roman Catholic priest. Steady-state theory (which did not require the universe to have a beginning) was seen as a theory more conducive to atheism. It is too quickly forgotten that until the late 1960s, big-bang cosmology was widely derided as an intrusion of religion into science (Appolloni, 2011).

<sup>137</sup> For example, if his students started killing each.

entirely ignore faith as an acceptable form of argument; the instant he did otherwise he would cease to be a scientist and become a theologian.<sup>138</sup>

Justificational naturalism allows science to benefit from supernatural knowledge, but it does not require supernatural knowledge. It therefore leaves science open to all. Some individuals may have a surprisingly effective subconscious, and regularly dream of the solutions to scientific problems. Others may receive divine revelation regarding those solutions. These individuals can take advantage of such abilities. Those who neither dream dreams nor see visions are by no means excluded from the scientific process, but will have to rely on plodding hard graft.

### 7.3 Supernatural science

I have argued that methodological naturalism is more restrictive than current scientific practice requires. I have also argued that justificational naturalism would fit rather comfortably within the current scientific process. I shall now mention an option which would be almost universally rejected under the present understanding of science, as it is insufficiently restrictive. However, realizing that science can and does regularly reinvent itself, the ideas presented here need not necessarily ruled out of a possible future for science.

John Polkinghorne claims that, “To be concerned with questions of God is to be concerned with the totality of what is real.”<sup>139</sup> Richard Dawkins would like to define science as “the honest and systematic endeavor to find out the truth about the real world.”<sup>140</sup> If one were to accept with Polkinghorne that the supernatural realm were real,<sup>141</sup> it would then, by Dawkins’ definition, fall under the remit of science. I shall sketch here one possibility of what fully embracing a supernatural epistemology may mean for science.

Current practice tends to distinguish between theorists (who focus mainly on reason and do not – in the first instance – require experimental support for their work) and experimentalists (who focus mainly on observation and do not – in the first instance – require theoretical support for their work). Historically, modern experimental science was arguably an innovation related to voluntarist theology.<sup>142</sup> Simply put, if God was bound by rationality when he made the laws of

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<sup>138</sup> It is, unfortunately, only too common for theologians to also be naturalists. For lack of a better word it is to be assumed here that ‘theologian’ here connotes religious conviction.

<sup>139</sup> Polkinghorne (1991, 75).

<sup>140</sup> Dawkins (2007, 405).

<sup>141</sup> Science is highly adept at changing its mind over the ontological status of ideas, be they waves or wavefunctions. Contrary to what Dawkins claims (2012, 19; 256), science is not a priori required to reject the supernatural as unreal.

<sup>142</sup> Henry (2011).

nature (which intellectualists such as Aquinas claimed he was) then one could save the expense of experimentation by rationally working out what a rational God must have done. Against this view, if God could do whatever He wanted (which voluntarists such as Scotus, Bacon and Newton claimed he could) then He was not obliged to make natural law follow human rationality. Consequently, the only way to find out what He had actually done was to go and look. This much is to say that entirely new ways of doing science have arisen from particular theological understandings of knowledge. If the voluntarists are right, however, and God is not bound by human rationality, then the “unreasonable effectiveness of mathematics in the natural sciences”<sup>143</sup> is something of a mystery. Except for the brute observation that they do seem to help, it is unclear *why* theorists should be any use at all in finding out the truth about the real world. Pragmatically, however, theorists are accepted as scientists because they seem to be useful.<sup>144</sup>

Putting these ideas together, there are several points worth noting. Firstly, there are three possibly ways of knowing: reason, observation, and faith. Secondly, given we would like to find out the truth about the real world, it would seem to make sense to use all of the means at our disposal. Thirdly, there is historical precedent for theological considerations causing an entirely new ways of knowing to be added to the scientists’ armory. Finally, at heart, scientists are pragmatists, and will use whatever works. Accepting all of this, one may wonder if science could – indeed, should – include ‘revelationists’ who work alongside theorists and experimentalists. For this to happen it would need to be demonstrated that, of the people who claim to receive ideas by revelation, at least some of them have ideas which are sufficiently interesting with sufficient regularity that such individuals are worth having around. This is by no means a given, but may be an interesting direction for future consideration.

The future may be open to the situation in which theory, experiment, and revelation can all contribute to scientific knowledge. The present – blinkered as it is by Enlightenment thinking – rejects the possibility. It is interesting to note what scholasticism thought, before the intervention of enlightenment naturalism: Aquinas stated,

“Sciences are differentiated according to the various means through which knowledge is obtained. For the astronomer and the physicist both may prove the same conclusion: that the earth, for instance, is round: the astronomer by means of mathematics [i.e. reason], but the physicist by means of matter itself [i.e.

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<sup>143</sup> Wigner (1960).

<sup>144</sup> For the importance of results-based pragmatism in science, see Laudan (1978).

observation]. Hence there is no reason why those things which may be learned from philosophical science, so far as they can be known by natural reason, may not also be taught us by another science so far as they fall within revelation.”<sup>145</sup>

The position of ‘revelationist’ in supernatural science would not only allow science to benefit from supernatural knowledge, but would *require* supernatural knowledge. Assuming that divine revelation is a resource open to Christians, and not open to atheists and Hindus, it may be objected that supernatural science destroys the egalitarianism usually displayed by science. This objection has some warrant but, if revelation proved to ultimately be useful, is not likely to be a fundamental obstacle. The existence of people with acalculia is not seen as a reason to proscribe theoretical physics. Similarly, the fact that certain people are unable to receive revelation should not proscribe its use by those who can.

#### **7.4 The relationship of science to religion**

The three positions laid out here – of methodological naturalism, justificational naturalism and supernatural science – have in common the view that revelation is a valid way of knowing something, alongside reason and observation. Whichever of these options one prefers, or if yet another option should be found, the addition of revelation to the epistemological mix, such that faith is no longer subsumed under reason and observation, brings with it a fundamental transformation in the relationship between science and religion.<sup>146</sup>

Under enlightenment naturalism, there exists a set of claims which are meaningful. They are meaningful because they can be traced to reason or observation. Science, whose purview is reason and observation, has within its remit all meaningful statements. Religious statements could fall into two categories: meaningless or meaningful. The meaningless statements can instantly be dispensed with. The meaningful religious statements (which one could permit as the purview of theology) are a subset of all meaningful statements. This situation is illustrated by the Venn diagram in Fig. 1. By way of examples, the statement “The purpose of man is to fear God and keep His commandments” is meaningless; the statement “Prayer for the sick results in

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<sup>145</sup> Aquinas (1274b, part 1, Q1, A1).

<sup>146</sup> The argument of this section is inspired by Barth’s conception of the relationship between general hermeneutics and biblical hermeneutics, as recounted in Vanhoozer (2005).

healings which cannot currently be explained by medical science” is meaningful, and both religious and scientific; the statement “Momentum is conserved” is meaningful and scientific.<sup>147</sup>

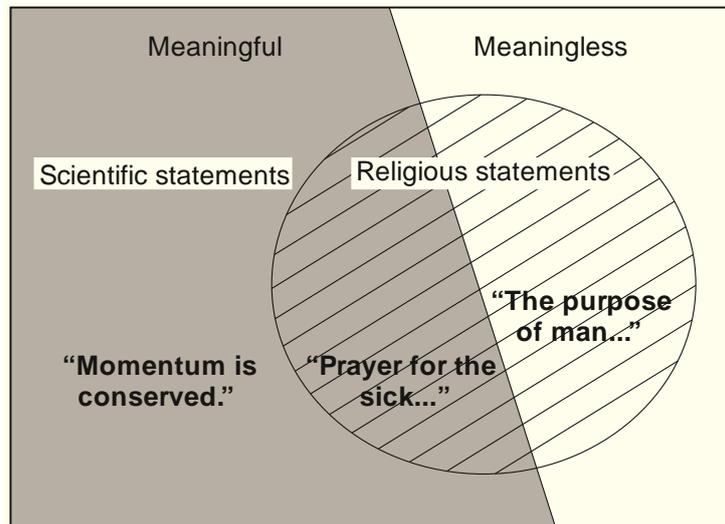


Fig 1. Enlightenment view of scientific and religious knowledge. Scientific statements (traceable to reason and observation) are coextensive with meaningful statements (grey area). Religious statements (hatched area) may or may not be meaningful. Meaningful religious statements form a subset of scientific statements.

The arguments laid out in this thesis change this situation somewhat. Naturalistic scientific knowledge has reasoned evidence and observational evidence available to it. Religious knowledge has reasoned evidence and observational evidence available to it, but it also has the evidence of faith available to it. This situation is illustrated in Fig. 2. For the sake of keeping the diagram simple, the example sentences have been assigned to one category each. It is of course possible to know by revelation that prayer is effective [Jam. 5:16]. Should God be so inclined, it is presumably possible to also know about momentum conservation by revelation. In any event, it is evident that religious knowledge cannot be a subset of scientific knowledge. Rather, scientific knowledge is a subset of religious knowledge.<sup>148</sup>

<sup>147</sup> My summary of the situation closely parallels one laid out by Aquinas, which he set up in order to knock down: “Man should not seek to know what is above reason... But whatever is not above reason is fully treated of in philosophical science... everything that is, is treated of in philosophical science – even God Himself; so that there is a part of [science] called theology.” (1274b, part 1, Q1, A1, Objections 1 and 2). Under the term “reason” here Aquinas denotes what I have called ‘reason and observation.’

<sup>148</sup> Once again, Aquinas got there ahead of me. Having set up his prescient summary of the enlightenment, he continued: “On the contrary... ‘All Scripture, inspired of God is profitable...’ Now Scripture, inspired of God, is no part of philosophical science, which has been built up by human reason. Therefore it is useful that... besides

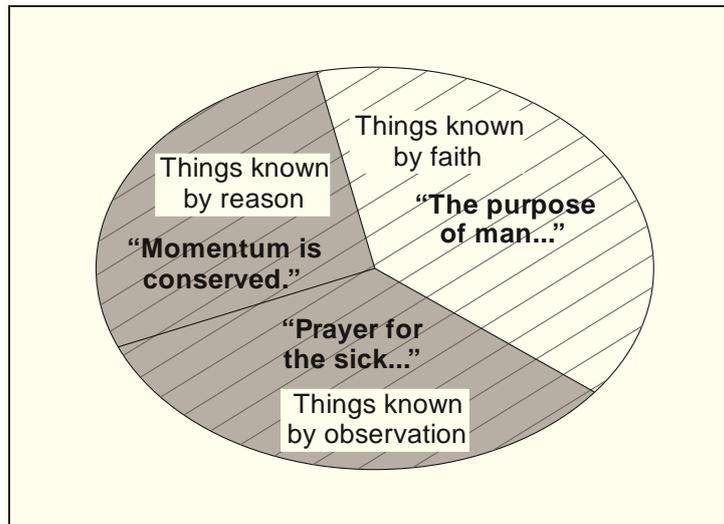


Fig 2. Conception of scientific and religious knowledge, allowing for supernatural revelation as a legitimate source of knowledge. Religious knowledge can be obtained via reason, observation and faith (hatched area). Assuming methodological naturalism, scientific knowledge can be obtained by reason and observation. Natural scientific knowledge therefore forms a subset of religious knowledge.

## 7.5 Summary

Goaded by atheist taunts that faith conflicts with science, Christians have gone to great lengths to show that science is compatible with Christian faith. Over the past half a century, scientific and religious knowledge have seemed to edge closer until there was a genuine concord between their methods. I have claimed that this apparent concord has come at the expense of losing touch with the historic and biblical view of faith. There may consequently be concerns that Dawkins was right all along and that science really is at odds with Christian faith.

Taking a supernatural view of faith, I have laid out three possible demarcations of science for which science and religion are not in conflict. Methodological naturalism plays it safe, and is arguably too conservative. Justificational naturalism fits comfortably within the current understanding of how science works, and still allows scientific practice to benefit from revealed knowledge. Supernatural science is a highly speculative vision of what a future integrated scientific paradigm might look like. Against the enlightenment view that theology is a subordinated to science, or the contemporary view that science and theology are on an equal

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philosophical science built up by reason, there should be a sacred science learned through revelation.” (1274b, part 1, Q1, A1).

footing, all three demarcations revive the scholastic position of theology as the queen of the sciences.

## Chapter 8: Conclusion

Faith is often portrayed in contemporary discussions as being necessarily uncertain. If we had actual proof then faith would turn into knowledge, but until we have proper evidence we have to accept things ‘on faith.’ This seems to be at odds with what the Reformers wrote. The dogmatic nature of the Reformers’ statements, and the certainty which they claimed to have, seem unbecoming of men of ‘faith.’ This thesis has argued that this is not a superficial disagreement, but rather goes to the core of what it means to know something by faith.

In contemporary discussions about faith, even when the various parties disagree, they disagree about where, on some sliding scale, the correct answer lies: Can one have faith in the presence of complete evidence, some evidence, or no evidence? Is faith completely rational, somewhat rational, or completely irrational? Richard Dawkins and Alister McGrath might come up with different answers, but at least they agree on the question. The reformation view of faith is practically orthogonal to the entire contemporary debate. One cannot ask how much evidence is needed for faith, because faith *is* evidence. One cannot ask if faith is rational or irrational, because faith is entirely independent of rationality.

This enables us to say whether the view of faith considered in contemporary discussions about science and religion is compatible with the historical reformation view of faith: It is not. This incompatibility is fundamental. The two views don’t simply disagree on the exact rules of the game; they disagree about which game they are playing. The contemporary view sees faith as being the best we can do in the circumstances, when proper evidence from reason and observation is lacking. The reformation view sees faith as being a supernatural source of knowledge in its own right, standing alongside, independent of, and in some respects superior to reason or observation.

This supernatural view transforms the relationship between science and Christianity. It is no longer the case that religious knowledge is similar to scientific knowledge, but lacking something (namely, hard evidence). Rather, scientific knowledge is similar to religious knowledge, but lacking something (namely, revelation). Theology’s title of ‘queen of the sciences’ then ceases to be a quaint throw-back to more innocent times when science was young,

and becomes instead a very sensible moniker for the fullness of knowledge that religion can attain.

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