Science and Religion:
A Conflict of Methods

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Abstract

There is an epistemological conflict between religion and science. While the claims of science are justified using epistemic methods whose reliability has been corroborated by other people and by other methods, the claims of religion are not justified in the same way. Different methods are used. This thesis offers both a comprehensive description of the distinctive epistemic methods of religion and a philosophical appraisal of the claim that such methods are knowledge-conferring. The methods explored are various and care has been taken to sample a broad range of religious cultures. It is found that the same religious methods, when used to answer the same questions, generate different answers for different practitioners. Additionally, the results of religious methods fail to agree with the results of other epistemic methods when employed independently. This lack of independent agreement is the primary reason for the exclusion of religious methods from science.

It is further argued that (a) this lack of agreement is evidence that religious methods are unreliable, and (b) the agreement generated by scientific methods is evidence for their reliability.
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In 2013, I approached Greg Dawes at the AAPNZ Conference at the University of Auckland. ‘What’s wrong with creationism?’ I asked him. ‘Is it untestable in principle or has it simply failed too many tests?’ I can’t remember Greg’s exact reply, but this thesis was the result. The question I asked him is no longer the primary concern of this thesis, but it proved to be a good place to start and Greg proved to be the right person to ask. It has been a joy and a treasure to work with him and to learn from his example. Greg’s dutiful work in corralling my ideas cannot be overstated.

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To the Memory

of JOSH PARSONS

(1973—2017)
Introduction

‘What has Athens to do with Jerusalem? What agreement is there between the Academy and the Church?’ – Tertullian, De Praescriptione Haereticorum

There is a conflict between religion and science. It is not a conflict between two communities using guns and missiles, but a conflict between two communities using distinct sets of epistemic methods. Religion and science approach the problem of human knowledge very differently. Each community, in making use of very different tools, arrives at very different answers to the same questions. Whereas the epistemic methods of science are reliable, the epistemic methods of religion have not yet been shown to be so. If it is true that we ought to use only reliable methods to justify our beliefs about the world, then we currently have no justification for taking up religious methods in this role. This thesis has three central aims. The first aim is to outline the nature of the conflict and to show that it is the result of differences in methodology. The second aim is to provide something like a taxonomy of religious epistemic methods. The last aim is twofold: to give a philosophical account of the reliability of scientific methods and to show that we do not have sufficient reason to believe that any religious methods are reliable.

Traditionally, supporters of the thesis that there is a conflict between religion and science have characterized the disharmony as one standing between faith and reason. These terms are unfortunately ambiguous and so have the tendency to mislead. Sometimes, ‘faith’ is understood to mean belief in the deliverances of supernatural testimony, while reason is understood as the exercise of our natural cognitive faculties, such as perception, deduction and induction. Other times, the ‘faith vs. reason’ thesis is taken as implying that there is a conflict between religious
dogmatism and scientific fallibilism. However the terms are usually defined, this
general approach is correct to the degree that it characterizes the conflict as an
epistemological one, but incorrect to the degree that it limits the scope of the dispute
to what are apparently Abrahamic or Western religious phenomena. The conflict
between religion and science is not limited to the Christian, or Abrahamic, notions
of faith in divine revelation on the one hand and the secular methods of Western
science on the other. The conflict is not historically limited to the scientific revolution
of seventeenth century Europe. Indeed, the Tungus Shaman who seeks revelatory
visions through the ingestion of psilocybin is no less a part of the conflict than the
young Earth creationist who believes that the remains of Noah’s Ark are currently
rotting on Mt. Ararat. Certainly, the young Earth creationist grounds her knowledge
in an act of faith, but does the Shaman also make use of this notion of faith? It would
be an odd thing to say that the Shaman also believes by faith that the spirit guides
encountered during the psychedelic vision have prophesied a flood. This is not faith
in any traditional sense of the word. While ‘faith’ may be a contestable term, it is not
so elastic as to extend naturally to the deliberate ingestion of magic mushrooms by
non-Christian Siberian shamans for the purposes of interacting with
anthropomorphic spirit guides who can tell the future. No. This is quite unlike our
ordinary notion of faith.

While it may be true, historically speaking, that the conflict finds its clearest
manifestation in the Western European case studies of, say, the Galileo affair or the
condemnation of 1277, the epistemological conflict runs deeper than either of these
episodes might suggest. The conflict between science and religion is not a conflict
that stands merely between reason and faith, but between, in the most general sense, the methods of science and the methods of religion.

‘Now,’ the reader might be wondering, ‘what would motivate the thought that there is any conflict in the first place?’ Perhaps a good place to start is the observation that everyday religious folk often make empirical claims which appear specious to secular folk. These claims either flatly contradict what science and common sense tell us is the case, or they are extremely unlikely according to science and common sense. For an example of a claim that contradicts the results of science, evangelical young Earth creationists argue that the universe is about 6000 years old. As is well known, geologists and physicists disagree strongly with such a recent estimate of the universe’s age, and collectively argue instead that the universe must be well over 10 billion years old. For an example of a religious claim with merely a very low probability, it is an orthodox Islamic doctrine that the Mahdi will be sent to Earth to defeat all evil shortly before the Day of Judgment. This prophecy is not in any clear sense contradicted by our existing scientific knowledge, or by common sense, or by historical evidence. It is simply an improbable claim, having virtually no independent support or precedent unless one accepts the tenets of Islam and the associated background knowledge that comes with that acceptance. Secular folk have no reason to think that the Mahdi is coming any time soon. So far as they are concerned, religion and science just fail to see things straight.

Now, there are numerous other examples of religious claims conflicting with scientific ones; too many to list. Altogether, they show that religion and science often get into a state of disagreement. Secular scientists and religious believers often fail to converge on the same answers to the same questions. This lack of agreement would
not be a problem if religion and science sought to answer different questions. But if we assume that religion and science are alternative ways of discovering truths about the natural world, and if we assume that there are not two contrary truths, one religious and one secular, but only one, then it seems we are left with three options: either science is unreliable, or religion is unreliable, or both are. At least one party has gone wrong somewhere, so which party is the culprit?

It is hardly a secret that most philosophers assume that religion is the culprit. Science has a pretty good epistemic reputation and, moreover, the world’s religions are not only in conflict with science, but also with each other. Different religious traditions make different claims about the way the world is, has been and will be. And while it is not in dispute that disagreement in science is commonplace, scientists nevertheless often agree on what it would take to settle their disagreement. A central task in science is to seek out those observations that would be relevant to settling such disputes. There is often a core of scientific agreement that is used as common ground from which to build bridges between disputants. There are mutually acknowledged methods of dispute resolution. In contrast, religious doctrines are as numerous and diverse as the religious cultures from which they spring. There is no widely accepted method for settling religious disputes. The empirical claims of all the world’s religions have almost no universally agreed content, and any common content between different religions can often be traced to a common cultural or historical source. To give an example, Jews, Muslims and Christians share a common mythology surrounding the Angel Gabriel, yet this is no surprise given Christianity’s origin as a Messianic sect of Judaism, and given that the Qur’an incorporates stories known from earlier Jewish and Christian sources. On the other hand, once religious
cultures have been isolated for hundreds, thousands or even tens of thousands of years, they are divergent in the extreme. One is hard pressed to find an analogue for the Australian Aborigine’s rainbow serpent in the pre-contact religious tradition of Easter Island.

Despite the diversity of religious opinion and despite the poor fit between the deliverances of religion with the deliverances of science, some mainstream philosophers (and plenty of pastors and parishioners) continue to argue that religion is a respectable way of coming to know facts about the natural world. Religion is, they say, a source of justified, true belief. How can the arguments of these (usually Christian) philosophers go forward in the face of this ongoing conflict with science? Given that religious claims often conflict with scientific claims, is it not thereby shown that religion is an unreliable source of empirical knowledge? One would think so, at least if one believed that science used only and all reliable epistemic methods.

Yet on the contrary, some philosophers, notably the so-called ‘reformed epistemologists’, turn the tables on the secular philosophers. ‘What’s so special,’ they ask, ‘about naturalistic science?’ After all, science relies in large part on intersubjective reports of human perception, and we rely on human perception, we are told, because beliefs derived from perception are simply basic. Perceptual beliefs are not warranted by any arguments, but by the perceptions themselves. We have no reason to accept the testimony of perception, but this is no blight on perception as a source of knowledge. Perception is still a warranted source of beliefs because it is, in some epistemically normative sense, an appropriate source. For instance, when I hear my cat purring, I naturally form a belief that my cat is purring, and this belief is justified by the perception itself. I do not deduce that my cat is purring. It is no
inference or argument. I simply hear the cat purring, a belief is formed, and *hey presto!* The belief is justified. Although my belief arises without the aid of any argument or deliberation, my belief is not without warrant. Perceptions are simply, in and of themselves, justifications for beliefs. They are appropriate knowledge sources.

This picture of human knowledge as resting on basic sources has worrying implications for the status of science *qua* privileged epistemological enterprise. If the astronomer notes that a pulsar has a pulse width of 0.04 seconds, and this is measured precisely by some scientific instrument, ultimately this measurement depends for its validity on the astronomer’s perception of the instrument. ‘Now what,’ the reformed epistemologist asks, ‘can justify this appeal to perception?’ If the measurement can only be established by perception, then since perception is not a rational or inferential process, but a basic one, science does not have any rational grounding. For the sceptic, this would show that science is ultimately an irrational enterprise. Science is grounded in perception, and we have no independent reason to take perception to be reliable. We are lost in a dangerous abyss, with the threat of relativism looming. But then, the foundationalist comes to the rescue. ‘Not all justification is inferential,’ he proclaims. ‘Some justification is non-inferential, and beliefs formed by perception are just like this.’ Perception is a *basic*, non-inferential belief-forming process. Perception can warrant some of our beliefs, despite our lacking any inferential justification for the beliefs formed.

If this picture of human knowledge is right, then a question naturally presents itself: is perception unique in having this special, warrant-conferring basicality? Or are there other non-inferential belief forming processes? If there are some, could not
these supply us with justified religious beliefs? Thus, the reformed epistemologist argues that religious belief may not be justified by any arguments either, but may arrive in the believer directly by way of religious experience. So, whereas perceptual experiences justify perceptual beliefs, religious experiences justify religious beliefs. And it follows that, ultimately, both religion and science are grounded in experiences for which we can provide no non-circular evidence of reliability.

Therefore, it is argued, there exists an epistemic parity between religious and scientific ways of knowing. The warrant conferred by the one activity is no different in quality to the warrant conferred by the other. Moreover, there is no higher authority to which we might appeal to show the superiority of one way of knowing over the other. We are in some sense wedded to our basic belief-forming practices. We use them, because we find that they are effective, but ultimately our opinion about their effectiveness is determined by evidence drawn from these very practices. This leads to an interesting problem: if neither the secular person nor the religious person ultimately has any independent justification for being secular or for being religious, then for what rational reason should anyone embrace a secular approach over a religious one? What evidence could we appeal to if we wanted to justify our preference for our chosen set of methods apart from evidence derived from our chosen set of methods? It would seem we were out of options. Moreover, if both religion and science are valid ways of knowing, grounded ultimately in personal experience, then why does the scientist eschew religious methods? If religious and scientific methods are equally warranted, then couldn’t religious methods be of some use to science? And shouldn’t the scientist embrace all warranted methods of inquiry? Why all this “secular chauvinism”? 

7
This line of argument for epistemic parity is, I believe, ultimately a failure. Contrary to what the reformed epistemologists say, there are non-circular justifications for the reliability of perception and other scientific methods that are not available for religious methods. One such justification runs that scientific methods are public, while religious methods are private. This public/private distinction may not appear to do much legwork towards showing that scientific methods are reliable while religious methods are not. Yet public methods are such that they generate agreement when applied to the same question by different agents in similar conditions. This success at generating intersubjective agreement is a marker of their reliability. In contrast, religious methods are private. When they are applied to the same question by different agents in similar conditions, they generate disagreement. This is a clue that religious methods are unreliable.

Furthermore, the various methods of science converge on the same answers to the same questions, while the various methods of religion fail to converge in the same way. The fact that various (independent) methods agree on the same result is all but miraculous unless we assume that there is some fact of the matter which the methods provide epistemic access to. This argument has been called the corroboration argument for scientific realism (Chakravartty 2011, §2.2). The thread of the corroboration argument can be traced patchily through the writings of Aristotle, Aquinas, Locke, Carnap, Reichenbach, Wesley Salmon and, more recently and explicitly, Ian Hacking. The existence of independent agreement between different methods is powerful evidence in favour of the reliability of those methods. Moreover, such evidence cannot be summoned for religious methods.
This thesis will argue for these conclusions over the course of its seven chapters. I begin by considering whether religion and science truly share any explanatory overlap. After all, if religions failed to make any knowledge claims about the world that might conflict with scientific claims, then my argument would fall at the first hurdle. A religion that made no claims about the world could not possibly contradict the results of science. It is imperative, then, to first discover whether the apparent knowledge claims of religion are considered to be genuine knowledge claims. Do religions really seek to tell us something about how the world is? Religions must make knowledge claims that conflict with scientific knowledge claims for any conflict argument to get off the ground. I assume from the outset that scientific explanations are not mere performances or rituals, but genuine attempts to account for empirical phenomena.

For any non-philosopher, it may seem strange to even conjecture that religions make no claims at all about matters of fact. But there are several philosophers, among them Wittgenstein, who argue that religious claims, while superficially resembling *bona fide* knowledge claims, are nothing of the sort. Religious language is part of a larger performative or symbolic activity that should not be mistaken as seeking to provide knowledge about the world. Religion is not “bad science”. Rather, religious activity satisfies a human need. It is an integral part of human behaviour. It is a cultural practice, fulfilling a human need for ritual; satisfying an urge, not for understanding, but for *meaning*. I find this account of religious language unconvincing, and I will argue that while religious ritual and practice are important aspects of religion, more often than not, rituals and practices are grounded in and inform claims about the way the world is.
Wittgenstein finds something of an ally in the biologist Stephen Jay Gould, who argues that scientific and religious explanations occupy distinct explanatory realms. Thus, although science and religion both seek to explain, they do not seek to explain the same things. The former seeks to explain the world around us by reference to natural law and causal mechanisms that have observational consequences, whereas the latter seeks to explain the purpose and value of human life. This thesis, dubbed NOMA (for ‘Non-Overlapping Magisteria’), has been picked up by theologians and scientists alike as a useful line of demarcation between science and religion. NOMA is found to be untenable on several points, the most important of which is that when religions make claims about matters of value, these are often inextricably grounded in what are thought to be facts about the nature of the world.

After having argued that religion and science share a common aim, I investigate whether the conflict between the two is one that science self-imposes. Is methodological naturalism the cause of the disagreement between religion and science? It has been argued that since science doesn’t let the supernatural through the door, science could never avoid a conflict with religion. Science arbitrarily rejects the supernatural from the get-go. So, one might ask, how could there be anything but conflict if the supernatural explanations of religion are never given a chance to compete with science on a level playing field? The idea is that methodological naturalism arbitrarily erects a defensive wall around science which religion is forbidden to climb. Religious knowledge claims are unjustifiably eschewed in science. This allegation has most often been made by young Earth creationists, and proponents of Intelligent Design theory. These writers argue that science unfairly or prejudicially eschews the supernatural from its investigations by the adoption of
methodological naturalism. If this prejudicial restriction were lifted, then there would be concord between religion and science. The conflict would dissolve, and science and religion could cooperate and collaborate. If it’s true that science unreasonably prohibits religion, then religious folk would be right to feel aggrieved. Such a commitment to naturalism would seem to amount to an atheistic bias within science that would exclude certain religious theories by fiat. In reply to this objection, secular philosophers of science have spilled quite a lot of ink attempting to explain to creationists why methodological naturalism is justified. I consider two popular justifications, but I ultimately reject both of them on the grounds that the metaphysical commitments of both justifications may be as prejudicial as the creationists allege. I offer a reformulation of methodological naturalism in purely epistemological terms, and I argue that this epistemological naturalism does not prohibit scientists from talking about certain kinds of entities, but only from justifying theories in certain kinds of ways. Gods and ghosts, I argue, may be welcome in science, in principle, but religious methods—religious sources of evidence—are barred from entry. But what would justify excluding religious methods? Is this not merely one more atheistic bias? Not so. I argue that religious methods are rejected from science on the grounds that such methods are private and fail to generate agreement between independent investigators. If science accepts only public methods, then it is clear why religious methods are barred from entry.

The subsequent chapter addresses the question of how the knowledge claims of religion are justified. This chapter describes the distinctive epistemic methods of religion, and attempts to sort them according to the manner in which knowledge is transferred from the supernatural entities to the believer. There are four phenomenal
methods of religion 1. *Divination* 2. *Acquaintance*, 3. *Innate Belief* and 4. *Testimony*. There are also two logical methods, 5. *Inference* and 6. *Paradox*. An attempt has been made to survey the methods of a diverse range of religious communities, showing the range of religious methods that are distinct from those used within science. Since the argument of this thesis is that the conflict between science and religion is a conflict of methods, it is essential that I identify exactly which methods I mean. I list only those religious methods that are distinctively non-scientific. I would also like to reiterate that this chapter is not limited to describing the epistemic methods of one sect of Protestantism, or of any other tradition of the major religious sects. As much as possible, I seek to describe the methods of a wide range of divergent and unrelated religious systems, from Sufism to Shamanism. I do this for two reasons.

Firstly, it is important to note how much common methodological ground is found between diverse religious traditions. To give just a couple of examples, spirit possession states and dream interpretation are taken by a wide range of historical religious cultures to provide reliable information to believers. The fact that the methods are so often common to a diverse assortment of religions is an enigma, but an enigma that I, quite unfortunately, cannot seek to explain in this thesis. What can be seen, however, is that these common methods produce different beliefs. The dreams of shamans and the dreams of Muslims fail to agree. Since the very same method is used in each case, an argument can be made that the method is unreliable.

Secondly, there has been, and continues to be, a tendency in the philosophy of religion to draw an arbitrary line between so-called “primitive” religious practices and the “sophisticated” religious practices of the communities to which academic theologians belong. This tendency to demarcate between the “great world religions”
and the rest is unique in contemporary academia for its utter lack of cultural perspective. Indeed, in a recent edited volume titled *Evidence and Religious Belief*, published by Oxford University Press, not a single chapter addresses the sorts of common methods by which evidence for religious beliefs is typically collected across a diverse range of cultures, and only one chapter out of a total of eleven discusses polytheism; the rest are concerned with theism. ‘In the history of religions,’ says the writer of this solitary chapter, ‘polytheism commands attention, but for philosophy of religion, it virtually doesn’t exist’ (Hasker 2011, 186). Given that the track-record of all religious methods is equally poor, I see no reason to further encourage this kind of Abrahamic parochialism.

Since there is no essential set of methods common to all religions at all times, it is imperative to gather something like a representative list of popular methods. It is impossible, I fear, to collect in one place an exhaustive list, since not only are religious methods diverse *at present*, but it is plausible that there may have once been very popular religious methods that have since vanished in the depths of human prehistory. Moreover, there may very well be new methods to come in the future (the e-meter of the Scientologists comes to mind). Nevertheless, I have attempted to classify religious methods according to certain broad categories, so that one may be able to find a place for any new methods in one of these categories.

Having argued that science does not accept religious methods, and having outlined what those methods are, I move to the argument that religious methods are not only private, but probably unreliable. To this end, I consider the long-standing problem of religious diversity, and some religious responses to the problem. The problem of religious diversity presents the following challenge to the defender of
religious methods: if religious methods are trustworthy and reliable, what can explain such widespread disagreement among different religions? To this challenge, there are three popular apologetic responses. The perennialist argues that all religions converge on a common, deep truth. The pluralist argues that religions describe a common reality by means of different conceptual and perceptual frameworks. And the exclusivist argues that at most one religion is on the money, and that there are good reasons to suppose that it is one’s own. None of these apologetic accounts of religious diversity are superior to the theory that religious diversity results from the use of methods that are unreliable.

Religious diversity is a problem for religious believers since religious diversity shows that there is widespread religious disagreement. What is the proper response to all this religious disagreement? What does it matter if religion and science disagree? How should the scientist react when she learns that some evangelical Christians believe in a worldwide flood? The subsequent chapter explores these questions. The general problem to be dealt with is that the beliefs of our intellectual equals, whether secular or religious, appear to be relevant to what we ourselves should believe, and therefore, their ideas deserve to be taken seriously. Much work has recently been done to deal with the problems associated with disagreement in the growing field of social epistemology. I add my own bit of ink to this debate by mounting an argument to the effect that the evidential force of a disagreement is weakened when one party’s position is predominantly justified by methods that are not public.

Continuing on, I address a problem that is seldom dealt with. While the problems of religious diversity and disagreement are well known, the opposite problem of
religious parallelism is comparatively poorly explored. The world’s religions are diverse both in their beliefs and their ritual practices, yet any comparison between isolated religions is bound to turn up at least some similarities. Yes, religious beliefs and practices are diverse, yet we nevertheless encounter persistent and puzzling examples of religious agreement. Heroic demigods, ghosts, ancestor spirits and hellish underworlds are common features of isolated religions from east to west, pole to pole. A strong argument can be made that this agreement is generated by reliable religious methods. If religious methods generate consistent outputs such as these, then we have reason to think that some religious methods may be reliable. I argue that religious parallelism is difficult to account for on the theory that religious methods are reliable. Instead, I survey some promising naturalistic explanations of religious parallelism, concluding that religious parallelism is best explained by (a) a common cognitive disposition to over-detect agency in the world and (b) analogical reasoning. No appeal to reliable supernatural epistemic methods is needed.

In the final chapter, I present the case for the reliability of scientific methods and the unreliability of religious methods. The argument is very simple: The methods of science typically generate both intersubjective agreement and agreement between a variety of different methods. The best explanation for this agreement is that there exists some fact that the different methods have converged upon. In contrast, the best explanation for the disagreement generated by religious methods is that there is no part of reality that the methods reliably provide access to. Thus, after having shown that there is a methodological conflict between science and religion, I conclude that the conflict is to be settled on the side of science. And so, I conclude that in the epistemological conflict between religion and science, there is a clear
victor. The methods of science outcompete the methods of religion. The methods of religion are yet to prove their mettle.

In a famous quotation, Tertullian once asked rhetorically: ‘What has Athens to do with Jerusalem? What agreement is there between the Academy and the Church?’ Tertullian saw Athens—the capital city of reason—as a threat to the security of divine knowledge. Athens and Jerusalem disagreed, and this disagreement was a symptom of epistemic illness: at least one party had got things wrong. I find myself in agreement with Tertullian. Either the Academy is mistaken, or the Church is mistaken, or they both are. And yet, while the fruits of Jerusalem have been sour for the Sikh, bitter for the Hindu, and inedible for the atheist, the fruits of Athens have been sweeter for everyone.
1. Do Religions Make Knowledge Claims?

*Christianity is not a doctrine, not, I mean, a theory about what has happened & will happen to the human soul, but a description of something that actually takes place in human life.* — Wittgenstein, *Culture and Value*

### 1.1 Realism and Antirealism

There are many points of religious doctrine that look for all the world like knowledge claims:

“God exists,”

“The Mahdi will come to defeat evil,”

“There was an original human pair,”

“There is a cycle of rebirth,”

“The gods created the world,”

“There was a global flood”

... and so on.

These doctrines do not appear to be exhortations to action, or poetic niceties, or performative utterances. They appear to be declarative and truth-apt statements about certain ways the world might be. Religious doctrines, then, often appear to aim at truth. This is at least *prima facie* evidence that religious doctrines *actually do* aim at truth, and if we were to accept this, we would be accepting a position called *religious realism*.

This realism is not limited to religious doctrines. Many religious practices, such as prayer and sacrifice, make little sense without the assumption that lurking behind the practice lies some belief about a particular way that the world operates. Why leave offerings to the ancestor spirits if there are no ancestor spirits to receive them? Why
pray to God, if God is unable to hear prayers? At the very least, some religious practices seem to be performed because some religious adherents have metaphysical beliefs that might be true or false. Unlike points of doctrine, religious practices themselves can be neither true nor false. However, they may still be understood realistically: If religious practices are believed to be effective, this requires an assumption of the reality of some particular metaphysical picture. I brush my teeth because I want to keep plaque at bay. But if I did not believe that tooth-brushing kept plaque at bay, I would not brush my teeth. My belief, therefore, goes some distance in explaining my action.

Religious realism is the natural view of the nature of religious activity. The religious realist holds, in short, that truth is an aim of religion. There may be other aims of religion, but truth is among them. Some religions may achieve this goal while others fail. Indeed, it may be the case that none of the world’s religions have been successful in achieving this goal. However, even if religion habitually misses its target, it remains the case that unlike poetry, etiquette and imperative commands, religious doctrines are not intended simply to evoke feeling, or to change behaviour, or to serve some social function. Religious language is often propositional, the propositions are often explanatory and the propositions may be true or false. This is a very common sense view of religion.

However, as is well known, philosophers are often less than content with common sense, and no less a figure than Ludwig Wittgenstein took issue with religious realism. Wittgenstein is an infamously opaque writer, and the work that he has left us relating to religious belief is especially scanty, often in note form and littered with incomplete sentences, rhetorical questions and open-ended speculation. Despite this
paucity of material, and despite the common-sensicality of the position he sought to overturn, Wittgenstein has had a remarkable impact on the philosophy of religion, perhaps simply for the perceived novelty of his arguments. Although, owing to his prose style, it is often unclear exactly what his arguments are, one thing can be known for sure: Wittgenstein’s thoughts about religion stand in total opposition to the religious realism just now outlined.

Against the realist position outlined above, antirealism rejects the claim that religion and science share truth as an aim. For the Wittgensteinian antirealist, religious practice is a human activity that is antecedent to any metaphysical theory said to justify the practice (Taliaferro 2013, §3). The aim of religion is not to explain puzzling empirical phenomena, but to live a particular kind of life. In the living of such a life, the religious person may attest to the truth of this or that doctrine, but this attestation is an expression of commitment, an oath, to a particular form of life. This commitment is not held because the evidence recommends it, and would be held even if the evidence suggested it was false. Indeed, evidence is wholly irrelevant to religious belief, since religious belief does not aim to explain anything.

If Wittgensteinian antirealism is true, and religion does not share any of the aims of science, then there could not be a conflict between science and religion. If religious doctrines are not descriptive or “realistic”, then science and religion would not be in direct competition. Since my thesis is that both science and religion aim at truth and seek to attain it by employing distinct epistemic methods, it is imperative to show that religion and science really do aim at the same end.
1.2. Wittgensteinian Antirealism

I believe that the best place to start to understand Wittgenstein’s philosophy of religion is the following proposition from the collection of notes, not directly related to the philosophy of religion, now known as *On Certainty:*

318: there is no sharp boundary between methodological propositions and propositions within a method.

For Wittgenstein, a methodological proposition in one context becomes a proposition to be appraised by some method in the next. We cannot, as it were, cleave off all of the methodological propositions as a distinct subset of our language. If we consider the claim that some thermometer is reliable, in one context this is a methodological proposition, assumed for the sake of testing others, yet it is a claim that can be assessed in its own right, once we adopt quite different methodological assumptions. What is assumed in one context can be scrutinized in another. What is background knowledge here becomes a tentative hypothesis there. This is an unproblematic claim. So far, so good.

But Wittgenstein pushes further, and charges that some propositions are *more fundamentally* methodological, less hypothetical, than others. That Mars has an average distance from the sun of 227 million kilometres is *more like* a hypothesis than the claim that there are physical objects. The latter is more fundamentally methodological than the former. Without the latter, I could not even make sense of the former. As another example, take the Moorean claim that I have two hands. Such a claim is not often seriously treated as a proposition *within* a method. More often than not, this claim, and others like it, make up part of the unproblematic
background by which we decide whether other claims are true or false, plausible or implausible, sense or nonsense.

If this picture of the structure of rationality is correct, then what are the implications for religion? Wittgenstein sees the situation like this: to say that one believes in the resurrection of Christ, for example, is partly to describe a proposition to which one assents (a proposition *within* a method) yet it is also to describe how other propositions are to be understood (a methodological proposition). Importantly, Wittgenstein argues that religious beliefs often sit at the more strictly methodological level of our belief system. Such beliefs will decide what propositions count as “making sense” elsewhere in the epistemic system, or, as Wittgenstein would say, in the religious *language game*. To believe in the resurrection of Christ is, therefore, not only, or not even necessarily, to accept a particular proposition as true, but to have a commitment to a particular methodology that decides what propositions will count as true elsewhere in the language game.

To illustrate, consider the popular idiom:

(A) ‘Everything happens for a reason’

On Wittgenstein’s view, someone who accepts (A) does not really take it to be a hypothesis that might be true or false depending on how the evidence pans out: either everything happens for a reason or it doesn’t. Instead, (A) is more plausibly cast as a rule of interpretation. We might reconstruct (A) as the methodological principle (A*):

(A*): ‘For all events, infer at least one purpose’

If (A) is better thought of as the methodological principle (A*), then arguing against (A) by asserting its negation utterly misses the point. Instead, Wittgenstein thinks that if I disagree with someone who accepts (A), I cannot say much more than that
the methodological principle (A*) is not a part of my own method. I see the world one way, and you see the world differently. You infer purposes. I do not. On this Wittgensteinian reading, (A) describes a framework for a particular style of language game. Religious language games have their own in-house rules and their own principles that decide what counts as making sense within their boundaries.

Note that on this interpretation, religious discourse becomes importantly non-evidential. One might ask someone who accepts (A): ‘But how do you know that everything happens for a reason?’ And to this question the believer in (A) can provide no evidence. Or rather, everything could be brought forth as evidence. That is to say, the believer of (A) could carry on pointing at every event that has happened for a reason, but this proof would be suitable only for those who are already playing the same language game. G.K. Chesterton had a similar thought in his very readable book, *Orthodoxy*:

If one asked an ordinary intelligent man, on the spur of the moment, “Why do you prefer civilisation to savagery?” he would look wildly round at object after object, and would only be able to answer vaguely, “Why, there is that bookcase ... and the coals in the coal-scuttle ... and pianos ... and policemen.” The whole case for civilization is that the case for it is complex. It has done so many things. But that very multiplicity of proof which ought to make reply overwhelming makes reply impossible. (1915, 150—1)

While Chesterton’s point is to emphasise the practical impossibility of defending our most deeply held beliefs, for Wittgenstein, these beliefs are in principle indefensible—the ubiquity of evidence is the consequence of the fact that the belief is so deeply held. Once one accepts the fundamental reality of God, one sees his work everywhere. Once one has accepted some religious principle, it becomes a framework
for all further thought. The proposition is, in Wittgenstein’s terms, a *hinge belief*: a belief on which all others turn.

So conceived, religious doctrines are not beliefs held on the basis of empirical evidence, and neither are they revised in the light of it. They are not explanations in the hypothetical sense that they can be empirically demonstrated to be true or false. Religious belief is better parsed as religious *commitment*; a way of framing all subsequent experience. Whether some religious commitment is true or false is not sensibly decided outside of the system from which it arises. Certainly, if we apply a scientific epistemic system to religious propositions, then many of them will appear to be major blunders. But as Wittgenstein notes: ‘whether a thing is a blunder or not—it is a blunder in a particular system. Just as something is a blunder in a particular game and not in another’ (2009, 170). The rugby player does not blunder when he holds the ball in his hands, despite this being a foul in a game of football. Religious blunders and scientific blunders are quite different things that depend on different sets of rules. The language game of religion is not the language game of science, and it is folly to assess the one by the rules of the other.

Religious commitments, therefore, partly determine our *picture* of the world, including deciding what is true and false. Such beliefs decide which linguistic moves are part of the game and which are not. As Wittgenstein notes: ‘I did not get my picture of the world by satisfying myself of its correctness; nor do I have it because I am satisfied of its correctness. No: it is the inherited background against which I distinguish between true and false’ (1969, §94).

Wittgenstein considers the following case, which I think is worth quoting at length, in his *Lectures on Religion*:
Suppose you had two people, and one of them, when he had to decide which course to take, thought of retribution, and the other did not. One person might, for instance, be inclined to take everything that happened to him as a reward or punishment, and another person doesn’t think of this at all.

If he is ill, he may think: “What have I done to deserve this?” This is one way of thinking of retribution. Another way is, he thinks in a general way whenever he is ashamed of himself: “This will be punished.”

Take two people, one of whom talks of his behaviour and of what happens to him in terms of retribution, the other one does not. These people think entirely differently. Yet, so far, you can’t say they believe different things.

Suppose someone is ill and he says: “This is a punishment,” and I say: “If I’m ill, I don’t think of punishment at all.” If you say: “Do you believe the opposite?” —you can call it believing the opposite, but it is entirely different from what we would normally call believing the opposite.

I think differently, in a different way. I say different things to myself. I have different pictures. (2009, 169)

Thus, different world pictures are not the sorts of things that could be mistaken, for they lay out the criteria by which we decide whether anything is mistaken. This thought leads Wittgenstein to the conclusion that it is mistaken to consider religious beliefs, whether held by peoples of primitive cultures or modern civilisations, as even possibly being grounded in error, since to be in error is to be mistaken according to some set of epistemic rules. But the very rules in question are those foundational principles which we want to claim are in error. In a rather surprising passage, Augustine of Hippo can be seen anticipating this Wittgensteinian thesis: ‘For whenever anyone affirms that the eternal ought to be valued above the things of time ... no one judges that it ought to be so, but merely recognizes that it is so,’ and he also adds ‘we make these judgments according to those rules of truth within us which we
see in common, but no one ever passes judgment on the rules themselves’ (1999, 67). Religious doctrines are not bare empirical hypotheses about the way the world is, but non-explanatory frameworks that serve to ground the very notion of what would even count as a successful explanation. ‘No opinion serves as the foundation for a religious symbol,’ says Wittgenstein ‘and only an opinion can involve an error’ (1993, 123).

The sceptic may reply to this: it is one thing to say world pictures differ, but quite another to say that none could be mistaken. Perhaps the theist simply has the wrong world view! Wittgenstein again thinks this misses the point. Are we to step outside of the language game to check which world picture is true and which is false from some neutral viewpoint? There is no such viewpoint, he says. Such attempts at viewpoint-neutrality fail, since all attempts lead to the adoption of another language game with its own peculiar rules. We are, as it were, trapped by language. The only way to understand how some language game works is to play the game.

Clearly, Wittgenstein is no realist with regards to religious doctrines, but what about religious practices? Are religious practices and rituals realistic in the sense that they are thought to be effective? Predictably, Wittgenstein also thinks it is mistaken to regard religious practices as aiming at some goal, the achievement of which would require that some particular metaphysical thesis hold. He gives the following analogies:

Burning in effigy. Kissing the picture of one’s beloved. That is obviously not based on the belief that it will have some specific effect on the object which the picture represents. It aims at satisfaction and achieves it. Or rather: it aims at nothing at all; we just behave this way and then we feel satisfied. (1993, 123)

His argument, then, is that there are compelling analogies in other aspects of our social life, in which ritualistic behaviour of a kind not dissimilar to that found in
religious life is clearly not aimed at any goal, the achievement of which requires that a certain metaphysical view be correct. Neither burning effigies nor kissing photographs appears to be aimed at anything other than the satisfaction of completing the ritual act. Ritual acts such as these are aimless. Furthermore, if we want to explain why some person burned an effigy, we need not assume that the person must believe that the represented party will be harmed. And if we want to explain the kissing of a photograph, we need not assume that the kisser must believe that somehow, by magic, the represented party will come to feel adored. To do so would be to seriously mischaracterize the intentional states of the agent.

For Wittgenstein, it is uncharitable to interpret the collective activities of religious people as chronic blundering based on flawed or faulty metaphysical beliefs. He says: ‘the characteristic feature of ritualistic action is not at all a view, an opinion, whether true or false,’ yet he adds ‘although an opinion—a belief—can itself be ritualistic or part of a rite’ (1993, 129). This is a difficult point to make sense of, but we might understand it by way of the following example: to accept the bread and wine of the Eucharist, one must perform a particular ritual, part of which is the acceptance of the proposition that the wine is the blood of Christ and that the bread is his body. Seemingly, this is a belief that is accepted as a part of the ritual, but once again, we are wrong-headed to approach it as though it were a theory or hypothesis of transubstantiation that explains why the ritual takes place. The belief itself could not be defended outside of the language game of religion. It is a part of the ritual of the Eucharist to regard the wine and the bread as the blood and the body of Christ. The belief is a part of the ritual, not an explanation of it.
Wittgenstein’s arguments can be quite compelling. But it is worth asking: does Wittgenstein take his thesis to hold universally, for all religious practices? It is exceedingly difficult to account for all religious activity as aimless. Indeed, we can at least imagine a case in which a religious practice aims at truth. What if, for example, a practicing Catholic were to carry a St. Christopher’s medal in her car *just because* she believes the truth-apt claim that this will prevent accidents? This practicing Catholic also believes that scientists could discover that this were true, but that their atheistic biases have so far prevented them from investigating the matter. This believer is motivated to bring the medal into the car just because she believes it really has some effect. If she were taken to Lima, however, and were to witness the abundance of cars crashing while bearing St. Christopher’s medals, she would reject her belief. Presumably, this good Catholic is not made non-religious by the fact that she believes that cars can be protected from crashes by certain amulets. What would Wittgenstein say about such behaviour?

Wittgenstein might reply that this would not count as religious behaviour, since the woman in question does not have the right kind of religious world picture. But what is the *right kind* of religious world picture? Seemingly, it must be a world picture that does not incorporate the same sort of grammar as the scientist; a world picture in which empirical evidence is able to influence belief. But if that is so, then Wittgenstein has defined his way to victory against the religious realist. He will have defined ‘religion’ so narrowly that many paradigm examples of religious belief will not count as religious.

To be clear, Wittgenstein is certainly right that *some* religious believers take part in practices that they do not assume are effective. Perhaps the Eucharist is like this
for many practicing Catholics. But some religious people do believe that some of their religious practices are effective, and to characterize their religious practices as aimless is clearly a misdescription. Adherents of the Christian Science Church choose prayer over conventional medicine when it comes to treating a range of illnesses. This has led to many otherwise preventable deaths of the children of Christian Science Church members. Is there really a better available explanation for their actions than the theory that the parents believed that prayer would be effective? Surely the parents did not ‘behave this way and then … feel satisfied’. No. The parents made a mistake. To describe their behavior—allowing their children to die—as ritualistic, or symbolic, or what have you, is about as uncharitable as you are going to get. Why, then, did the parents act this way? It seems that the parents just made an awful and regrettable mistake. They held certain beliefs about effective health care, and those beliefs were wrong.

David and Ginger Twitchell were members of the Christian Science Church who, in 1986, refused to seek medical help for their two-year-old son, Robyn’s, obstructed bowel. Instead of taking him to the hospital, they prayed for him day and night. He died. The parents were found guilty of manslaughter. After the trial, David Twitchell expressed his deep regret and remorse. His failure, he said, was in not having prayed with sufficient faith. ‘If we were closer to God,’ lamented Twitchell, ‘we could have stopped this from happening. In that way, I blame myself’ (Twitchell quoted in Gottschalk 1988, 602). Had he prayed with the conviction that God required, his son would still be alive today. I see no reason not to take Twitchell at his word. His prayers were supposed to be effective, but something went wrong.
To say that aimlessness is the nature of all religious practices is therefore either to exclude many religious practices that are considered effective, or it is to mischaracterize the intentional states of the agents performing religious practices. If Wittgenstein is simply reducing the data set to count only aimless rituals as religious, then he is certainly right that such rituals are not performed because of a faulty metaphysics. To this, my reply would be that I am also interested in those rituals (such as the intercessory prayers of the Christian Scientists) that do have aims. But Wittgenstein appears to argue that even those religious rituals that appear to have aims do not. To this, my only reply is that such a hypothesis is an empirical and psychological one; not to be settled on logical grounds or by mere speculation. Whether religious adherents believe a religious ritual is effective is decided only by observing their behaviour and collecting first person reports. I would emphasise that Twitchell’s own words speak against Wittgenstein on this point. As the anthropologist Ioan Lewis said: ‘Let those who believe in spirits and possession speak for themselves’ (1971, 29). Quite so.

Having given an overview of Wittgenstein’s approach to the philosophy of religion and having shown that Wittgenstein has not established that religious practices are not taken to be effective, I now turn to his claim that religious doctrines are not realistic, that they are not akin to scientific explanations and that they should not be judged by the same standards. What are Wittgenstein’s arguments that lead him to accept the kind of antirealism that he accepts?

Wittgenstein appears to reach antirealist conclusions by way of two quite distinct arguments. I have tried to keep these two arguments separate, as their conclusions are very different. Indeed, their conclusions are contradictory. In light of this,
Wittgenstein scholars may wish to consider which of the arguments he would ultimately endorse. I am not particularly interested in that question, since I am no Wittgenstein scholar. The question I want to answer is whether either argument is any good.

The first of the two arguments I dub the language game argument. The second I dub the hinge belief argument. The language game argument concludes that there is a logical and intentional divide between religious and scientific discourse. The hinge belief argument can be construed as having one of the following consequences. Either religious commitment is non-propositional (in which case, religion is an activity, or a form of “knowledge how”) or, if religious commitment is propositional, the propositions in question cannot be thought of as a kind of knowledge in the sense of being justified or justifiable. I will first look at the language game argument, before discussing the hinge belief argument in the two following sections.

1.3 Different Meanings of “Truth”

The language game argument runs that it is folly to assess religious doctrines according to scientific standards, since religion and science are two different sorts of language game that consist in different “grammars”. “Grammar” is a Wittgensteinian term of art, which refers to the network of rules that determine what will count as making sense and what will not in any language game (Biletzki and Matar 2014, §3.6). So, the respective grammars of religion and science decide what will count as true and false only in their own domains. Religion and science accept contrary methodological principles and because of this, there is a fundamental incommensurability between religion and science. In particular, the concept of truth found in religion simply isn’t the same thing as the concept of truth one finds in
science. While one might say that the scientific concept of truth is something like a correspondence relation—a relation between statements and the way the world actually is—the religious concept of truth is quite different.

According to Wittgenstein’s follower, D.Z. Phillips, religious truth is the kind of truth one might deploy in the following sentence: ‘I have come to see the truth of the saying, that it is better to give than to receive’ (1970, 12). Phillips adds that when Jesus proclaimed that he was ‘the way, the truth, and the light’, he surely did not mean that he was a relation between sentences and the world. He meant that he was vitally important, or valuable, or to be emulated, or something along those lines. Religious truth is a distinctly value-laden concept, quite unlike the concept used in the sciences. Similarly, the Buddhist’s Four Noble Truths are not truths in the sense that one accepts them after consideration of all the supporting evidence. The Four Noble Truths are foundational principles that one either commits oneself to or does not. One hears the Four Noble Truths and one thinks ‘this is speaking to me’. Truth, then, is not the same relation in religion and science. Therefore, it follows that (a) there is a logical divide between scientific and religious language games: the rules of one do not apply to the other, and (b) there is an intentional divide between scientific and religious attitudes. That is to say, religious belief is not akin to scientific belief, since the former is a belief about what matters and the other is a belief simply about what is. Thus, to fault the believer in religious doctrines for being factually incorrect is confused, since one does not believe religious doctrines on the grounds that they are factually correct.

Well, are religion and science really logically distinct? Phillips’ argument, I think, commits an equivocation fallacy. He argues that the fundamental ambiguity of truth
makes it impossible to discuss what is true in religion without employing the appropriate concept of *religious truth*. Yet this is simply not the case. The word ‘truth’ might well be used differently in different contexts, but this does not imply that truth is a relation that is constituted differently in religious and scientific contexts. Truth does not differ depending on which language game we’re playing, although the meaning of the word ‘truth’ might differ in different contexts. There is an old story about Abraham Lincoln attributed to Lloyd Reinhardt (a story which I have inherited from Alan Musgrave). Lincoln poses the question:

‘If tails as well as legs were called “legs” how many legs would a donkey have?’

‘Five, Mr Lincoln,’ comes the reply.

But such a reply would be mistaken. Donkeys have four legs no matter how we talk about them (Musgrave 1999, 30). And no matter how ‘truth’ is ordinarily defined within religion, what is true remains the same.

Why do I bring up donkeys’ legs? My reason for alluding to the example of Lincoln is to draw attention to the fact that if the religious meaning of ‘truth’ and the scientific meaning of ‘truth’ are not the same, then ‘truth’ is just a homonym. Therefore, there is no reason to think that science and religion are language games that must forever be logically distinct. We can take concepts from one language game and apply them in another in an effort at understanding. We might say, herein, that we will abolish the word ‘truth’. Instead, the religious concept of truth is now dubbed ‘R-truth’ and the scientific concept of truth is now dubbed ‘S-truth’. And once we tidy up our terms like this, the perceived incommensurability vanishes. The hardline skeptical scientist would say ‘there are no S-true propositions in religion,’ by which he means that there are no theories that correspond to the way the world really is, and the hardline
religious believer would say ‘there is no R-truth in science,’ by which she means that science cannot show us what our fundamental purpose is, or what is ultimately valuable. This is no insurmountable logical distinction; it is wordplay. The question of interest, now, is just whether any religious propositions aim to be S-true. Well, as far as I can tell, the claim that there was a global flood is taken by many evangelical Christians to be S-true, not R-true, and the fact that the young Earth creationist Ken Ham of *Answers in Genesis* recently spent over $100 million on the construction of a Noah’s Ark replica museum full of evidence for a young earth is the pudding where the proof can be found.

To say that there is a fundamental *logical* distinction here—that one cannot apply the concepts from one language game in another in an attempt at understanding—is little more than a Wittgensteinian bias. To understand religion, Wittgenstein thinks, one must understand what is significant *from within a religious viewpoint*. One cannot have an *understanding of religion* without having a *religious understanding*. This is a terrible fallacy that is lamentably widespread: one cannot *truly* understand oppression without having been oppressed. One cannot *truly* understand a cultural or political system if one stands outside of it. It is as though one were to say that to truly understand insanity, it is of no use to study psychology; one must be stark raving mad.

The claim that there is a logical divide between science and religion is false. But what about the claim that there is an *intentional divide* between scientific and religious beliefs? What about the claim that religious beliefs, unlike scientific beliefs, are not held because they are thought to be factually true? To this argument one can only repeat that such a claim is a psychological one that requires some kind of
psychological evidence. It is not the sort of claim that one can intuit \textit{a priori}. Either religious belief is not held to be factually true, or this is not so. Given the preponderance of seemingly evidence-based \textit{justifications} for religious belief, and given the number of believers who claim to reject their faith in the light of disconfirming evidence, including such events as the death of a loved one, we have at least some \textit{prima facie} reason to prefer the latter hypothesis. As already mentioned, young Earth creationists defend their views by constructing multi-million-dollar Creation Museums, filled to the brim with supposed evidence for the events found in scripture. It would be odd to say that the museums are not \textit{really} intended to provide evidence that the events recorded in scripture are factually accurate; even more odd to say that young Earth creationists were not really religious after all.

So much for the language game argument.

\subsection{1.4 Religious Commitment as Propositional but Unjustifiable.}

The hinge belief argument is rather different from the language game argument. While the language game argument seeks to establish a logical and intentional distinction between religious and scientific epistemic systems, the hinge belief argument runs that religious commitment is \textit{either} unjustifiable \textit{or} non-propositional. In either case, religions do not make \textit{knowledge claims}. For if religious commitment is unjustifiable, then it is not knowledge, and if religious commitment is non-propositional, then it is no claim at all. Which of these two conclusions Wittgenstein might have endorsed depends on the interpretation of the key term ‘hinge belief’.

Let us first turn to the claim that religious commitment is propositional, but unjustifiable. On this view, religious commitment is composed of \textit{fundamental},
methodological propositions, and so it is not open to justification in the same way that the rest of our beliefs might be. The argument runs that religious commitment sits at the very bottom of our epistemic system. It cannot be “levered up”, as it were, by any other belief in order to be rationally appraised. In the same way, to test whether I have two hands, I hold them in front of my face. But the belief that I have two hands is so basic that one struggles to imagine what can be brought from lower down in the epistemic structure to ground the belief as reasonable. ‘For why shouldn’t I test my eyes by looking to find out whether I see my two hands?’ asks Wittgenstein (1969, §125). Hinges, then, are not knowledge claims, since they are unjustifiable. When understood as propositions, hinge beliefs are generally unreflective beliefs that must have the following two properties:

Circularity: The belief cannot be defended without begging the question.

Evidential Immunity: The rationality of the belief cannot be affected by changes in evidence.

If religious commitment is the acceptance of hinge beliefs, then religious commitment does not consist in making any knowledge claims. One does not take up a religious commitment in order to explain puzzling phenomena. Religious commitment is ultimately groundless and unjustified. That being said, religious commitment is the means by which other explanations are appraised. It is a lens through which we are able to see the world in a certain way. It defines the very boundaries of critical scrutiny. For the religious person, religious commitment defines the reasonableness of all other claims.

If all of this is right so far, then to call religious commitment into reasonable doubt is impossible, since to doubt a hinge is to doubt everything. It is to doubt the
very methodological principles that make reasonable doubt possible. To excise a hinge from one’s network of beliefs is to dismantle part of the machine of justified belief. It is to recklessly take a sledgehammer to the mechanism. To doubt a hinge is possible, but to reasonably doubt a hinge is impossible.

Note, that it is possible to change from one set of hinge beliefs to another. It is simply not possible to reasonably do so. No rational considerations could compel us to accept some set of hinges as superior to any other. Unlike hinges on doors, which may become rusty or stiff and need replacing, the hinges on which our beliefs turn do not admit to any evaluative appraisal and are not replaced on the grounds that they are defective, ineffective or wrong. Perhaps we have prudential reasons to change our hinge beliefs, or maybe we are just not feeling ourselves. We may have a conversion experience, or we may be coerced into accepting some new world picture. Fashions, of course, come and go. Whatever the reason, once we switch our hinge beliefs, we simply start to see the world differently than we did before.

Is religious commitment like this? It is clear that some religious beliefs are logically more fundamental than others. Thus, for example, the shahādah (the statement that Allah is the only god and that Muhammad is his messenger) is fundamental in Sunni Islam; whereas the belief that one must ritually wash before prayer is derivative. Only by committing oneself to accepting the former belief is there any reason to accept the latter. The question is, however, are such logically fundamental religious claims actually hinges? Do they exhibit circularity and evidential immunity? There is clearly a difference between hinge beliefs and beliefs that merely enjoy a logically fundamental status.
So, can religious commitment be defended without begging the question? On first thought, it seems plausible that any defense of a deeply-held religious belief must beg the question. If one were to ask the Muslim why he accepts that Muhammad is the messenger of Allah, he may point to the Qur’an, in which Muhammad is described as a messenger of Allah. Yet it is immediately obvious that the authority of the Qur’an depends on the truth of the proposition that Muhammad is Allah’s messenger. This justification is circular. The Christian may also offer a circular defense, with the Bible sometimes described as a ‘self-authenticating text’ (Dawes 2016, 103). These are both clearly examples of circular justifications of religious commitment. But for our purposes, we require stronger evidence that that. After all, logically speaking, any belief can be given a circular justification. What is needed is evidence that any defense of religious commitment must invoke religious commitment. It is the necessity of a circular justification that would show us that we are dealing with a hinge.

Some examples of putative hinges come to mind, as Crispin Wright writes:

It is utterly unclear how evidence might be amassed that there is an external world, that there are other minds, or that the world has a substantial history at all, which is not evidence specifically for particular features of the material world, or for the states of consciousness of particular people or for particular events in world history. (2003, 59)

Religious commitment must be unavoidably circular in the same way as these paradigm examples of hinges are. Yet religious commitment is not always like this. Consider the popular Islamic argument that evidence for the divine origins of the Qur’an can be found in the miracle of its prose style. As is stated in the Qur’an:
And if you are in doubt concerning that which we have sent down [i.e. the Qur’an] to Our slave [i.e. Muhammad], then produce a surah of the like thereof and call your witnesses beside Allah, if ye are truthful. And if ye do it not—and ye can never do it—then guard yourselves against the fire prepared for disbelievers, whose fuel is of men and stones. (2:23—24)

Indeed, the Qur’an is here offering a unique challenge for the unbeliever. The argument is that the Qur’an is written in such magnificent prose that Muhammad, an illiterate and poorly educated man, could not have devised it himself. It must have been a divine revelation. If anyone else were to produce a surah comparable in beauty and poetic form to one contained in the Qur’an, then the Qur’an would be shown not to be divinely inspired. Suppose that I, as an atheist, read the Qur’an and I concur that unless a similar literary feat could be performed, then it is unlikely that the Qur’an could have originated with Muhammad without divine revelation. I do a bit of research into the history of the Qur’an and discover that Muhammad was indeed the person who dictated it. I try my hardest to produce a comparable surah and I search extensively to find an example. I find none. It follows that I should, at least tentatively, believe that the Qur’an is a divine revelation and that Muhammad is the messenger of Allah. In short, I should come to accept the content of the shahādah, and I would have been led to do so by a rational method. So, there is at least one example of religious commitment justified by a non-circular argument, and so religious commitment is not universally justified circularly.

Does religious commitment exhibit evidential immunity? On first sight, there seem to be good reasons to think so. One of the pervasive features of religious commitment is its lack of what Popper terms empirical content (1959). Religious commitment, it is often said, is infamously unfalsifiable. Religions make few
predictions that could possibly show them to be false. Take some bare theistic postulate such as that there exists an omniscient, omnipotent and omnipresent person. This postulate is compatible with any possible observation. The claim is simply unfalsifiable. There is no obvious piece of evidence that might lead us to rationally reject the theory. Certainly, many instances of religious commitment are like this. There is no way evidence can speak against the commitment, since many of the core claims concern invisible and undetectable agents, as well as events that occur in inaccessible, supernatural realms. The metaphysical elements of religious doctrines are often empirically evasive, and so the theories containing them have zero empirical content. Therefore, we have reason to suspect that religious commitment is evidentially immune. But is all religious commitment evidentially immune? I do not think so, and I provide some examples in the following chapter dealing with the testability of supernatural claims within science. For now, I bring the reader’s attention to the problem of evil, which, if it were successful, would be just the kind of evidence capable of rationally undermining a theistic commitment.

It is important not to confuse evidential immunity with an unwillingness to change one’s belief in the light of new evidence. Religious commitment is not a hinge belief merely because the evidence against it is never taken seriously or consistently disregarded. This would be to confuse the attitude of the believer towards her belief with the logico-epistemological consequences of what is believed. A religious claim is a hinge only if there is no relevant, non-circular evidence that could affect the probability of the claim. It is important to be clear on this point, for as is well known religious believers often tenaciously cling to their religious commitments even in the face of compelling evidence to the contrary. Yet that does not show the commitments
to be hinges. It only shows those religious believers to be stubborn. Indeed, evidence not taken seriously is evidence nonetheless. For a hinge belief, there is no question of evidence.

What can we conclude? In some respects, religious commitment is hinge-like, but religious commitment does not always exhibit the necessary circularity or evidential immunity to count as a *bona fide* hinge belief. Religious commitment can be appraised on grounds that do not beg the question, and the credence one has in one’s religious commitments may change as the evidence changes. Thus, religious commitment, if propositional, is not unjustifiable.

1.5 Religious Commitment as Non-Propositional

So we arrive at our last Wittgensteinian option. Perhaps religions do not make knowledge claims simply because religious commitment does not consist in mental assent to *any claims* at all. Perhaps religious commitment is *non-propositional*. Up to this point, we have been understanding hinge beliefs to be fundamental, *methodological propositions*. But perhaps, as Daniéle Moyal-Sharrock argues, hinge beliefs merely ‘look like statements about reality, but are not’ (2007, 42). But if religious commitment is a hinge belief in this non-propositional sense, if religious commitment is not commitment to a set of claims, then what else could it be? The answer given by the proponents of this view is that it is a commitment to a *way of behaving*. Hinge beliefs are unreflective, non-propositional and normally expressed only in our practices. They are not sophisticated thoughts, but something closer to basic animal urges. ‘Does a cat know that a mouse exists?’ Wittgenstein asks (1993, 478). We are inclined, I suppose, to answer ‘no’. Wittgenstein’s disciple Norman Malcolm elaborates on this example:
A cat watches a mouse hole. It would be natural to say that the cat knows, or believes, that a mouse may come out of the hole. But what does this come to? Are we attributing to the cat the propositional thought, ‘a mouse may appear’? No. We are only placing this behaviour in the larger pattern of cat-seeking-mouse behaviour. An infant reaches for its milk bottle. Does it ‘believe’ that what is in the bottle is milk? One could say this. But what would it mean? Just that there is this behaviour of reaching for the bottle from which it has been fed in the past; plus, perhaps, the fact that it will reject the bottle if what it tastes is chalk water. This is just doing. (1995, 71)

To hammer home the point, I am adept at making use of the world around me. I sit on chairs and I converse with my friends. But to say that I believe that chairs exist or that there are other minds is not quite right. Rather, I act as though I accepted the above propositions. I act in this way. I do not act another way. Indeed, if I were asked whether I believe that chairs exist, I would be puzzled and probably ask the questioner to repeat themselves. The belief is embodied in my practice, but it is not a thought. It is not a proposition to which I assent. The question of justification, then, or even of understanding, need not arise. This is simply what I do. This is my form of life, to use Wittgenstein’s phrase. I do not know that there are other minds; I know how to get along with people.

Can this picture of hinges as non-propositional account for religious commitment? Perhaps Straits Chinese children merely learn how to leave offerings for the ancestor spirits, and how to avoid angering those spirits. It seems plausible that they might learn the practice of religion (religion as a form of life) without ever taking as problematic the proposition expressed by the sentence, ‘the ancestor spirits exist’. Belief in the ancestor spirits is embodied in their practice. ‘Ancestor spirits exist’ is not a belief offered up as any kind of knowledge claim. When we attribute this belief to the Straits Chinese, we are not describing anybody’s mental state; we
are describing, in a kind of shorthand, the practices that shape the believer’s form of life. Does a cat believe that a mouse exists? No, but cats stalk mice. Do the Straits Chinese believe that ancestor spirits exist? No, but the streets are filled with offerings.

I see two problems for this non-propositional approach. The first problem is that if hinges are dispositions to behave as though some proposition were true, then all hinges can be fairly interpreted as dispositions to mental assent to propositions. Since this is the standard definition of belief qua propositional attitude, we are back where we began: hinge beliefs are propositional. Once we treat hinges this way, as propositions, they become knowledge claims that can be independently appraised. The proposition that the ancestor spirits exist can be brought under critical examination, and so too can the practice of ancestor spirit worship more generally. Perhaps it is true that, in practice, the vast majority of religious believers never take the hinges of their religion as independently problematic propositions. This does not change the fact that the propositions are independently problematic. I use the word ‘problematic’ here in two senses: the propositions are in principle open to criticism (there is nothing logically awry about criticizing them), and the propositions are in practice often criticized. The fact that a proposition is not often brought to the fore of our criticism gives us no reason to think that the proposition cannot be criticised, or that it has not been criticised.

It is argued, however, that it is the very nature of hinges to be acted on as generally unproblematic. If some hinge were genuinely problematic, it would no longer qualify as a hinge. Hinges are then, by definition, neither generally criticizable nor well-criticized. Hinges just are those ways of behaving that hold fast for us. Nothing speaks against them. As Moyal-Sharrock puts it, the certainty of a hinge can be traced
to ‘its seamless coherence, to its not standing out as unacceptable as a foreign body. To its not standing out at all. Its invisibility, its inarticulateness are a measure of its unquestionability. It is accepted as ... going without saying’ (2007, 112). The unproblematic nature of hinges can be witnessed in our treatment of them: ‘a question does not normally present itself as to whether I or the chair I am sitting in exist. It does normally present itself about unicorns, or about whether there are chairs in the next room’ (2013, 263).

But fundamental religious claims, no matter how strongly and unquestionably held, are regularly exposed to criticism. They are generally regarded as problematic, in the sense of being open to criticism and regularly criticised. In times of great suffering and hardship, believers will question whether an omnibenevolent god really exists. Cook and Wimberly (1983, 226) note that a third of parents interviewed struggled with a loss of religious faith in the wake of a child’s cancer diagnosis, and Coleman et al. (2007) note the negative effect that the death of a spouse may have on theistic belief. In the light of new scientific discoveries that challenge the orthodoxy of scripture, believers will question whether scripture is really an infallible deliverance from a divine being. In discovering that their holy guru has been behaving in an immoral or base manner, followers will doubt his claims to godliness (Costabile 2014). In meeting adherents of different religions, one’s belief is shown not simply to go without saying. Religion is brought to the fore of our mind routinely as problematic and as able to be criticised. To paint what I am trying to say in terms of Moyal-Sharrock’s earlier analogy, gods are more like unicorns than chairs.

To conclude, if hinge beliefs are dispositions to behave as though some proposition were true, then we may recast non-propositional behaviours as
propositional attitudes. Once we do this, it is possible to critically appraise the proposition believed by appeal to evidence and background knowledge. This criticism is not only possible, but actually happens routinely in the lives of believers. Thus, religions put forward propositions which can be critically appraised, and which are often criticised. Religions do make knowledge claims.

I now leave this discussion of Wittgensteinian antirealism. It is a position that, although once popular, has slowly shed supporters. I hope I have convinced the reader that this decline in popularity is deserved. Despite the novelty of the views presented, they fail to withstand criticism. I now turn to a view that is currently more popular in the public imagination, yet not so unlike the Wittgensteinian views just now rejected.

1.6 NOMA

Ultimately, Wittgensteinian antirealism aims to show that religion and science are not, and could not be, in explanatory competition. The language game argument, in particular, argued that truth is a concept that is constituted differently in religious and scientific contexts. It was argued that the religious concept of truth is a value-laden concept, whereas the scientific concept is not. For this reason, religion and science forever talk past each other. A similar argument can be made, which is not equivocal about the concept of truth. It is possible to accept that truth is univocal and that religions do make knowledge claims, while accepting that these claims are restricted to knowledge in a non-scientific domain. Religion and science, then, are attempts to provide answers to different kinds of questions. Each kind of question pertains to a separate zone of human knowledge, a distinct explanatory magisterium, or teaching authority.
Stephen Jay Gould is perhaps the most prominent defender of this view, which he dubs the Non-Overlapping Magisteria Thesis (NOMA, for short). As Gould outlines it, there is no essential conflict between science and religion, since each field tries to answer different questions. Indeed, he says:

The lack of conflict between science and religion arises from a lack of overlap between their respective domains of professional expertise—science in the empirical constitution of the universe, and religion in the search for proper ethical values and the spiritual meaning of our lives. The attainment of wisdom in a full life requires extensive attention to both domains. (2001, 739)

And Francisco Ayala, in agreement with Gould, adds to the picture:

Science and religious beliefs ... cannot be in contradiction because science and religion concern different matters. Science concerns the processes that account for the natural world: how the planets move, the composition of matter and the atmosphere, the origin and function of organisms. Religion concerns the meaning and purpose of the world and of human life. (2007, ix)

A similar thesis has also been quietly endorsed by Kenneth Miller, a cell biologist, philosopher and practicing Roman Catholic, who argues that the problem of ultimate purpose is quite rightly left to the realm of faith (Miller 2005, 369).

The idea is not a new one. Galileo famously quoted Cardinal Baronius in his letter to the Grand Duchess Christina of Tuscany: ‘the Bible tells us how to go to heaven, not how the heavens go’. Science is concerned with such things as empirical facts, predictive models and natural law; while religion is concerned with such things as value, purpose and spiritual fulfilment. These separate zones of enquiry do not overlap. And so, science and religion can coexist.

Of course, specialists in each field may sometimes overstep the bounds of their expertise. A priest may claim that a tsunami is caused by a nation’s failure to repent,
or a scientist may claim that the meaning of life is to maintain an income within an upper middle class bracket. But these specialists, in justifying their claims with the tools available to them within their respective fields, would have invaded foreign explanatory territory. Such conflicts are due to misunderstandings about the proper domains of science and religion. Thus, NOMA is best understood as a claim about what it is appropriate for each subject’s practitioners to make knowledge claims about, given the tools and methods available to them.

One might accept NOMA if one already thought that the methods of science were appropriate for solving one class of problems and that the methods of religion appropriate for solving another, that the respective methods of science and religion differ, and that each method is particularly suited to achieving its own aims in its own designated explanatory magisterium. Scientific and religious methods would then be effective in their respective domains. It would only be natural to grant the descriptive domain to science and the evaluative domain to religion, since it is only in these domains that the methods are effective.

If that is the argument, then we must first be sure of what the respective aims and methods of science and religion are. Arguably, science has a well-studied, if often disputed, method of inquiry, thought to be an effective means to solving problems of fact and prediction. Yet it is unclear what the aims and methods of religion are. We have all at least heard of the scientific method, but what is the religious method? Does it actually aim to solve problems of meaning and value? And if so, is it effective? Until these questions have some rudimentary answer, it is quite unclear why we should be so confident to allocate religion its own distinct explanatory magisterium. It is further unclear why it should happen to be the magisterium of value. Moreover, why
should religion, as opposed to any other field, such as philosophy, jurisprudence, or anthropology get dibs on the magisterium of value? Perhaps all these fields should be supplying us with theories of what is meaningful and valuable. Perhaps none should be. It is premature to say. And so, why should we assume that theologians have better tools than anyone else to answer such questions? As Richard Dawkins jibes: ‘Why the chaplain? Why not the gardener, or the chef?’ (2006, 56).

What is the aim of religion? One should, I think, take a firmly skeptical line to the claim that religion has one single, essential aim. The vast array of world religions appear to have wildly varying aims. Mikael Stenmark provides a diverse list of the alleged pragmatic and epistemic aims of religion, including: moral truth, empirical truth, salvation, eternal life, existential intelligibility, usefulness, community building, moral excellence and divine communion to name just a few (1997, 496). If all of these are aims of religion, then given that empirical truth is among them, NOMA has fallen at the first hurdle. If both science and religion share the aim of empirical truth, then the magisteria do overlap. But do religions have to concern themselves with matters of fact? Perhaps this shared aim is the result of a mistake on the part of some believers, who fail to understand that religion isn’t capable of answering such questions.

It is abundantly clear that certain religious texts do make claims about matters of fact, and that such factual claims are core beliefs, to which believers are expected to assent if they are to count as a member of the religion at all. Belief in some matters of fact, then, is an essential part of at least some religions. It seems unlikely that we would find a religion that made no claims at all about the external world. What would such a religion look like? Could such a practice even be called, with all due respect to
the common usage of the word, a “religion”? Religions are cultural institutions, membership of which routinely requires assent to a common core of beliefs among adherents. Such beliefs at the core are deemed sacred and irreproachable. There is no reason to stipulate that these sacred doctrines are limited to propositions about value and meaning. Numerous religious doctrines concern matters of historical, biological and archaeological fact. The belief that Jesus cleared the temple court at Jerusalem, overturning the tables of the money-changers and scattering their coins, is for many Christians a belief about a matter of historical fact. It would be odd to say that these Christians, in taking the story literally, and not as a mere parable, are no longer engaged in a religious activity, but have instead become amateur historians. As Massimo Pigliucci notes: ‘If one is a young Earth creationist, one isn’t violating NOMA by chance by rejecting evolutionary theory; that rejection is at the very core of the creationist’s belief’ (2010, 126). This opinion is shared by theists, as Alvin Plantinga notes: ‘Some of the teachings most central to Scripture and to the Christian faith tell us of concrete historical events; they therefore tell us of the history and properties of things within the cosmos’ (2001, 117).

This particular argument against NOMA runs that it is the very essence of some religions to provide explanations about the world around us. Thus, given that this feature is essential to some religions, NOMA must be false. The core religious doctrines by which we discern one religion from another are often doctrines concerning phenomena in the material world. Thus, religion is unavoidably engaged in describing and accounting for phenomena in the external world. Therefore, both science and religion aim to explain empirical phenomena, so the magisteria do overlap.
There is another argument against NOMA that does not depend on an appeal to the essential features of religion. One might argue instead that religious folk, for the most part, actually do happen to believe many historical, or geological, or biological claims on religious grounds. Religious folk believe that there was an original human pair because they have applied religious epistemic methods to the question of human origins. To label their belief non-religious, then, is to artificially limit the scope of beliefs that might be obtained by religious methods. Naturally, Gould would reply that these believers just happen to have some beliefs which they think are religious, but which are, in fact, not religious at all. But this reply does not quite engage with the argument as I see it.

The argument is that NOMA puts forward an arbitrary, stipulative definition. It does not carve religion, as a natural kind, at its joints. If almost every member of every religion accepts some point of doctrine (on religious grounds) that concerns a matter of fact, not value, then NOMA, in putting such doctrines out of the realm of true religion, redefines ‘religion’ in a way far outside of ordinary usage, and in a way that does not do justice to the nature of object of inquiry: religion as a particular kind of cultural institution. In other words, if Martian sociologists came to investigate the phenomenon of human religion, it is doubtful that they would come to the conclusion that human beings divide themselves into religious groups, the defining element of which is common assent to certain sets of beliefs which everywhere and always concern matters of value, and never matters of fact.

Putative explanations of empirical phenomena are given within religions and the explanations are justified by appeal to the results of religious methods. It is not the case that religious folklore serves only a moral purpose. Noah’s ark is not always an
allegory; sometimes it’s just a very big boat. Yet according to NOMA, the priest who teaches his flock that this boat came to rest on the mountains of Ararat is *no longer a priest*, but has metamorphosed into an amateur archeologist. *No true priest* sermonizes on big boats, according to Gould. (And no true Scotsman puts sugar on his porridge.) Of course, we could *choose* to talk like this if we wished to, but it is unclear why we should wish to, unless we were trying to cover up an undesirable truth that was otherwise in plain sight.

There is one last reason to reject NOMA that I would like to leave here. When religions *do* make pronouncements about matters of value, such pronouncements are often derived from doctrines concerning matters of fact. Consider, as the most obvious example, divine command theory. According to the divine command theorist, we ought not to transgress that which is forbidden by God. This ethical claim is grounded in a doctrine about the way the world is: it contains a God who explicitly forbids, say, murder. Similarly, consider the Buddhist ethic of altruism, which is inseparably grounded in the metaphysical theory of no-self. Since the self is an illusion, there is no unique person capable of owning any particular instance of pain. Therefore, all instances of pain are equally undesirable. It is moral to act to prevent pain *wherever* it is found or anticipated. Now, whatever you think of the Christian’s divine command theory or the Buddhist’s argument for selflessness, both derive from claims about the nature of the world. Religious value claims *depend* on factual claims. Both the Christian and the Buddhist, in clear contradiction of NOMA, must appeal to matters of fact to justify their ethical positions as *religious* positions at all.
1.7 Conclusion

Religions do make knowledge claims, and many religious practices are taken to be effective. The most popular theses to the contrary, Wittgensteinian antirealism (in all its forms) and NOMA, are flawed accounts of the nature of religious belief and practice. Both approaches, I fear, are primarily aimed at insulating religious belief from the disconfirmations of scientific evidence. Both approaches artificially delimit religious discourse, such that it is established as a sphere of understanding apart from science, evaluated according to different standards, kept hidden, or worse, kept sacred. The positions explored in this section have been shown to be on very unsteady psychological footings. Furthermore, if taken as stipulative definitions of ‘religion’, both Wittgensteinian antirealism and NOMA make many traditional religious beliefs and practices essentially non-religious.

I have not aimed to show that all religious practices are assumed to be effective, or even that all religious belief is truth-apt or empirically predictive. My aim has been only to show that some intrinsically religious beliefs and practices are, and that, therefore, Wittgensteinian antirealism and NOMA are false. Given that religions sometimes make knowledge claims, just like science does, we can infer that religion and science have the opportunity to stand in explanatory competition. Young Earth creationism is perhaps the best known contemporary example of a religious knowledge claim that stands in direct competition with many aspects of modern evolutionary theory. As is well known, the threat posed by creationism to contemporary science is now a political one, as there exist organized campaigns to interfere with the teaching of evolution in public schools. This interference is especially prevalent in the United States. The discord between creationism and
evolution is a symptom of the epistemological conflict between religion and science—a conflict which has now reached beyond Athens and Jerusalem, all the way to Dover, Pennsylvania. The young Earth creationist and the proponent of modern evolutionary theory disagree, and a reconciliation does not seem forthcoming. These disagreements are manifestations of the deep epistemological conflict at play.

But is the creationism debate really a symptom of an epistemological conflict? One might have reason to be skeptical. After all, that science stands in a state of disagreement with supernatural creationist theories is hardly a surprising fact. Science, it is said, accepts a methodological naturalism, according to which the denizens of the supernatural realm are rejected out of hand. Talk of gods, spirits, angels and demons is eschewed in science as a matter of principle. If that’s right, then it follows that the disagreement between scientists and creationists is no accident; it is institutionalized. Why should we expect religion and science to agree about substantive empirical matters when scientists have determined from the outset that the central objects of religious thought will be rejected come what may? If religious claims are methodologically eschewed in science, then of course disagreement will be the natural result. But such disagreement will not be epistemologically salient, it seems, since it results only from the scientist’s adoption of a certain principle while doing science. When the scientist hangs up his lab coat at the end of the day, he is also entitled to put to the side his naturalistic principles. He can return home believing in gods, goblins and ghosts. If methodological naturalism were like this, assumed only for the sake of doing science, then we should expect disagreement between science and religion. However, such a disagreement would fail to pack much epistemic punch, since the claims of science would be restricted to a limited domain
of naturalistic explanations. The claims of science could all be prefaced with the phrase ‘on the assumption that there’s nothing supernatural going on,’ and such a precaution might ensure that there is agreement between religion and science.

To anticipate these concerns, I now turn to the question of whether methodological naturalism prohibits explanations that appeal to supernatural entities from science.
2. Are Supernatural Explanations Prohibited in Science?

*They have endeavored to build a system of natural philosophy on the first chapter of Genesis, the book of Job, and other parts of Scripture; seeking thus the dead among the living.* — Francis Bacon, *Novum Organum*

2.1 Introduction

The conflict between science and religion has seen certain obvious flashpoints, the most famous of which is the battle over the scientific respectability of creationism. In this particular battle, there is perhaps no greater point of contention than the matter of whether or not scientists should accept methodological naturalism. Intelligent design proponent Michael Behe writes, for example:

> It is often said that science must avoid any conclusions which smack of the supernatural. But this seems to me to be both bad logic and bad science. Science is not a game in which arbitrary rules are used to decide what explanations are to be permitted. Rather, it is an effort to make true statements about physical reality. (Behe 2001, 255)

Behe’s allies in battle, Alvin Plantinga and Phillip Johnson, have also argued in a variety of places¹ that methodological naturalism is an arbitrary demarcation criterion that places an unreasonable prohibition on supernatural creation theories in science. If creationism is rejected a priori as an explanation for human origins, then of course something like naturalistic Darwinism will be accepted, they say. But for what reason, they ask, should we accept methodological naturalism in the first

¹ Several of these articles have been collected in Robert Pennock’s (2001) *Intelligent Design Creationism and Its Critics.*
place? A variety of philosophers have sought to address the creationists’ collective grievance. They have sought to explain why science accepts the naturalistic constraints that it does. I argue that most of these explanations have misconceived methodological naturalism. There is a general tendency in the literature to locate the naturalism of science in the metaphysical commitments of its explanations. I argue that this is misplaced. Methodological naturalism prohibits scientists, not from making appeals to certain kinds of entities, but from making appeals to methods of justification that do not yield intersubjective agreement. In particular, those methods whose reliability depends on appeals to some kind of supernatural agency.

The most popular interpretation of methodological naturalism, simply put, is that it is a principle of science according to which claims about supernatural entities are barred from entry. I define supernatural entities, in line with definitions given by Owen Flanagan (2006) and Evan Fales (2013), as causally efficacious disembodied minds or immaterial agents such as ghosts, gods, demons, and hobgoblins. Entities such as these should not, according to this interpretation of methodological naturalism, take up any explanatory role in any respectable scientific theory. To do so would be to break some rule, or some rule of thumb, of respectable science. So then, how is this anti-supernatural principle defended? After all, if there are demons and hobgoblins hiding in the laboratory, one would think that the scientist, nobly pursuing truth, would be the first to want to know.

At present, two conflicting defenses of methodological naturalism are usually put on offer, leading to two very different concepts of what methodological naturalism is. The first has been called, by Maarten Boudry, the intrinsic defense of methodological naturalism. The second is called the pragmatic defense. The former charges that
I will present the intrinsic and pragmatic defenses of methodological naturalism, before rejecting both of them. In their place, I’ll be putting forward a picture of methodological naturalism as a principle of science according to which supernatural sources of evidence, such as faith in a divine revelation, are eschewed. Since I believe that this particular concept of methodological naturalism was first clearly enunciated as a demarcation criterion between natural philosophy and theology in the Middle Ages, I’ll be drawing on some historical examples of medieval natural philosophy to support my case. In short, my case is just that methodological naturalism does not obligate science to reject supernatural entities, but to reject supernatural methods of acquiring evidence, such as those methods surveyed in the previous chapter.

### 2.2 Intrinsic Methodological Naturalism

The most popular defense of methodological naturalism is the intrinsic defense. This runs that science, by its very nature, cannot appraise supernatural theories. On this view, methodological naturalism is a ground rule, without which science ceases to be. It is a demarcation criterion, separating true science from pseudoscience and non-science. To give an example that puts the principle to work, when Newton famously suggested that God might have to tweak planetary orbits from time to time, the argument goes, he was no longer actually doing science. He was doing something
else, like theology or storytelling. This intrinsic view has been defended by several philosophers of science such as Michael Ruse, Robert Pennock, and Eugenie Scott.

Michael Ruse (2001, 377) has argued that supernatural explanations are “science-stoppers”. They are dead-end explanations; nothing more than tourniquets for doubt. We may *feel* as though we have explained the problem of, say, the origin of life by appealing to a miracle from God, but in reality, we have merely given ourselves an excuse to stop looking for better, naturalistic explanations that generate further testable predictions. The idea is that supernatural explanations are not really explanations at all, since they offer no predictions over and above the fact to be explained. They are simply, to use Darwin’s phrase, restating the fact in dignified language.

Robert Pennock (2001, 89) argues that supernatural explanations are unfalsifiable since any observation can be said to be compatible with the existence of supernatural agents unconstrained by natural law. No possible observation, he says, is incompatible with the existence of an omnipotent god whose will is inscrutable. He writes that such a being ‘may be called upon to explain any event in any situation, and this is one reason for the methodological prohibition against such appeals in science’ (2001, 93). Pennock further argues that this prohibition applies not only to theories containing *omnipotent* and *inscrutable* supernatural entities, but also to such lesser beings as demons and angels, as well as to gods with well-defined desires and capacities (2011, 189—90). So, since falsifiability is a hallmark of the scientific, and since supernatural explanations are not falsifiable, Pennock argues that supernatural explanations are not scientific. To use Popper’s terminology, such explanations have zero empirical content.
Eugenie Scott, former executive director of the National Center for Science Education, is also a defender of the intrinsic defense. She argues that ‘one cannot use natural processes to hold constant the actions of supernatural forces; hence it is impossible to test ... supernatural explanations’ (2001, 39). Furthermore, belief in supernatural beings is a matter of faith, not science. Science doesn’t have the right tools to investigate the supernatural. So, if you want answers to those kinds of questions, you’ve got to find your local priest, mystic or necromancer.

The above writers agree that supernatural theories must be rejected because such theories are not amenable to scientific investigation. Specifically, there are certain logico-epistemological features of supernatural explanations that put them beyond the purview of science. And to emphasize, according to the intrinsic view, scientists have not judged supernatural explanations to be false or unlikely or bad explanations. Scientists just can’t judge supernatural explanations. ‘Science is a limited way of knowing,’ says Scott; limited insofar as it is unable to reject the possibility of the supernatural (Scott 1996, 519).

The claim that supernatural theories are unfalsifiable science-stoppers has been convincingly dealt with by Boudry et al. (2010), and I direct the reader to that paper for a detailed rebuttal. I will only briefly go over the obvious problems with these claims. Firstly, one can invent all manner of supernatural theories that produce falsifiable, independently testable predictions. Elliott Sober asks us to consider the hypothesis that an omnipotent supernatural being wanted everything to be purple, and had this as a major priority (2007, 4). Purple ID is a supernatural theory that generates independently testable and falsifiable predictions. Beside me, as I write, there is a piece of greenstone sitting on a chest of draws. Therefore, purple ID is false.
To be sure, most theistic explanations are nothing like purple ID, but some will be more so than others. The claim that God created the world in six days and less than 10,000 years ago generates, in conjunction with our background knowledge, a greater number of testable predictions than the bare claim that God created the world. In any case, Sober’s example shows that supernatural theories are not necessarily unfalsifiable, or necessarily science stoppers, and so such theories cannot be excluded from science for those reasons.

Kelly Smith (2001, 707) has argued that the testability of any theistic explanation depends on the degree of reasonableness of the will of the posited god. ‘Reasonableness’ here refers just to the degree to which God’s will resembles others with which we are familiar. The more mysterious and inscrutable his will, the less predictable his behavior, and so, the less testable any theory incorporating such a God. Smith’s argument applies well to Eugenie Scott’s claim that one cannot hold other variables constant to test for an omnipotent God. It seems that we can hold other variables constant so long as the posited omnipotent God is a reasonable and reliable one, who only interferes in the workings of creation under very particular circumstances. If this reliable God, for example, did nothing other than unfailingly cure cancer patients each and every time a patient was prayed for, such a God would not, it seems, be so difficult to control for.

So, these arguments seem to bleed support from intrinsic methodological naturalism, since supernatural claims can be made falsifiable, can be made predictively potent and can be investigated under constrained conditions.

There is another reason to reject intrinsic methodological naturalism that Theodore Schick (2000) has argued previously. Science is ultimately silent on the
metaphysical commitments of new theories. No rule of science should prohibit, a priori, particular kinds of objects from inclusion into the body of scientific knowledge for the rather obvious reason that this may prematurely close off fertile avenues of investigation. Whether some theoretical entity is of any explanatory use should not be decided before viewing the evidence. Of course, there are plenty of other spooky concepts and entities in modern science, such as wave-particle duality, point particles and quantum entanglement, which would all be excluded from science if metaphysical constraints on spookiness were taken seriously. In other words, it is very difficult to understand why we should eschew causally efficacious disembodied minds a priori, but not objects that take up no space!

The important point, I think, is that the methodology of science may be able to tell us whether this claim is better than that claim, but not what we should claim in the first place.

2.3 Pragmatic Methodological Naturalism

Let us turn now to the pragmatic defense. The pragmatic defense of methodological naturalism charges that science does have something to say about the supernatural, and that so far, the verdict has been pretty negative. Scientists, then, are reasonable when they reject the supernatural, since the track record of supernatural explanations is so ghastly. Maarten Boudry and colleagues at the University of Ghent (2010) have argued that the preference for naturalistic explanations in science is a sensible rule of thumb that has been arrived at after the consistent failure of so many supernatural explanations in the history of science. Pragmatic methodological naturalism has also been defended elsewhere by Greg Dawes (2011).
According to Boudry et al, methodological naturalism is ‘an empirically grounded commitment to naturalistic causes and explanations, which in principle is revocable by extraordinary empirical evidence’ (2010, 229). The decision to eschew the supernatural ‘did not drop from thin air,’ they say, ‘but is just the best methodological guideline that emerged from the history of science, in particular the pattern of consistent success of naturalistic explanations’ (2010, 229—30). And Greg Dawes similarly argues that the preference for naturalistic explanations ‘should be regarded as nothing more than a provisional commitment, justified by reference to the history of these disciplines’ (2011, 7). This leaves us to wonder: by reference to what in their histories exactly? The implication is that the history of science has witnessed a dwindling of the sphere of supernatural explanations, as they are slowly discarded and replaced by superior naturalistic ones. As Boudry elsewhere writes ‘as a result of centuries of scientific investigation, earlier animistic, anthropomorphic, and teleological views have gradually been superseded by more parsimonious, impersonal explanations’ (2015, §3.3).

On the pragmatic defense, methodological naturalism is not an a priori dogma. It is no demarcation criterion. After all, we could give up on this naturalism caper at any time given compelling enough evidence. Maybe next week on an overcast morning, the clouds will part and celestial trumpets will shake the Earth and L. Ron Hubbard will descend bodily from the heavens, and if that happens, we needn’t scratch our heads wondering what natural law accounts for this very extraordinary event. We can simply abandon our naturalistic bias.

Since the claim is that supernatural explanations have consistently failed, it follows that science can judge the supernatural. The idea is that throughout history,
scientists have learnt that supernatural explanations are predictive failures. And indeed, just as the pragmatic defense alleges, scientific investigations into intercessory prayer, telepathy, special creation, intelligent design and other alleged supernatural phenomena have occurred. Furthermore, just as the pragmatic defense argues, such research has usually failed to confirm any of these phenomena. This seems to be pretty compelling evidence for pragmatic methodological naturalism. The pragmatic defense coheres better with the observation that supernatural claims have been tested, and appear to have been largely discredited.

However, the claim that science has, over the centuries, eventually adopted methodological naturalism in reaction to the failure of supernatural theories is a claim with virtually no historical support and much evidence against. Naturalistic theories did not gradually supersede supernatural ones in the history of science. From its very inception, science, or natural philosophy, was a discipline that necessarily subscribed to naturalism in some sense.

David Lindberg (1992) and Edward Grant (1996) have traced the naturalism of modern science to a rebirth of classical, pagan learning as early as the middle half of the twelfth century. And medieval philosophers such as Duns Scotus, Adelard of Bath, William of Ockham, Thomas Aquinas, Siger of Brabant, Nicole Oresme, Boethius of Dacia and John Buridan all explicitly repudiate the supernatural in natural philosophy. Yet these medieval philosophers had not tested a number of supernatural explanations and found them wanting. The subject matter of their

2 An overview of the scientific research of the alleged supernatural effects of prayer can be found in Dein and Littlewood (2008). For an overview of telepathy studies between the mid-nineteenth and late twentieth centuries, see Alvarado (1998).
research program just was the regular workings of the natural world. In particular, the medieval idea that natural philosophy was limited to the study of the ‘common course of nature’ (*communis cursus naturae*) by appeal to reason and sense experience was not an idea born as a reaction to the uninspiring track-record of supernatural explanations. Moreover, and here’s the important bit, medieval philosophers were able to hold both natural and supernatural knowledge side by side. But when the two ways of knowing stood in conflict, supernatural knowledge was usually given priority. In the fourteenth century, for example, John Buridan wrote that ‘we must hold on the basis of faith that the heavens are supernaturally created ... but it must also be said that the heavens are not naturally able to be generated or destroyed’ (Buridan in Biard 2001, 79). That is, by faith we may know that the heavens had a supernatural cause, but by all observational evidence, their movements have remained uniform throughout history. This latter claim is therefore grounded in a track record of observations, such as those alluded to in Aristotle’s *De Caelo*, in which he notes that all existing astronomical records, including the records of Babylonians and Egyptians, indicate that no change whatsoever has taken place in any part of the outermost heaven (Lloyd 1968, 136). This distinction between natural and supernatural knowledge should give us pause for thought about the nature of methodological naturalism. It should, in particular, give us reason to doubt the supersessionist historical narrative given to us by Boudry. Medieval natural philosophers clearly accepted methodological naturalism, yet argued that we must hold that the heavens are supernaturally created. The creation theory only fails on the naturalistic grounds which have already been presumed within the scientific domain.
As noted already, the pragmatic defense does not claim that the supernatural is totally prohibited from science, but only that scientists act sensibly when they avoid supernatural explanations. On this point, I admit that I share some common ground with Boudry and Dawes. We agree that so far, all proposed supernatural explanations that have been seriously considered by scientists have proven to be failures. Nevertheless, it is a misleading construal of the nature of methodological naturalism to say that it is entirely accounted for by the failure of previous supernatural explanations. This is not only historically inaccurate, but it also locates naturalism in the wrong context. Methodological naturalism is not a constraint on the subject matter of science, but, as the name would indicate, a constraint on the method of science. It is, I urge, an epistemological principle. To reiterate, I agree that entities that have repeatedly proven to be predictive failures should, ceteris paribus, be eschewed, but this eschewal does not account for the naturalism of science. Science does have intrinsic anti-supernatural commitments.

To recap, the pragmatic defense is correct that supernatural explanations are testable, have been tested and have often failed in the scientific arena. Yet on the other hand, the pragmatic defense gets wrong the historical claim that methodological naturalism was eventually adopted as a rule of thumb. The intrinsic defense also gets something right, insofar as science is a discipline with an explicit, a priori, anti-supernatural bias. But, the intrinsic defense doesn’t square with the observation that science apparently can test and has tested supernatural explanations. Thus, science is not a ‘limited way of knowing’ in the sense that Scott alleges. Given these shortcomings, neither view can be the right way to understand methodological naturalism. I believe there is another way.
2.4 The Intrinsic and Pragmatic Defenses Defend the Wrong Thing

Methodological naturalism is not a thesis about what may or may not be conjectured by scientists, but about how scientists may or may not justify their theories. Scientific justifications eschew appeals to supernatural methods of knowing, such as faith, revelation or spirit mediumship. Such justifications make an appeal to the authority of the testimony of some disembodied mind said to be providing testimonial evidence. Methodological naturalism is a restriction on ways of knowing, not on the metaphysical commitments of theories. For the scientist, only natural cognitive faculties may be used to collect evidence that may justify theories.

To be clear, it is important to draw the well-worn distinction between the context of discovery and the context of justification. The context of discovery is the context in which new theories are developed. The context of justification is the context in which theories, once developed, are appraised. There is no naturalistic methodological constraint in the context of discovery, and there are numerous examples in the history of science of theories dreamt up from the wildest of inspirations. Perhaps Kekulé’s half-waking vision of a fiery ouroboros, which inspired his theory of the molecular structure of benzene, is among the wildest. That a theory had an odd inspiration, however, is no blight on that theory. It is only with respect to our appraisals of new theories that science accepts a methodological naturalism. Kekulé’s theory is only as good as the evidence that can be summoned for it by a natural method.

Given this understanding of methodological naturalism, Buridan’s claim that we must hold that the universe was created on faith can be better understood. Although the medieval philosopher held as a matter of faith that the heavens were created by
God, the natural tools of reason and sense experience indicated that the heavens were eternal and incorruptible. This clear distinction between natural and supernatural ways of knowing is a ubiquitous one in medieval natural philosophy. The important point, however, is that the medieval natural philosopher institutionalized this separation of natural and supernatural knowledge in natural philosophy. Methodological naturalism was cemented in the Middle Ages as an injunction on appeals to faith in natural philosophy. The two most commonly appealed to naturalistic principles of medieval natural philosophy were the principle of the common course of nature and another principle that I call the principle of empiricism.

The principle of the common course of nature stated that natural philosophers should proceed as though nature always operated with the kind of regularity commonly observed in day to day life. Such a principle happened to exclude unpredictable miracles from the realm of science, but its epistemological effect was greater than just that. Joel Biard (2001) has argued, following Edward Grant (1978) and J. M. M. H. Thijssen (1987), that the principle of the common course of nature is a medieval principle of induction, that allows that our never faltering experiences of such things as hot fires may justify knowledge claims of general theories, such as that all fire is hot (Biard 2001, 91). Without such a principle, sense experience could not be taken to justify knowledge claims of universal theories. To establish the characteristic nature of fires, we conjoin our experience of all observed fires with an ampliative principle of the common course of nature. Knowledge of a scientific theory is then justified on the grounds that the theory’s predictions have been ‘observed to be true in many instances and to be false in none’ (Buridan in Grant 1978, 109). It is,
then, an epistemic, not metaphysical, principle. There are metaphysical implications of the principle of the common course of nature e.g. claims about unpredictable or irregular miracles are generally rejected. As Adelard of Bath wrote in his *Quaestiones Naturales*, miracles should be posited only when reason has been absolutely exhausted (Adelard 1920, 96). Nevertheless, theories making appeal to predictable, or controllable, supernatural entities need not be excluded by such a principle. Such a principle does not constitute a blanket prohibition on causally efficacious supernatural entities in science.

The principle of empiricism was another foundational principle of medieval natural philosophy. One can characterize this principle negatively as the view that knowledge claims or evidence allegedly derived from some divine authority, such as faith or scripture, may not be appealed to in the appraisal of theories. This secularization of knowledge is almost certainly due to the rediscovery of Aristotle’s empirical method in the twelfth century. The translation of the Aristotelian corpus between circa 1125 and 1200 brought forth a wave of optimism concerning natural human cognitive faculties. No divine illumination was needed for man to have certitude. Our natural cognitive faculties were sufficient for the acquisition of knowledge.

For a positive account of the principle of empiricism, Duns Scotus made the following list of the ways in which we may naturally acquire knowledge: a proposition may be self-evident, or we may know if from induction of particular cases, or by introspection, or we may know it directly from experience (Pasnau 2015). Such natural methods of knowing were kept strictly isolated from supernatural methods in the medieval university. One could apply the method of faith in the theology
faculty, but in the faculty of arts, reason and sense experience were the only legitimate tools. This distinction between knowing by faith and knowing by reason becomes so well established that it later becomes common for natural philosophers of the period to preface their scientific theories with the phrases *loquendo naturaliter* and *loquendo supernaturaliter*, that is, speaking naturally and speaking supernaturally. Buridan uses this distinction, as does his predecessor Siger of Brabant and his successor Nicole Oresme. Regarding the origin of the universe, these philosophers write that *speaking naturally*, it is known that the universe can be neither created nor destroyed, yet *speaking supernaturally*, it is known that it has been created by God. Natural reason alone tells us that the world is not capable of being created or destroyed, but faith tells us that there is a God who is capable of doing what is naturally impossible.

This distinction between knowing by faith and knowing by reason was cited in the Condemnation of 1277, which attempted to outlaw certain Aristotelian teachings from the University of Paris. In the preamble to the condemnation, Bishop Tempier writes that the dangerous doctrine shared by all these troublesome natural philosophers is that they 'state things to be true according to philosophy, but not according to the Catholic faith, as if there are two contrary truths' (Tempier in Dodd 1998, 133). But few (if any) of the philosophers of the day accepted the Averroist doctrine of double-truth to which Bishop Tempier is referring. Few genuinely believed that there were two truths that could be known by different methods. There was only one truth, and indeed, when pushed to make a decision about the eternity of the world, medieval philosophers on the whole *agreed* that the Earth must have had a beginning. The idea was that although the light of our natural faculties
established that the world was eternal, we nevertheless should accept by faith that it had a beginning when it was created by God. Ultimately, faith trumped reason. It just so happens that in natural philosophy, appeals to faith could not be made. Faith—quaque appeal to supernatural authority—was off-limits. Tempier includes this anti-supernatural principle among his condemnations. Specifically, he condemns those natural philosophers who claim ‘that man should not be content with authority to have certitude about any question’ (Klima 2006, 181).

This abrupt shift towards a natural method was not the result of the chronic failure of supernatural hypotheses, but was a definitive methodological feature of medieval natural philosophy. Medieval natural philosophers accepted that supernatural explanations were true, but also accepted that they could not be shown to be true in the realm of science. Crucially, medieval philosophers rejected supernatural testimony and adopted a natural concept of justification. Thus science was born. Therefore, when the pragmatic defense argues that methodological naturalism consists in nothing more than a scientific rejection of failed supernatural explanations, this is simply not true. It does. Science, as a matter of principle, eschews justificatory appeals to such things as divine revelation and faith. This naturalistic method of justification has been an intrinsic part of science since its establishment in the Middle Ages as a demarcation criterion between science and theology. The intrinsic defense, as presented by Pennock, Ruse and Scott, simply locates naturalism in the wrong context. Science is not necessarily naturalistic with regard to its explanations, but with regard to its method of justification.

Now, it remains the case that supernatural explanations are generally rejected as inadequate, but this is no kind of metaphysical bias. Many supernatural explanations
have been rejected after having been shown to be either redundant or false. Elliot Sober gives the example of the claim of Intelligent Design proponents that there is a supernatural cause for the vertebrate eye. Such a claim makes few predictions over and above the phenomena requiring an explanation. As Sober puts it, such a theory ‘entails that vertebrates have eyes, but that does not permit it to be tested against alternative explanations of why vertebrates have eyes’ (2007, 8). The ascription of a supernatural cause is clearly redundant. What is needed is some predictive power beyond entailing of the observation alone. Such predictions can be generated if Intelligent Design creationism is put forward in conjunction with auxiliary hypotheses about the nature of the designer. But whenever such auxiliary hypotheses have been brought forward, the resulting theory has been shown to be false. The problem is made worse by the fact that desirable auxiliary hypotheses are not typically drawn from a hat, or invented out of thin air. Typically, it is desirable that auxiliary hypotheses are adopted which have already garnered some degree of independent support (Sober 2007, 6). In the case of the designer’s nature, no such independently supported hypotheses are available (or, if they are available, they have been supported by religious, and therefore illicit, epistemic methods).

Thus, methodological naturalism is an epistemological principle of science. It is the principle that appeals to the epistemic methods of religion (and especially appeals to the authority of divine or supernatural testimony) are eschewed. This eschewal can be clearly seen in the work of medieval natural philosophers as science is becoming institutionalized, and it is only with this concept of methodological naturalism in hand that we can make sense of the medieval distinction between natural and supernatural knowledge. Locating the naturalism of science in the
metaphysical commitments of scientific theories is a mistake—a mistake that adds fuel to the collective grievance of creationists, who feel that their theories are rejected out of hand. Indeed, it is not their theories that are rejected, it is their method. This recharacterization of methodological naturalism is sorely needed.

2.5 Problems for this Conception of Methodological Naturalism

To this point, I have argued that methodological naturalism is an epistemological principle of science: a principle that eschews the use of putatively supernatural methods to justify theories. I have said, in a nutshell, that methodological naturalism does not tell us what we may conjecture. But an objection might be made that this epistemological principle amounts to the denial of a certain metaphysical picture of the world, specifically one in which there are disembodied minds who come into causal contact with human beings. Therefore, the principle does limit what we may conjecture. As Matthew Ratcliffe puts the objection:

A refusal to entertain the possibility that God speaks to people during religious experiences as an aspect of scientific deliberation does not amount to neutrality. In fact, it ultimately entails an ontological rather than merely methodological position, a position that implicitly rules out the possibility of certain coherent, theistic ontological claims. (Ratcliffe 2003, 323—4)

It seems that if there were disembodied minds floating about and revealing knowledge to human beings willy nilly, then this would be a fact about the world which scientists would wish to know. It is a conjecture about the causal structure of the world which, by my thesis, ought to be open to scientific investigation. So why are scientists justified in eschewing the claim that there exist disembodied minds that sometimes impart knowledge to the faithful, but not the claim that there exist disembodied minds?
Certainly, I do not wish to argue that the hypothesis that there may exist knowledge-imparting disembodied minds should be eschewed in science. Indeed, this is the very thesis I have been rallying against. Instead, I claim only that in order to justify any hypothesis, including the one just mentioned, science may make no use of evidence drawn by supernatural methods. How am I able to make this distinction without falling into a metaphysical trap? Like so: methodological naturalism, construed as an epistemological thesis, is a commitment to public methods, and this commitment is no kind of metaphysical prejudice. Publicity is an epistemological characteristic of scientific methods.

Since supernatural methods are private, they fail to generate scientific evidence. Only evidence collected by public methods counts as scientific evidence. After all, science is a communal activity that ought to be maximally inclusive; open to all rational and capable human beings. This inclusivity requires that the methods used be public. But just what counts as a public method? One of the more promising accounts comes from Alvin Goldman, who defines a method of evidence collection M as public iff (A) two or more investigators can severally apply M to the same questions, and (B) if different investigators were to apply M to the same questions, M would always (or usually) generate the same answers (induce the same beliefs) in those investigators (1997, 534). Thus, the tendency to generate intersubjective agreement is the hallmark of scientific methods. Private methods simply are not like this. Such methods generate intersubjective disagreement and conflict, not consensus. To be clear, there does exist some intersubjective agreement within particular religious communities with regards to the deliverances of some methods, but this intersubjective agreement is not in any way surprising. That is to say, this
intersubjective agreement does not tend to come about independent of a locally shared historical or cultural source. Methods that invoke the authoritative testimony of some immaterial spirit (faith in divine revelation, prophetic dreams, spirit possession etc.) have been used by many historically isolated religious cultures, and yet these methods do not generate the kind of surprising cross-cultural agreement that is required to admit such methods as scientific ones.

Contrast the persistent disagreement generated by supernatural methods with the agreement that is generated by the use of our natural cognitive faculties. Even historically isolated, preliterate, tribal societies have bodies of practical knowledge (concerning such activities as agriculture, fishing, and navigation) that share in common a surprising amount of theoretical detail. There is surprising cross-cultural agreement in the key principles of these “proto-sciences”, despite these cultures having long been isolated from each other. What makes this kind of agreement surprising? The agreement is surprising because the hypotheses underwriting this practical knowledge have not come from a common cultural source. Instead, this knowledge has been drawn from (and tested against) experience by each community separately. Our natural cognitive faculties and a process of trial and error generate surprising intersubjective agreement. In the sorts of cases mentioned above, historically and culturally isolated investigators, using the same methods of evidence collection, are led to the same conclusions. The methods they used, then, are demonstrably public.

But surely, one might think, that just is not so. Surely there are extensive differences in the theoretical beliefs of these historically isolated communities, even with regards to these bodies of apparently successful practical knowledge. Thus, the
criterion of publicity given here may be susceptible to the charge that no methods are capable of inducing the same beliefs in different investigators. After all, and as is well known, for any given piece of evidence there exists an infinite number of theories that are logically compatible with that piece of evidence. If that’s so, then Goldman’s criterion of publicity may be too strong, since investigators are, it seems, not only very often led to disagreement in practice, but probably inevitably led to disagree because of the problem of underdetermination of theory by evidence. As Gualtiero Piccinini (2003, 604) has noted, however, the practical impact of this underdetermination is mitigated once we are clear on what Goldman means by the phrase ‘induce the same beliefs’. If we understand ‘belief’ in the broadest sense, to include all our most general scientific theories and abstruse metaphysical beliefs, then this criterion of publicity would indeed judge no method to be public. Instead, ‘beliefs’ should be taken to mean beliefs about what the results are. It is this narrower kind of agreement that many methods do, in practice, happen to generate. While this answer fails to solve the logical problem of underdetermination (no surprises there), it nevertheless answers the sceptic who charges that in practice this intersubjective agreement cannot be found.

It ought to be emphasized that not all the methods used within religion are private. Deductive arguments for God’s existence, for example, generate the kind of agreement described above (they generate agreement about what the results or what the conclusions are). Nevertheless, supernatural methods are, it seems, private. Therefore, allowing supernatural methods to count as scientific methods would generate widespread intersubjective disagreement that was in principle irreconcilable. Keep in mind the variety of religious traditions with their distinct
supernatural authorities. Not only could the Bible be brought to bear on scientific questions, but the Qur’an and the Granth Sahib and Dianetics also. Scientific inquiry would be irreconcilably divided along religious lines if any investigator could bring forward private evidence in the appraisal of theories. Without a common set of justificatory tools, scientists would be led to a dangerous stalemate, a stalemate that Piccinini has appropriately termed *epistemic divergence*. There is no escaping this divergence without agreeing on a *public* set of epistemic tools: a set that tends to generate agreement. My thesis is, then, that the anti-supernatural commitments of the scientist are subsumed under the more general preference for public evidence.

Indeed, this scientific preference for justificatory methods that tend to generate agreement appears to have preoccupied Aquinas. He considers the argument, for example, that sacred doctrine is a lowly *scientia*, since not all men find its deliverances compelling or self-evident. The following argument is found in the *Summa Theologiae*:

> It seems that sacred doctrine is not nobler than other sciences; for the nobility of a science depends on the certitude it establishes. But other sciences, the principles of which cannot be doubted, seem to be more certain than sacred doctrine; for its principles—namely, articles of faith—can be doubted. (1.1.5)

Sacred doctrine does not command the assent of all people. Aquinas therefore also considers whether sacred doctrine should be considered a way of knowing at all:

> It seems that sacred doctrine is not a science. For every science proceeds from self-evident principles. But sacred doctrine proceeds from articles of faith which are not self-evident, since their truth is not admitted by all: “For all men have not faith”. (1.1.2)
He ultimately rejects these arguments, concluding that faith remains a bona fide way of knowing; just not a way of knowing that should be considered as justificatory within natural philosophy (1.1.6.ad.2). It is telling, however, that Aquinas considered the lack of intersubjective agreement surrounding faith to be a problem with regards to its status as a scientia at all.

The notion that publicity is a virtue of scientific methods can be traced to Aristotle. In the Metaphysics, he writes:

... the same thing never appears sweet to some and the contrary of sweet to others, unless in one case the sense organ which discriminates the aforesaid flavours has been perverted and injured. And if this is so the one party must be taken as the measure, and the other must not. (Met. 1063a 1—5)

Aristotle is closely followed by Aquinas, who also argues that the first principles of rational demonstration are those which are ‘common things that no one is ignorant of’ (1.2.ad.1). These common principles account for Aquinas’ commitment to the autonomy of rational investigation (De Ceglie 2016). Like Aristotle, Aquinas takes up the example of taste in his Contra Summa Gentiles:

That which is asserted universally, by everyone, cannot possibly be totally false. For a false opinion is a kind of infirmity of the understanding, just as a false judgment concerning a proper sensible happens as the result of a weakness of the sense power involved. But defects, being outside the intention of nature, are accidental. And nothing accidental can be always and in all things; the judgment about savors given by every tasting cannot be false. (2.34)

As noted by both Aquinas and Aristotle, when investigators disagree about what the results are while using sense perception (a method that is assumed to be otherwise public), this disagreement may be traceable to a weakness of the sense power or an injured sense organ. Thus, the reason for an unusual disagreement between parties
can be traced to a dysfunction or weakness of a cognitive mechanism. In more modern terms, Carnap writes:

Physicists believe that agreement can in principle be reached to any degree of exactitude attainable by single investigators; and that when such agreement is not found in practice, technical difficulties (imperfection of instruments, lack of time, etc.) are the cause. (Carnap 1963, 409)

Note that these claims about the shortcomings of cognitive mechanisms can be independently corroborated by the application of other methods that are themselves public. By such a procedure of cross-checking, public methods can be calibrated and the conditions under which any particular method is considered public is adjusted in turn. The scientist then comes to depend not only on surprising intersubjective agreement, but on surprising intermodal agreement, when faced with a conflict between competing methods.

I would like to consider one more objection that might be levelled at the general approach of this argument. It might be argued that my decision to locate the emergence of methodological naturalism in Europe in the Middle Ages is fundamentally misguided. After all, the ancient Greeks seem to have been doing pretty good naturalistic science before then, and Muslim philosophers picked up where the Greeks left off. So why not locate the emergence of methodological naturalism in those contexts? Moreover, it is added, even if the medievals did eschew supernatural methods, so what? This does not seem to tell us anything interesting about how we should understand methodological naturalism today.
In response, I say two things. First, I do not dispute that the ancient Greeks appear to have been doing pretty successful naturalistic science. However, the contemporary sources relating exactly why this Greek naturalism flourished are few and obscure. In contrast, the medieval era is virtually teeming with contemporary critical commentary that grapples at length with the tension between faith and reason. Aristotle was reintroduced into the hostile atmosphere of medieval Christian Europe so abruptly that an epistemological crisis ensued and a wealth of literature was spawned. What is clear is that methodological naturalism was self-consciously established in the Middle Ages as part of an intellectual tradition having clear roots in Aristotle. Thus, I have sought a conception of methodological naturalism in medieval natural philosophy for the same reason that a man seeks his keys under the streetlight. It is not more likely to be there, but if it is there, there is a better chance of finding it.

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3 A critic may argue that the flourishing naturalism of Greek science, for example, consisted in its rejection of superstitious supernatural explanations and their replacement by naturalistic ones. However, this rejection can be explained as the result of other methodological commitments of scientists besides methodological naturalism. So, supernatural explanations for epilepsy are rejected by Hippocrates in ‘On the Sacred Disease’ on the grounds that the distribution of epilepsy is non-random and apparently hereditary, which is unlikely if the ailment has a divine cause (Hippocrates 1923, 151). So, the theory that the ailment has a divine cause predicts something that we do not see. Hippocrates also points to the fact that those who ascribe a divine cause to the ailment nevertheless usually recommend naturalistic remedies. Yet if the ailment can be cured by naturalistic methods, then it is reasonable that it would have a naturalistic cause. At the least, the ascription of a divine cause is redundant. In neither case is a preconceived commitment to metaphysical naturalism required in order to reject the supernatural theory.
Second, I do not wish to argue that because this epistemological conception of methodological naturalism emerged at the birth (or rather, rebirth) of science, it is the right conception for modern science. This would be to commit a kind of genetic fallacy. Instead, however, I argue that there simply is no science without this conception of methodological naturalism. Once medieval philosophers adopted this naturalistic epistemology, they were doing science. The relevance of medieval natural philosophy is, therefore, not that it witnessed the genesis of methodological naturalism within an existing science, so much as it witnessed the genesis of science.

2.6 Back to the Battleground
Does the methodological naturalism of science entail the eschewal of supernatural explanations? I have argued that this is not the case. Creationism, for instance, is not prejudicially locked out of science on the grounds that the theory posits some supernatural agent, but because creationism is usually justified by appeal to a divine revelation whose authority can only be recognized by an act of faith. Divine revelation justifies the claim that there was a global flood. Divine revelation justifies the claim that the Earth is less than 10,000 years old. But when the Bible is put back on the bookshelf, and these creationist claims are put under scientific scrutiny, the theories almost all fail under the light of reason and observation.

To be clear, I am not alleging that creationism is defended solely by appeal to revelation, but that revelation is consistently introduced alongside more familiar, natural methods to justify creationist theories. For example, in their old Earth creationist manifesto Who Was Adam?, Fazale Rana and Hugh Ross speculate that ‘attempts to identify evolutionary pathways to modern humans will ultimately prove unfruitful’ given the present state of the available evidence, which includes both ‘the
fossil record’ and ‘Genesis 1 and 2 as well as Mark 10:6 and Matthew 19:4’ (Rana 2015, 48). Creationist theories are consistently supported by appeal to supernatural methods in conjunction with natural methods. The prominent young Earth creationist organization Creation Research Society, infamously demands that its members accept a statement of belief, the first principle of which is the following:

The Bible is the written Word of God, and because it is inspired throughout, all its assertions are historically and scientifically true in the original autographs. To the student of nature this means that the account of origins in Genesis is a factual presentation of simple historical truths. (C.R.S. 2016)

Thus, creationism is not scientifically respectable because its proponents explicitly rely on private, supernatural methods alongside more familiar, natural methods. Furthermore, when these supernatural methods are abandoned, and the creationist is forced to appeal to only public methods, no credible support is found for the creationist’s claims. Indeed, the creationist Duane Gish says: ‘we cannot discover by scientific investigations anything about the creative processes used by God’ (Gish quoted in Ruse 1982, 74).

In contrast, some versions of Intelligent Design theory, or ID, present a unique problem. Insofar as it is publicly defended by appeal to public methods, ID may count as a scientific research program. A failed one, to be sure, but scientific nonetheless. Proponents of ID can join the ranks of proponents of other failed research programs, such as animal magnetism and phrenology. Given the present state of the evidence, it is clear enough that few scientists would take ID to be deserving of, say, equal time in the classroom or substantial research grants from public bodies. Yet in the minimal sense of being publicly justified only by appeal to public methods, ID is, by the lights of the thesis argued here, scientific. Is there any way to avoid this
conclusion? Perhaps one could argue that since ID proponents are almost always believing Christians, who *privately* justify ID to themselves (and within the greater Christian community) by appeal to revelation, ID is not *honest* science. After all, it is an open secret that revelation ultimately drives the ID research program (Forrest 2004), yet these supernatural justifications are censored from official ID literature. However, if we are to arbitrate between honest and dishonest science according to the private justifications of its practitioners, we may be led to the conclusion that almost no science is honest. In any case, while the motivation for defending ID is almost always religious in nature, this does not entail that the defenses of the theory must themselves be.

What these considerations show is that in the battle over the scientific respectability of creationism, methodological naturalism is not the silver bullet that it is commonly taken to be. Methodological naturalism was institutionalized in the Middle Ages as an injunction on appeals to supernatural methods in natural philosophy. Thus, science has intrinsic anti-supernatural epistemological commitments. The philosophers of science who try to demarcate their way to victory in this battle, by way of an injunction on supernatural *metaphysics* should, I think, desist. Nothing is gained except the growing suspicion among creationists that there exists a conspiracy to keep their theories outside of science. No great wall is needed to prevent incursions of undesirable metaphysical elements into the fortress of naturalistic science. There are other ways to treat supernatural entities that need not be so hostile or defensive. Indeed, an empirical outlook and an appeal to public methods does most of the work in keeping gods, ghosts and goblins at bay.


3. The Epistemic Methods of Religion

*Reasoning will never make a Man correct an ill Opinion, which by Reasoning he never acquired* – Jonathan Swift, *A Letter to a Young Gentleman*

3.1 Introduction

Having argued that religions make knowledge claims which are not eschewed out of hand within science, I now turn to the question of how those claims are formulated, developed and appraised. Religions have characteristic methods of forming and justifying beliefs. These methods are unlike those used in science. An important part of assessing whether some belief is justified is appraising the method by which the belief is justified. But before we can appraise the methods of religion, we must first be sure of what the methods are. So, what kinds of epistemic methods are characteristic of religion? While much has been written on the general nature of religious practices, rituals and beliefs, very little attention has been given to the methods by which religious folk of a variety of religious cultures form and justify their knowledge claims. If religious adherents wish to maintain that their religious beliefs are justified, they would be wise to show that those beliefs are delivered by methods that tend towards the truth. The challenge has been taken up by Christian writers such as William Alston (1991) and Alvin Plantinga (2000). Both of these writers aim to show that practitioners of traditional Christian epistemic methods are within their epistemic rights to do so.

Typically, religious adherents claim that the success of their methods depends on the causal action of supernatural agents, such as ghosts, gods, demons, spirits, angels etc. The beliefs imparted to a believer during possession, or prayer, or a séance are
taken to have a supernatural origin. While the reader ought to remember to keep a
distinction between the methods carried out by the religious in the pursuit of
knowledge, and the practitioner’s explanation of how the method delivers
knowledge, I shall nevertheless, in what follows, describe the religious methods
incorporating the terms found within the practitioner’s explanation. It is tedious to
preface every example with ‘the practitioner believes that …’ or something similar. In
what follows, then, the reader will find spirits doing such-and-such, and God
intervening here-and-there. Yet this permissiveness of language should not be seen
as an endorsement of the metaphysical picture painted by the believer.

3.2 Epistemic Methods

Religions have many different methods for the achievement of many different aims.
The present thesis explores only epistemic methods: methods which aim principally
at the acquisition and justification of reasonable beliefs. Epistemic methods are
procedures or experiences that are considered to be appropriate for both belief-
forming and credence-modifying with respect to some target discourse in suitable
conditions. I will quickly define the key terms. A belief in a proposition $p$ is here
understood as a disposition to mental assent to $p$ as expressed by some sentence $S$.
Credence is here understood as a believer’s subjective probability that $p$ is true, when
$p$ is understood under some $S$. Subjective probabilities are identified with betting
ratios. So, someone with degree of belief $d$ in a proposition expressed by sentence $S$
is taken to be willing to pay $d$ for a wager that pays $1 if $S$ is true (Talbott 2008),
where $d \leq 1$. Epistemic methods are considered appropriate for belief-forming and
credence-modifying with respect to some target discourse. For example, pregnancy
tests are normally considered appropriate for justifying beliefs about pregnancy status, but not about the velocity of projectiles.

Note that epistemic methods are procedures that are considered to be appropriate for belief-forming and credence-modifying under suitable conditions. This proviso (call it the approval proviso) is added since any particular epistemic method may fail, on a given occasion of use, to generate new beliefs or change credences. Consider an inconclusive pregnancy test. Perhaps the woman using the test has forgotten whether a positive result is indicated by a single or a double stripe, so she forms no new belief and her existing credences remain unchanged. Perhaps an anomalous triple-stripe appears due to a manufacturing blunder: again, the woman’s beliefs and credences are unaffected. Nevertheless, pregnancy tests remain epistemic methods. Whether or not an epistemic method, in some instance of use, actually happens to form any new beliefs or change any existing credences is irrelevant to its status as an epistemic method. Epistemic methods, under certain conditions of use, are just considered to be appropriate methods for forming beliefs and affecting credence levels.

I add the approval proviso for another reason also: there may be a problem in identifying the genuine cognitive mechanisms responsible for belief change. Perhaps there are genuine cognitive mechanisms responsible for belief change of which we are unaware. Perhaps some mechanism we believe we have identified is in fact a cluster of conceptually distinct mechanisms. But these unknown mechanisms are of no interest to the present study. I am interested only in those alleged mechanisms that are considered to be appropriate for belief change, not the mechanisms that are actually responsible. I also must stress that I am not (yet) interested in which
methods are *actually appropriate or effective*. Many epistemic methods fail to be appropriate, in some normatively binding sense, for belief-forming and credence-modifying. Indeed, these are the methods that are of particular interest to the present study, since it is my contention that religious epistemic methods are all like this: considered appropriate by religious adherents, but not in fact appropriate. This chapter, however, only describes the methods used.

So defined, my notion of epistemic methods shares some overlap with William Alston’s notion of *doxastic practices*, which he describes as ‘a constellation of belief-forming habits or mechanisms’ (1991, 155). While Alston’s doxastic practices are necessarily socially established practices, I take epistemic methods more broadly. Epistemic methods are methods that are considered by at least *somebody* to be appropriate for forming and modifying beliefs, but such methods need not be considered appropriate by the wider social group to which that person belongs. The madman who seeks the cure for cancer by spitting on a candle and listening to the resulting hiss is on my account adopting some epistemic method. Note further that while Alston considers doxastic methods to be *prima facie* justified in virtue of being socially established, I do not regard a method’s being socially established as any reason to recommend it. The consequences of this difference will become apparent in later chapters.

Epistemic methods need not be deployed voluntarily or deliberately. Belief-forming and credence-modifying habits may be so habitual, or natural, or innate, that the activity goes on without notice. Consider beliefs formed by sense perception. I do not actively *decide* to apply my sense of touch when I wake in the morning. I simply wake up, and involuntarily feel the softness of the pillow on my face. I thereby
unreflectively come to believe that the pillow is still beneath my head. This involuntaryness is no blight on the epistemic method of tactile sense however. I consider myself entitled to the belief that the pillow is soft since the method of touch is one that I consider appropriate for forming and modifying certain kinds of beliefs. I will henceforth draw a distinction between active epistemic methods and passive epistemic methods. Active methods are voluntarily applied. Passive methods are not. The same method may sometimes be active and sometimes passive. I may wake up and involuntarily come to believe that the pillow is still beneath my head. And so here, tactile sense is a passive method. Alternately, I may wake in the middle of the night and spot a blurry patch beside my head. Unsure of what I am seeing, I may reach out with my hand, tentatively, to acquire some tactile information. I discover that it is simply the pillow beside my head. In this new case, tactile sense is being used as an active method. Some methods are, it seems, too complicated to be carried out passively, and so are exclusively active—radiometric dating, for example.

3.3 Religious Epistemic Methods

Religious epistemic methods are those procedures or experiences that are considered by religious communities to be appropriate for both belief-forming and credence-modifying in suitable conditions. While some methods used within religious communities are also used in scientific communities, the methods of particular interest for the present study are those methods that are either (a) not also accepted within the scientific community, or (b) used in both religion and science, but with radical differences in what is understood to constitute suitable conditions of use. Mystical experience is an example of a method that is not accepted as justificatory within the scientific community. For an example of a method that is used in both
religion and science, but with radical differences in what is understood to be suitable conditions of use, consider deduction. When a contradiction is encountered in the course of scientific reasoning, this is taken to be evidence that at least one of the premises is false. As I outline in my discussion of religious paradox, religions sometimes accept dialetheia (true paradoxes), and therefore accept that deduction is reliable under conditions not accepted in science.

**3.3.1 Types of Religious Epistemic Methods**

There are two families of religious epistemic methods: *phenomenal methods* and *logical methods*. Phenomenal methods are a posteriori methods: they deliver beliefs about the world only by *interaction* with the world. What is characteristic of the phenomenal methods of religion is that the efficacy of the method is explained by the action of supernatural agents. In contrast, logical methods are a priori methods; the beliefs derived do not depend on interaction with the external world, but on logic. What is characteristic of the logical methods of religion is an acceptance of true paradoxes (*dialetheia*) and an acceptance of sacred propositions which are understood to be immune to revision. The logical methods of religion are constrained by the norm-guiding religious notions of the sacred and the taboo, which draw a circle around the domain of tolerated criticism. The notions of the sacred, the profane and the taboo are judged according to the approval and disapproval of supernatural agents.

Within the family of phenomenal methods of religion, there are four types:

1. Divination
2. Acquaintance
3. Innate Belief

87
4. Testimony
And within the family of logical methods, there are two:

5. Inference
6. Paradox.

These six methods are distinctively religious, and the epistemological conflict between science and religion stems, in every case, from the use of these methods, on account of their inability to generate agreement in belief outputs, although that will not be argued for in this chapter.

3.3.2 Divination

Divination is a widespread religious epistemic method, found in the histories of all religions. In the *Shaff-Herzog Encyclopedia of Religious Knowledge*, George Gilmore defines “divination” as follows:

> The supposed art of discovering the will of the gods, of forecasting the future from indications ascribed to them, or of deciding from phenomena supposedly supernatural the correct course of action to be followed (1953, 450).

So understood, divination is a form of supernatural communication *by proxy*. Information is delivered from the supernatural agent, via some natural messenger, to the practitioner. These messengers may be any kind of living or non-living sign, and divination may be carried out actively or passively by the practitioner. Divination is usually undertaken according to a sophisticated interpretative scheme, and lengthy training is often required for religious novices to become expert in the method. The beliefs generated by divination may be either *prognoses* or *diagnoses* (Beerden 2013, 21).
3.3.2.1 Active Divination: Living Objects

Divination is often purposively carried out on living things, including plants, animals, and humans. Most commonly, the observed movements and behaviours of animals, especially in relation to various sacred markers, are the signs by which some supernatural message is delivered. This particular kind of divination is called *divination by behaviour*. To give an example of divination by animal behaviour, the Kenyah people of Northern Borneo had been observed to judge whether the next rice crop would be a success by watching the movements of water beetles as they floated atop a prepared, water-filled gong (Hose and MacDougall 1912, 113). These beetles were emissaries of Laki Ivong, god of the harvest.

Unusual physical characteristics of living things may also be the object of divination. The Devil’s mark, for example, was an identifying sign found on the bodies of witches during the European witch trials. It was described, by the witch-hunter John Bell in 1705, as having the following appearance:

> Sometimes like a blew spot, or a little tate, or reid spots, like flea biting; sometimes also the flesh is sunk in, and hallow, and this is put in secret places, as among the hair of the head, or eyebrows, within the lips, under the arm-pits, and even in the most secret parts of the body.’ (Bell quoted in Macdonald 1997, 507)

Sometimes these marks were undetectable, other than being numb patches of skin, leading European witch-hunters to the practice of “pricking” suspected witches with brass needles. What kind of explanation was given as to the origins of such marks? A supernatural explanation was given: the marks were argued to have been impressed on the skin by the grip of the devil’s claw. In other cases, the mark was taken to be a kind of teat, through which demons found nocturnal nourishment.
Perhaps the most grotesque form of divination of the living is *divination by ordeal* (Rose 1908, 777). Divination by ordeal has routinely been used as a method for the determination of guilt and innocence. There are two types of divination by ordeal: one positive and one negative.

In the positive case, some person, suspected of having committed some crime, is subjected to treatment that would normally injure that person. If the accused fails to be injured, this is due to the causal intervention of some supernatural power, and so this result is seen either to incriminate or exonerate the accused depending on the source of supernatural power (i.e. was the intervention from a divine or demonic source?). The following example is found in A. B. Ellis’ 1887 ethnography, *The Tshi-Speaking Peoples of the Gold Coast of West Africa*:

A husband who suspects his wife of having been unfaithful to him, but is unable to prove it, while the wife strenuously denies her guilt, subjects her to an ordeal. He obtains from a priest, to whom he states the case, certain leaves, which, the priest informs him, possess medicinal or magical qualities. These leaves he mixes with water in a calabash, in the presence of his wife, while an earthen pot containing palm-oil is placed over a fire. When the oil is boiling the wife has to dip her hand in the water in which are the leaves, and then at once plunge it into the boiling oil. If the hand should sustain no injury, she is guiltless; but if it be scalded, she is guilty. (200—1)

Early Modern European witch trials were famously rife with positive divinations by ordeal. The well-known method of “swimming a witch” was an ordeal by water that consisted in the suspect being bound and thrown into a body of water, while connected to a rope. If the suspect sank, she was retrieved and declared innocent. If the suspect floated, she was thereby shown to be guilty. The basis for the ordeal by
water was the widely-held belief that water, a symbolically pure substance, would refuse to receive those tainted by the spiritual crime of witchcraft (Zguta 1977, 221).

In the case of negative divination by ordeal, some accused person is subjected to treatment that would normally leave them unharmed. If the accused is thereby harmed, this is due to the intercession of some divine or supernatural power, and so the accused is declared guilty. An example of negative divination by ordeal is the Medieval trial by eucharist (Schaff 1885, §79 p.362—3). A cleric suspected of some capital crime, such as murder, adultery or theft, would be made to take the bread and wine of the eucharist. If he is able to consume it unharmed, he is not guilty. If he chokes, or falls ill, this is a supernatural sign declaring his guilt.

3.3.2.2 Active Divination: Non-Living Objects

Divination may be purposely carried out on non-living objects. These include man-made artifacts such as books or machines, natural geological and meteorological phenomena such as volcanoes or clouds, as well as the celestial bodies and the lifeless bodies of dead creatures.

Haruspicy, or the reading of entrails, is perhaps the best-known example of divination of a non-living object by its physical characteristics. The practice featured prominently in ancient Etruscan and Roman religion, and is still practiced today among other historically disconnected religious cultures. In Peru, for example, entrails of guinea pigs are used as diagnostic tools by traditional healers who take the animals’ bodies to be rich with signs (Pratt 2007, p.120).

Kinetic artifacts are also the object of divination. The movement of pendulums is noted as a method used by Malay traditional healers to answer all manner of questions (Rose 1908, 779). In central Africa, we find a wide variety of so-called
friction oracles, the most elaborate of which might be the Congolese galukoji, an accordion-like device, with a carved head at one end. The galukoji is held in the lap, while the practitioner recites a list of names of suspects of some crime. The head of the galukoji springs upwards and downwards as names are read out, but on the utterance of the guilty party’s name, the head will spring forth to its limit, and that is the guilty party (LaGamma 2000, 56).

Straddling divination by behaviour and divination by physical characteristics we find astrology: a culturally widespread form of divination carried out according to the position and movement of celestial bodies. Astrology is difficult to classify strictly as a form of divination, since the celestial bodies themselves have often been considered, by all kinds of early religious communities, not simply as signs of the divine, but as divine agents themselves. Furthermore, although it is the case that the standard model in most cultures has ‘God or gods and goddesses communicate with humanity via the stars, giving notice of their intentions’ (Campion 2015, 107), some astrological systems, such as the Chinese horoscope, do not assume the existence of any supernatural agency to explain their efficacy. Therefore, not all astrological methods are religious methods.

Note further that the general method of making predictions according to the positions and movements of celestial bodies is a method heartily endorsed within science. Astronomy and geoscience are both fields that make predictions on the basis of the movement of the celestial bodies. One important difference between the astrologer and the astronomer concerns the kinds of questions deemed to be answerable by appeal to the heavenly bodies. Thus, the duration of military sieges is predicted according to the astrology of the Māori (Campion 2015, 112). Ptolemaic
astrology makes predictions about which marriages will be happy or unhappy. And famously, the star of Bethlehem revealed the location of the baby Jesus to the Magi. In contrast, astronomy, as a modern scientific discipline, does not make predictions such as these, which concern specific details of events in our cultural and personal lives.

3.3.2.3 Active Divination: Visions

Commonly, in religious cultures having a specialized role for shamans or visionaries, visions or apparitions are induced as a means of symbolic communication between the supernatural and natural realms. Visions are most commonly elicited by the infliction of bodily stresses, such as by self-torture, sleep deprivation and fasting. They may also be elicited by the administering of psychoactive drugs, or by repetitive and lengthy rituals involving focused attention.

Psychoactive drugs figure prominently in the ‘vision quest’ ceremonies of indigenous North and South American religions: decoctions of peyote cactus and ayahuasca are consumed. Moreover, the hallucinogenic compound ibogaine is used to elicit visions in the bwiti sect of Christianity practiced largely in West Africa. In these cases, hallucinogenic drugs are administered in the context of some ceremony (often a man’s coming-of-age ceremony), and the visions undergone by the initiate can be either prophetic or diagnostic (Cohen 1998, 54).

As noted, bodily stresses and self-torture figure prominently in the quest for visions. The following list of vision-inducing methods across shamanistic communities can be found in Noll (1985, 447): focused suggestive attention, pain stimulation, hypoglycemia, dehydration, forced hypermotility, temperature
stimulation, acoustic stimulation, seclusion, sensory deprivation, sleep deprivation, kinetic stimulation and hyperventilation.

The visions had by practitioners may be seen as existing in a space external to the believer, or as a kind of internal mental imagery. Whereas external-type visions are more commonly elicited via amplifying sensory stimulation, internal-type visions more commonly require sensory deprivation, especially of the visual system. So, for example, both Russian Shelkup shaman and Samoyed mystics wear blindfolds in their quests for visions. Similarly, Eskimo and Aboriginal mystics seek visions while lying prostrate and unmoving in dark and silent conditions (Noll 1985, 447).

A common method of eliciting visions is scrying, or crystal-gazing. This is a popular form of active divination in which visions are elicited by focusing attention on some reflective object, such as a mirror, still lake, or polished crystal.

3.3.2.4 Active Divination: Dreams

Although dreams are more commonly used as a passive epistemic method, dreams may sometimes be purposely induced for the sake of divination. One example of active divination of dreams is the ancient Greek method of incubation. The practitioner of incubation would sleep in a sacred temple belonging to some chosen god, petitioning the deity for a message about future events (Stroumsa 1999, 193–4). Incubation was particularly popular as a tool for the diagnosis and treatment of illness. The gods would visit the patient and reveal an appropriate treatment. This method was not only taken up by the ancient Greeks. Indeed, it has been argued on archeological and textual evidence that the practice of incubation lived on in the early Christian world, possibly as a continuation of the pagan tradition, although this is a disputed claim. Within the Christian tradition of incubation, it seems that the Church
may have replaced the sacred temple as dormitory and patients would find their
dreams to be visited by intermediary saints rather than pagan gods (Graf 2014, 133—
7).

3.3.2.5 Passive divination: Dreams
The fantastical imagery of dreams makes fertile ground for interpretation. It is no
wonder, then, that strange and unsettling dreams would be the objects of divination.
Indeed, the divination of dreams is one of the most common, and most ancient,
epistemic methods found in religion. The popularity of religious dream
interpretation is probably due to a popular folk metaphysical view of the relation
between the soul and the body. A common theme of many primitive societies is that
the soul leaves the body during sleep, and this is taken to explain the efficacy of the
method of dream divination. As the soul roams about, it encounters a world not
normally accessible to the world of embodied sense experience. The contents of
dreams are very often taken to be prophetic.

Indeed, the popularity of the method cannot be overstated. The Bible contains
close to ninety verses referring to prophetic dreams. Dream divination was
particularly popular in the medieval Muslim world, with large and impressive
volumes produced to aid their interpretation. One particularly important text was
Ibn Sirin’s Dictionary of Dreams. In this work, he notes that not every kind of dream
is amenable to divination. Non-divinable dreams are of seven kinds:

1. Dreams had during periods of great distress
2. Erotic dreams involving nocturnal emission
3. Nightmares
4. Dreams brought on by demons
5. Dreams brought on by Satan

6. Self-interested dreams that serve to fulfil waking desires

7. Dreams caused by pain from a physical ailment (Al-Akili 1991, xix)

Interestingly, the early Christian theologian Tertullian also argued that not all dreams were divine signs. Among Tertullian’s typology of dreams he describes ‘incoherent dreams brought on by the ecstatic soul that are not open to narration or interpretation’ (Miller 1994, 68—9). While Christian and Muslim traditions seem to have agreed that some dreams should not be the objects of divination, this was not accepted by other religious cultures. The Ten’a people of Alaska, for example, appear to have accepted all dreams as containing prophetic messages (Jetté 1911, 242).

The dreams had by animals, despite our relative lack of epistemic access to these, may also have been the object of divination by some religions. A particularly interesting case is described by Elsdon Best. He notes that New Zealand Māori hunters saw the involuntary twitches and barks of sleeping dogs as an indication that those dogs were reliable for catching kiwi upon waking (1898, 126). Aristotle also considered the question of whether the dreams of animals were prophetic (1963, 463b). Interestingly, Aristotle was led to conclude that the existence of animal dreams (inferred from their involuntary bodily movements while sleeping) actually spoke against the theory that all dreams could be prophetic. Aristotle’s reasoning was that the gods would have no reason to give prophetic dreams to unreasoning brutes.

### 3.3.2.6 Passive divination: Visions

Spontaneous, non-induced visions may appear to be in external space, or they may be internal visions, impressed on the imagination by some supernatural force. Lucia
Santos’ apocalyptic visions of 1917 were approved as ‘worthy of belief’ by the Catholic Church. These were certainly external visions. Santos first witnessed the Virgin Mary appearing above an oak tree in a field. She later describes one vision of an angel carrying a flaming sword as occurring ‘at the left of [a statue of] Our Lady and a little above’ (Matter 2001, 132).

Despite their alleged supernatural origins, the phenomenon of internal visions is often connected with temporal lobe epilepsy. There is a great deal of literature on this observed connection, which has been noted since the time of Hippocrates, who dubbed the condition the ‘sacred disease’, while insisting of course that the condition had quite natural causes. In a more recent study of the connection between epileptics and religious experience, the following account of a non-elicited internal vision is described:

[The patient] had a vision in which he was in the cockpit of an aeroplane flying over a mountainous region of France. The aircraft gained altitude and brought him to a different land, a land of peace. He had no cares and no burdens. He felt that the power of God was upon him. (Dewhurst and Beard 1970, 500)

The patient proceeded to convert to Christianity.

### 3.3.2.7 Passive divination: Omens

There is a more general class of passive divination, in which signs may be embodied by living or non-living objects encountered in daily life, without having been contrived. The signs embodied by these objects are usually called omens. The messages conveyed by omens are often not very informative. Such messages may be, in the most general sense, simply auspicious or simply foreboding.

Involuntary human bodily movement is commonly taken to be an omen. Yawns and sneezes are particularly common examples. The Ten’a Alaskans regarded yawns
as having been sent by protector spirits to contradict one’s train of thought. Thus, if one were to yawn while worrying about the downward trend of a loved one’s state of health, the yawn is an omen that they will recover (Jetté 1911, 243). Sneezes are described as omens in the *Problemata*, a work falsely attributed to Aristotle. Interestingly, it is noted in this work that the ancient Greeks considered sneezes to be ominous if occurring in the morning, but auspicious if occurring at night (1927, 962b). Disagreeing with the Greeks, the *Ten’a* saw the *originating location* in the nose as the deciding factor: if a sneeze begins with a tickling in the right nostril, this indicates food and plenty ahead. Tickling in the left nostril is a bad omen (Jette 1911, 243).

The sudden appearance of certain animals, especially birds, has been a near universal omen in religious cultures, although the significance of this omen differs across cultures. The appearance of *people*, as well as animals, may also be taken as an omen. In the Christian tradition, for example, John the Baptist is sometimes identified as a harbinger of the coming Messiah. Meteorological phenomena have also made fertile objects of divination. We find, for example, the Jewish and Christian traditions taking the rainbow as a good omen: a symbol of the covenant God made with Noah after the global deluge.

**3.3.2.8 Passive Divination: Miracles**

The observation of miracles is also a kind of divination, albeit one in which the interpretive scheme is relatively impoverished. To observe some miracle is to observe some physical event that has a disembodied spirit or force as a proximate cause. To describe some event as miraculous is to ascribe some proximate supernatural cause to the observed event. In his classic essay ‘On Miracles’, Hume provides the following
Thus, there are two notable marks of a miracle. The first is that miracles are quite unlike other forms of divination which can often resemble natural magic, in the sense that such effects are often regular, controllable, and repeatable. Miracles are no part of the ordinary course of nature; they are violations of it. Their happening is typically unpredictable and unexpected. Secondly, miracles need not necessarily carry any deeper significance or connection to part of a recurring pattern of supernatural signs. To be sure, some interpretive scheme will be applied to the observation of any miracle post hoc, but this scheme will be relatively pared-down or ad hoc e.g. a statue that cries blood may be ascribed a supernatural cause, and may be called a miracle. Only later will it be given some interpretation as a sign, especially if the miracle can be related to some later event such that it can be seen as having portended.

### 3.3.3 Acquaintance

For the most part, divination requires a subtle understanding of the signs and symbols that mediate knowledge between the supernatural and natural realms. In contrast, some religious epistemic methods provide direct evidence of the supernatural. Thus, whereas divination is an epistemic method with a large inferential component, some religious epistemic methods are argued to directly acquaint the practitioner with the supernatural objects of belief. An analogy is often made to the deliverances of the senses: I am aware that the shirt I am now wearing is green. How am I aware of this fact? It seems that my belief stems from my direct cognitive contact with the shirt itself (in this case, through the faculty of vision). Similarly, methods of religious acquaintance allow practitioners to perceive a
supernatural reality directly via some separate or supervenient cognitive faculty whose proper operation, under suitable conditions, is informative about supernatural beings, among other metaphysical and moral matters. As the ancient mystic Plotinus put it, during mystical experience the divine is ‘like a thing of sense,’ since it is ‘immediately perceived’ (1999, 43). The practice of cultivating this quasi-perceptual experience is usually given the term *mysticism*, and its practitioners labelled *mystics*. Mystical experience can be defined as the direct experience of supernatural objects by means other than our natural cognitive faculties.

There is an important feature of mystical experience that I urge the reader to keep in mind. In contrast with divination, which is a collection of disparate methods practiced in a variety of conflicting ways and taken to answer a wide variety of dissimilar questions, mystical experience often produces some surprising agreement among its practitioners. Mystics often come to similar conclusions about the nature of their experiences and about the fundamental, metaphysical and moral insights delivered by the method. The idea of ‘unity’ is a persistent theme of mystical experience and mystics often describe uniting with a supernatural being, or of the supernatural being visiting the soul (Teresa of Avila 1921, p. 125). Because of this feature of mystical experience, it is very common for practitioners to agree on the claim that the self or soul is *absorbed* by a supreme being during the experience. While mysticism is focused on the individual’s efforts to achieve communion with some supreme being, there remains a supernatural cause that gives authority to the experience. This supernatural being meets the mystic ‘with a divine grace which both purifies and illumines the soul’ (Beckwith 1953, 68).
Mystics claim that the fundamental nature of reality is only properly known or understood during a mystical experience, whereas at other times everyday experience shrouds this ultimate truth in darkness. Thus, the deliverances of our natural cognitive faculties are argued to be illusory in contrast. The 16th century mystic Teresa of Avila writes, for example, that during the ‘prayer of union’, God ‘deprives the soul of all its senses that He may the better imprint in it true wisdom’ (1921, p.125). The senses may err, but God cannot.

Although predominantly practiced as a religious method, mysticism is not only a religious activity and mystics have often come to the practice without any religious or theistic interpretation of their experience. That being said, it is apparent that mysticism has been sanctioned by some religions at some stages of their histories and that mystical experiences have been interpreted as having divine causes. This is further taken to be a kind of evidence for the truth of various theistic claims. That being said, there is notable disagreement about which supernatural claims are thought to be justified by mystical experience. Indeed, some mystics experience a single godhead, some experience several deities, and still others experience a variety of lesser spirits (Fales 1996, 305). Thus, while there is a degree of agreement with regards to the deliverances of mystical experience, there are notable differences as well. Russell remarked on this point:

While the witnesses agree up to a point, they disagree totally when that point is passed, although they are just as certain as when they agree. Catholics, but not Protestants, may have visions in which the Virgin appears; Christians and Mohammedans, but not Buddhists, may have great truths revealed to them by the Archangel Gabriel; the Chinese mystics of the Tao tell us, as a direct result of their central doctrine, that all government is bad, whereas most European and
Mohammedan mystics, with equal confidence, urge submission to constituted authority. (Russell 1935, 180)

Despite Russell’s warning, it must be kept in mind that the mystics still agree up to a point. There is notable convergence in the contents of first-person reports of the phenomenology of mystical experience. This has led several writers to systematically analyse the phenomenological characteristics of mystical experience. Several of these analyses have resulted in measures of mystical experience that have been put to work in psychology, neurotheology and psychopharmacology (Griffiths, 2006; Pahnke, 1966). William James was the first to present a systematic analysis of the phenomenological characteristics of mystical experience. In his seminal work, *The Varieties of Religious Experience*, James lays out the following four marks of mystical states:

1. **Ineffability:** The experience defies expression.
2. **Noetic Quality:** Mystical states are states of insight into depths of truth unplumbed by the discursive intellect.
3. **Transiency:** Mystical states cannot be sustained for long.
4. **Passivity:** Although the oncoming of mystical states may be elicited by a variety of procedures, when the characteristic sort of consciousness once has set in, the mystic feels as if his own will were in abeyance. (James 1999, 414—16)

Following James, Walter Stace (1960) gives the following nine characteristics in his phenomenological typology of mystical experience:

1. **Unity:** Subject is either aware of an internal oneness of all consciousness or of an external oneness of all physical objects.
2. **Transcendence of Time and Space**: Subject feels outside of time or outside of three-dimensional space, sees the “unreality” of time or space.

3. **Deeply Felt Positive Mood**: Subject feels intense bliss, peace or love, often assisted by tears.

4. **Sense of Sacredness**: Subject feels a sense of awe or reverence for the experience.

5. **Objectivity and Reality**: Subject feels deep insight or illumination, with a sense of certainty about purpose or values.

6. **Paradoxicality**: Subject mentally assents both to a proposition and its negation. The truth of both propositions is claimed to be understood as unproblematic. Subject becomes a “temporary dialetheist”.

7. **Alleged Ineffability**: Subject takes the experience to be beyond words, non-verbal, impossible to describe.

8. **Transiency**: The intensity of the subject’s experience peaks at some point, after which the experience subsides. The experience is temporally discrete.

9. **Persisting Positive Changes in Attitude and Behaviour**: Subject feels greater appreciation and good feeling toward both self and others.

By far the most popular contemporary measure of mystical experience, Hood’s Mysticism Scale (Hood 1975) includes five phenomenological factors of mystical experience, which correspond roughly to the first five factors noted by Stace. Besides Hood and Stace, Russell noted the following three core doctrines associated with mystical experience:

1. **Unity**: that all division and separateness is unreal, and that the universe is a single indivisible unity.

2. **Moral Nihilism**: that evil is illusory; that is to say that good and evil, while seemingly opposite, are identical.
3. *Temporal Nihilism*: that time is unreal, and that reality is eternal, not in the sense of being everlasting, but in the sense of being wholly outside time. (Russell 1935, 179)

The evidence upon which these typologies are based is largely the oral and written testimony of a broad sample of mystics from a variety of different religious traditions. As can be seen in their ordering of the characteristic qualities of mystical experience, Stace, Hood and Russell give priority to the theme of *unity*. Unity beliefs are regarded as absolutely central to mystical experience. James says that ‘in mystic states we both become one with the Absolute and we become aware of our oneness. This is the everlasting and triumphant mystical tradition’ (James 1999, 457). On the same point, Stace writes that unity is the ‘one basic, essential, nuclear characteristic, from which most of the others inevitably follow’ (1960, 110). Indeed, there is no need to quote philosophers. We may as well let the mystics speak for themselves. The following is a list of verbatim first-person reports from practitioners of mystical states exemplifying the theme of cosmic unity:

‘I didn’t know where I ended and my surroundings began.’

‘The sense that all is One, that I experienced the essence of the Universe.’

‘I was able to comprehend what oneness is.’

‘The complete and utter loss of self... The sense of unity was awesome...’

‘All things are connected.’ (Selected from Griffiths 2008, 19)

As with the other religious epistemic methods described so far, mystical experience may be actively sought or may fall upon a person passively. When actively sought, mystical experience is elicited by many of the same procedures already described for eliciting active visions. The reader may remember that most of these procedures demanded some form of sensory deprivation or hyper-stimulation, and the role of...
psychoactive drugs was also noted. That such drastic and often painful measures are necessary might lead one to think that mystical experience is pathological: the result of a disordered, distressed or dysfunctional mind. Russell was of this opinion, writing:

> From a scientific point of view, we can make no distinction between a man who eats little and sees heaven and the man who drinks much and sees snakes. Each is in an abnormal physical condition, and therefore has abnormal perceptions. (1935, 188)

But, as C. D. Broad put it, perhaps you simply have to be a bit “cracked” to get “peep-holes” to the supernatural (2014, 198). That our cognitive faculties are used in an abnormal way is no evidence that their deliverances will be unreliable when the putative objects of the experience are themselves abnormal. Indeed, anyone familiar with the *Magic Eye* illusion series knows that the only way to see the hidden image is to look at the page with a diverged focus.

### 3.3.3.1 Active Mystical Experience: Devotion

Devotion has often been used as a means to elicit mystical experience. ‘Devotion’ is here defined as enthusiasm, adoration, attentive preoccupation, submission or obedience with respect to the object of devotion, where the object of devotion may be a person, a totem, a spirit or a god. Note that religious devotion is commonly part of the ritual practice of religion in a way that does not qualify it as an *epistemic* method. For example, a Muslim might practice devotion in praying five times a day, but this is not in order to attain mystical insights, or to change any of his beliefs at all. Such devotional practices are simply intended to gratify Allah.

In Indian religious traditions, devotion figures prominently as a means to mystical experience. This devotion is usually played out as a relationship between
guru and devotee. The devotee is encouraged to adore the guru and to make the guru the object of persistent attentive preoccupation. By way of guru devotion, the devotee may reach supernatural truths immediately. The guru acts as the source of supernatural knowledge, and devotion allows supernatural knowledge to flow from the guru to the devotee. Thus, devotion from the devotee to the guru generates something akin to a conduit by which the mystical, transcendent experience of ultimate truth may flow. That a conduit is nurtured between guru and devotee by the act of devotion is stressed in these traditions. Take, for example, what the new age guru Adi Da Samraj (a.k.a. Franklin Jones) had to say on the matter of guru devotion:

> You enter more profoundly into this turning to Me, which becomes surrender to Me, which is merely Beholding Me and being able to “Locate” My specific Transmission of My Transcendental Spiritual Nature and Presence, Which Ultimately Reveals My Very State—Which Is the State, the Divine Self-Nature. (Adi Da Samraj 2004)

Although making use of many more capital letters, Adi Da’s words are reminiscent of Christ’s exhortation to devotion: ‘I am the way, the truth and the life. No one comes to the father except through me.’

Indeed, devotion is a persistent theme in Christian traditions, with the Holy Spirit taking up the position of the Indian guru as the object of devotion. Teresa of Avila, the quintessential Christian mystic, characterizes devotion as a means to mystical experience when she says that ‘true union can always be attained by forcing ourselves to renounce our own will and by following the will of God in all things’ (1921, 140). Teresa’s devotion culminates in ecstatic, mystical experiences of union with the divine: ‘the soul is now a new creature,’ she says, ‘it is continuously absorbed in God’ (2001, 9).
3.3.3.2 Passive Mystical Experience

Mystical experiences may sometimes set on a believer spontaneously, without having any contrived conditions as a means of elicitation. As was also noted for passive internal visions, temporal lobe epilepsy is commonly associated with this kind of mystical experience.

As far as the great religious traditions go, the biographical *Puratan Janamsakhi* appears to indicate that Guru Nanak, the founder of Sikhism, had just such a passive mystical experience as he ventured to bathe in a local river. There is no indication that Nanak had deliberately sought such a mystical experience. A poetic description of this experience, apparently written by Nanak himself, appears as the first composition of the Sikh sacred scripture, the Granth Sahib. It begins with a paradigm description of the mystical experience of unity, emphasizing the oneness of God, who is transcendent as well as immanent. He has a ‘timeless form’, being unbegotten, self-existent, ‘not produced from the womb’ (Nanak 1970, 1).

More controversially, passive mystical experiences may come in the form of near death experiences. Near death experiences are mystical experiences, in which the believer is brought into contact with a supernatural, unitary consciousness, after having been assumed to be dead or very nearly dead. Such experiences are often had alongside a particular assortment of standard visions, including a vision of a tunnel or tunnels, a supernatural ‘being of light’ who communicates some message, a vision as of leaving the body and viewing it from a different perspective and, frequently, visions of deceased friends and loved ones (Engmann 2014, 6). Accounts of near-death experiences are not restricted to the modern era. Plato, in his *Republic*, discusses the myth of the hero Er, who was slain in battle. Twelve days later, says
Plato, ‘he returned to life and told them what he had seen in the other world’ (1955, XI §3). By Plato’s account, Er’s soul left his body and came to a mysterious place where there were two openings in the earth and two other openings in the heavens above. Great judges were seated, who commanded the just to ascend to heaven, and the unjust to descend. The myth of Er is unmistakably similar in some respects to modern descriptions of near-death experiences.

3.3.3 Innate Beliefs

Whereas mystical experience is analogous to perception in that the supernatural objects of belief are presented to the practitioner, beliefs about the supernatural may also be formed in a way analogous to other forms of innate knowledge. By this method, one does not reason one’s way to belief in the supernatural, and neither does one directly perceive supernatural goings-on. Instead, beliefs about the supernatural just flourish in the human mind. Human beings have a natural predisposition to acquire beliefs about the supernatural under the right kinds of conditions, in a similar way, it could be argued, to how we are disposed to acquire beliefs about numbers or morality. Note also that whereas mystical experience is radically unlike, or even transcends, everyday experience, innate methods bring forth belief in the supernatural in a quite ordinary way. Mystical experience is radical, ineffable, paradoxical, blissful etc. Innate methods are not like this. Their exercise is associated with a comparatively humdrum phenomenology.

Some religious traditions permit the faithful to form new beliefs and to adjust existing credences according to this dispositional capacity, since this capacity is taken to have been instilled in us by supernatural beings who wish us to have veridical beliefs about their nature. Thus, the efficacy of innate supernatural belief is
ultimately guaranteed by the beneficence and omnipotence of some supernatural being.

The most well-known account of such an innate capacity is given by John Calvin. Calvin calls this innate disposition to supernatural belief a ‘sensus divinitatis’, or sense of the divine. Calvin notes in his Institutes: ‘There is within the human mind, and indeed by natural instinct, an awareness of divinity’ (1845, I, iii, 1). Calvin’s explanation for the existence of this awareness is that it has been implanted in us by God, engraved on our minds. Calvin makes clear, however, that this awareness begins as a mere seed that requires attentive care in order to grow. The innate sense that there exist supernatural beings is a kernel of the truth of divine reality, a truth so radical that none may fully attain it. He writes: ‘But though experience testifies that a seed of religion is divinely sown in all, scarcely one in a hundred is found with who cherishes it in his heart, and not one in whom it grows to maturity, so far is it from yielding fruit in season’ (1845, I, iv, 1). While proponents of a Calvinist-styled sensus divinitatis differ in their accounts of its precise nature, for present purposes, it is enough that all share in the belief that the faculty consists either in innate belief or an innate tendency to form beliefs about supernatural beings, under suitable conditions. They also believe that the efficacy of this method depends entirely on a god having crafted the faculty such that, when functioning optimally, accurate belief in the supernatural results.

Alvin Plantinga has given perhaps the most well-known contemporary account of the sensus divinitatis. He argues that this cognitive faculty can be understood as operating as an input-output mechanism, taking a broad range of experiences as inputs and producing theistic beliefs as outputs. Consider the following example. One
lies to a friend and consequently one feels guilty. This feeling of guilt has a tendency to cause one to believe that God is disappointed. The input, a feeling of guilt, tends to produce a theistic belief as an output, a feeling that God is disappointed. This feeling may be as of a ‘brooding presence’ of divine chastisement (2000, 182). But then why do we not all feel God’s disappointment after lying to a friend? Plantinga points to the corruptive noetic effects of sin on the sensus divinitatis to explain this kind of failure.

Arguments for the innateness of belief in the supernatural are not restricted to the Calvinist tradition. Both the Stoic and Epicurean schools of Greek philosophy held that the innateness of belief in the supernatural spoke in favour of the existence of supernatural beings. Another analogue may be found in Islamic theology: the religion of the Qur’an is referred to as the Din Al-Fitrah, a pure monotheistic religion originally imprinted on the heart and nature of man. For now, however, I should like to look further into the Greek arguments.

In his De Natura Deorum, Cicero borrows the arguments of the Epicureans to defend belief in supernatural agents. He writes that ‘nature herself has imprinted a conception of them on the minds of all mankind. For what nation or what tribe is there but possesses untaught some “preconception” of the gods?’ (1997, I: 16). Indeed, Calvin himself explicitly drew on Cicero’s arguments in developing his conception of the sensus divinitatis. Cicero goes on to state that the innateness of certain religious beliefs recommends those beliefs:

The belief in the gods has not been established by authority, custom or law, but rests on the unanimous and abiding consensus of mankind; their existence is therefore a necessary inference, since we possess an instinctive or rather an innate
concept of them; but a belief which all men by nature share must necessarily be true; therefore it must be admitted that the gods exist. (1997, I: 17)

Cicero’s description echoes Plantinga’s conception of the *sensus divinitatis* as an input-output mechanism. Cicero ponders: ‘For when we gaze upward to the sky and contemplate the heavenly bodies, what can be so obvious and so manifest as that there must exist some power possessing transcendent intelligence by whom these things are ruled?’ (1997, II: 2). The belief in the supernatural is no calculated deduction, no argument from design. Rather, one beholds the glory of the night sky and belief in a beneficent supernatural being simply arises within us.

On all accounts, innate belief in the supernatural is not a kind of *perception* of supernatural agents. The supernatural agent plays no proximate causal role and is not the immediate object of the experience. The causal role played by the supernatural being is limited to the *initial design* of the human mind, and the immediate objects of experience are such natural things as rainbows and feelings of guilt.

Indeed, on the Epicurean and Stoic accounts, it seems unclear whether the gods are required to make *any* causal contribution to the belief whatsoever. On some interpretations, no gods are required for the innate faculty to be imprinted in our minds. Instead, a providential mother nature has ensured that we come to know about the gods (Sedley, 2011). The gods have not personally caused us to believe in them in any way. If that’s so, it may be the case that the innativism propounded by the Stoics and Epicureans is no religious epistemic method at all (having no proximate cause in any supernatural being) but instead, it may be an early naturalistic (or proto-naturalistic) explanation of the pervasiveness of religious belief in human beings.
To conclude, unlike mystical experience, which provides the practitioner with an immediate presentation of the supernatural, innate methods generate veridical beliefs about the supernatural, without requiring that the supernatural being be the object of the experience. Instead, beliefs about supernatural beings are proximately caused by experiences of other objects (stars, guilty feelings, rainbows etc.), while the reliability of the belief forming mechanism is guaranteed by the action of supernatural agents.

3.3.4 Testimony

Whether religious or not, all rational human beings form new beliefs, or change old ones, in the light of the say-so of parties who are taken to be generally trustworthy. So why have I included testimony in a discussion about the distinctive epistemic methods of religion? The reason lies in the unique sources of testimony accepted in religious traditions. Specifically, religions accept the testimony of supernatural agents, whether at first or second hand, as reasonable sources of evidence.

Let me be clear on the distinction between first and second hand religious testimony. In the case of second hand religious testimony, it is permissible within religions to accept the testimony of some person whose source for their testimony is some religious method. I call this kind of testimony religious transmission. That is to say, if one suspects that person A arrived at some belief P by the use of some religious epistemic method, then one may take the testimony of A that P to justify believing that P. This is an unsurprising consequence of the acceptance of two principles: (1) that religious epistemic methods reliably deliver true beliefs and (2) that testimony between honest human beings also reliably delivers true beliefs. Religious transmission is the transmission of the first-hand deliverances of
supernatural agents via second-hand testimony. The strength of the testimonial evidence will depend on both the trustworthiness of the testimonial source, as well as the source’s proficiency with the religious epistemic method by which the belief was delivered.

As for first hand religious testimony, it is taken to be sometimes reasonable to accept the testimony of supernatural agents directly. This is supernatural testimony. One may take the testimony of B that P to justify one’s believing that P, where B is a supernatural agent. The strength of the evidence here depends on the trustworthiness of the supernatural source itself. Estimating the trustworthiness of the supernatural source is particularly difficult, since many religious cultures posit not only reliable and benevolent spirits, but additional unreliable and mischievous spirits whose aim is to mislead believers.

Supernatural testimony may be delivered directly to the audience via some temporary vessel, such as a human body (as is the case during spirit possession) or a holy book (as is the case for scriptural religions). These are examples of supernatural testimony which are publicly accessible. Alternatively, supernatural testimony may be delivered to a person directly through a sort of private mental transmission, as per spirit mediumship, or during a religious vision, or through what is sometimes referred to within the Christian tradition as ‘the internal testimony of the Holy Spirit’.

Testimonial evidence is of central importance within the Abrahamic religions, in which scripture is often identified with the word of God. Karl Barth, the most notable Christian theologian of the twentieth century, wrote that ‘the principle behind every theological dogma is: Deus dixit’ (Barth 1991, §1:10). And through the mouth of
Muhammad, Allah says that the Qur'an ‘could not possibly be authored by other than God ... It is infallible, for it comes from the Lord of the universe’ (10:37).

### 3.3.4.1 Supernatural Testimony: Spirit Possession

The most popular and widely distributed method of supernatural testimony is spirit possession, which can be found in religious traditions worldwide. Spirit possession is defined as the hold exerted over an object by some supernatural entity. This object is usually a living human body, although it may also be any animate or inanimate object. In what follows, I focus on spirit possession of living persons. The testimony of the intruding spirits is taken to be evidence for all kinds of claims. Janice Boddy notes some of the various intruding spirits and their manner of occupation of the body:

> These forces may be ancestors or divinities, ghosts of foreign origin, or entities both ontologically and ethnically alien. Some societies evince multiple spirit forms. Depending on cultural and etiological context such spirits may be exorcised, or lodged in relatively permanent relationship with their host (or medium), occasionally usurping primacy of place in her body (even donning their own clothes and speaking their own languages) during bouts of possession trance. (Boddy 1994, 407)

Possession may be active or passive, that is to say, involuntary or sought. As Ioan Lewis writes of these different kinds of possession: ‘the first is an ascent of man to the gods: the second the descent of the gods on man’ (1971, 50). For examples of the former, voodoo and shamanic possession states are usually actively and quite consciously sought. In contrast, Islamic *jinn* possession is universally passive, falling on an unwilling victim.

As Boddy notes above, the invading spirit may be some supreme god or powerful divinity, or any kind of lesser spirit. The supernatural testimony that forms the basis
of religious justification is usually gained during divine, as opposed to demonic, possession states. While the gods may wish to offer important prophecies or special knowledge to the audience, demons more often torture their victims with bouts of unruly and violent behaviour. While demon possession is a source of informative testimony, this is more often diagnostic than it is prophetic.

Any proper discussion of spirit possession must include some reference to the fact that it predominantly affects one gender over the other. The demographics of possession exhibit a very clear gender asymmetry. Lewis first observed that possession by maleficent spirits predominantly affects women. Interestingly, in patriarchal and polygynous societies with established exorcism rituals, married women are overwhelmingly prone to demon possession. This observation has been widely corroborated (see Harris [1957], Messing [1958], and Gomm [1975]). In cases of demon possession, the possessed party exhibits hysterical and seemingly involuntary behaviours, often including speaking an indecipherable tongue. Still, there may also be intelligible speech. When there is, the demon usually informs the audience about the reasons for entering the possessed party. The demon may also suggest the remedy for the possession state. In zar possession cults, this often involves the invading spirit demanding gifts such as jewellery, hats or sunglasses in exchange for releasing its hold on the body (Lewis 1971, 80).

Spirit possession is an important feature of Christian traditions. Someone who is possessed by God and used as a means of communication is referred to as a ‘prophet’, and the history of Christianity has seen no shortage of these. I would like to discuss one (admittedly unorthodox) example. Before his death in Waco, Texas, after a prolonged siege at the hands of the FBI, the prophet and leader of the Branch
Davidian church, David Koresh, claimed to have written ‘two messages, from God, to the F.B.I.’. In these messages, delivered to the authorities during the siege, Koresh’s own personality is displaced while God speaks through him. Through the vessel of Koresh, God reminds the F.B.I., ‘You’re not rejecting a man by fighting against David My servant, no, for I have given and revealed my name to him.’ He then goes on to describe his nature ‘I AM your life and your death. I am the spirit of the prophets and the Author of their testimonies’ (Koresh 1993). Despite this self-proclaimed divine authority, other Christian preachers were skeptical. Indeed, at least one pastor offered the F.B.I. his assistance in exorcising the demons that he took to be possessing Koresh (Lewis 1998, 38). Thus, any authority that the invading spirit might self-profess is liable to be criticised (usually by religious outsiders), and the existence of both divine and demonic possession within the Christian tradition is liable to make any appraisal of any particular possession claim extremely problematic.

As for demon possession within early Christianity, Jesus’ messianic claim was measured, in large part, by his ability to cast out demons from the possessed, since this symbolised the prophesied destruction of the kingdom of Satan in the Messianic age (Weiss 1953, 402). One might be tempted to think that contemporary Christians in developed countries are overall skeptical of possession. No modern Christians seriously believe in a silly superstition like demon possession, but this belief would belie an arrogant intellectualism on our own part. A sobering 2013 YouGov poll of 1000 Americans found 72% of “born again” Christians, 59% of Protestants and 59% of Catholics believed in demon possession. (YouGov 2013). These beliefs are not without biblical sanction. In the Bible, demons are described as usually residing in
tombs, old ruins or the desert and prefer to invade the bodies of sinners over the righteous (Weiss 1953, 402).

In Islam, there is a distinction between possession by Jinn and possession by a qarīn. Possession by Jinn, or demons, may occur when these have been sent by Shaytan. In these cases of possession, the behavioural effects are pronounced. Seizures and glossolalia are common. On the other hand, every person (except Muhammad) has their own subversive demon, a qarīn, which is allocated to them from birth. The qarīn is a person’s constant companion spirit, whose role is usually limited to tempting one to be sinful. Yet the qarīn may also possess its human counterpart from time to time, especially out of jealousy of a sexual partner, and behave in ways out of the control of the possessed party (Drieskens 2004, 154).

3.3.4.2. Supernatural Testimony: Incarnation

In the above examples, spirit possession occurs by a process of temporary displacement, in which the executive role of some existing personality is thwarted and the body is given over to the invading spirit(s). In such cases, we usually say that the possessed party is ‘no longer herself’. But possession occurs, not only by a process of displacement, but also by a process of incarnation, in which the supernatural agent occupies some body permanently, with no possibility of the return of any prior personality. It may be that the God is simply born and lives an earthly life. In the Bhagavad Gita, Krishna claims to be one of a series of incarnations of Vishnu: ‘Although I am unborn, everlasting, and I am the Lord of all, I come to my realm of nature and through my wondrous power I am born’ (Bhagavad Gita 1962, 4:6). And Jesus is described in the Bible as the incarnation of God: ‘The Word became flesh and dwelt among us’ (NKJV 1988, John 1:14).
Note that the divinity need not be born in human form. Incarnation may also refer to a permanent displacement of some existing personality by some deity or higher spirit, who continues to occupy the body and could, in principle, not be removed or replaced by the original occupant. Incarnation is permanent spirit possession and vitally important in the religious traditions which acknowledge the phenomenon. The reason for this importance is that the testimony of God on Earth is often, but not universally, taken to be entirely reliable.

To take another unorthodox case, consider the incarnations of Ti and Do, leaders of the infamous Heaven’s Gate cult, who were propelled to infamy after members performed a mass suicide as a means to board the comet Hale-Bopp in 1997. The following is an excerpt from an essay available at the cult’s website, which remains online as of July 2016:

In the early 1970’s, two individuals (my task partner and myself) from the Evolutionary Level Above Human (the Kingdom of Heaven) incarnated into (moved into and took over) two human bodies that were in their forties. I moved into a male body, and my partner, who is an Older Member in the Level Above Human, took a female body. (We called these bodies "vehicles," for they simply served as physical vehicular tools for us to wear while on a task among humans. They had been tagged and set aside for our use since their birth.) (Applewhite 1995)

Incarnation is a particularly popular theme in Indian religions, with Vishnu repeatedly taking human form over successive ages, especially during times of moral or political decline as a social corrective (Bhagavad Gita 1962, 4:7).

It is quite natural, to the Western mind, to imagine that the testimony of an incarnation of God would be infallible. In the Abrahamic traditions, God is omniscient and omnibenevolent: all-knowing and with our best interests at heart.
Such a being, it seems, would be compelled to tell the truth and nothing but the truth. Yet outside of the Abrahamic religions, divine testimony is not always considered an infallible guide. Indeed, in Indian traditions regular testimonial unreliability can even be considered evidence for the claim to godliness. For example, Sathya Sai Baba, a recently deceased guru considered by millions of Hindu believers to be an incarnation of Vishnu, makes unreliability an art. Lawrence Babb relates the following story:

In early 1979 many devotees believed that [Sai Baba] would be coming to Delhi in March. One informant, a strong devotee, recalled to me later that he had asked him to come and that “Baba” had told him that he would. But he did not come, and when my informant related this tale to some people who are quite close to the deity-saint, they laughed and said, “You didn’t actually believe him, did you?” (1983, 120)

Babb goes on to explain that the persistent unreliability of Sai Baba’s testimony is a clue to his divinity. He notes: ‘within the tradition in which Sathya Sai Baba operates, unaccountability is an extremely important characteristic of divinity’ (1983, 120).

The gods are light-hearted, unpredictable, and joyful. They indulge in what is called, Lila, or play, with their creation and lesser mortal beings are playthings. This frivolousness, for want of a better word, is characteristic of their innocent, childlike nature; evidence for their claims of divinity. Hence, the notion that supernatural testimony must be infallible or perfectly reliable is no universal idea.

**3.3.4.3 Supernatural Testimony: Mediumship**

Supernatural testimony may also be delivered via a spirit medium, who has a special skill of clairvoyance (an ability to see spirits) and/or clairaudience (an ability to hear them). The medium communicates messages directly from the spirit seen or heard.
Mediums often operate independently, outside of any organized religious setting and without the endorsement of any established religion. Indeed, mediumship appears to flourish outside of the confines of any established community of religion. There is evidence suggesting that mediumship gained noteworthy popularity in the West after the growth of spiritualist movements in the 19th century in the United States, a time of notable religious experimentation and a turning away from traditional religious doctrines and methods. We find in the writings of Ralph Waldo Emerson and Henry Thoreau, a skeptical and dismissive attitude to the growing popularity of the method as it flourished during their own lifetimes (Wilson 1968, 248).

3.3.4.4 The Limits of Religious Testimony
Science and religion differ with respect to what they consider to be reliable sources of testimony, but they also differ with respect to the norms that guide the treatment of testimony within their respective contexts of investigation. Specifically, there exists a religious norm of secrecy which applies to a special class of sacred knowledge. Such knowledge is deemed too valuable, too subtle, too precious or too pure to fall into the hands of the uninitiated. This religious norm of secrecy can be most clearly seen when contrasted against a scientific norm that encourages the open dissemination of knowledge. For this reason, I shall first discuss the scientific norm, before outlining the religious norm of secrecy.

According to Robert Merton, the institutional goal of science is to advance the boundaries of knowledge (1942, 122). There is, for that reason, a scientific imperative to communicate one’s findings to the broader community. This imperative is incentivized, Merton argues, by the establishment of a currency of recognition, according to which priority of discovery is paramount. This lure of recognition
incentivizes the dissemination of new scientific discoveries quickly and widely. The aim is to be the first to publish results, the first to make the claim public, the first to be known as the discoverer of some fact. Even scientists who come a close second get at least some credit, especially if the discovery is made independently. Alfred Russel Wallace might come to mind here.

In addition, Merton outlines a scientific norm he dubs communism, which is the principle that the substantive findings of science are ‘a product of collaboration and are assigned to the community’ (Merton 1942, 121). The norm of communism states that scientific knowledge rightly belongs to, or should be made available to, everyone. The norm works to ensure that the results of scientific investigation are publicly available. Does science accept such a norm? Does this norm truly guide the dissemination of scientific results? The idea that science is, as a matter of fact, absolutely free from secrecy is clearly a utopian one. Indeed, it seems that if there is such a norm, it is very often ineffective. Secrecy persists in scientific settings often exactly because of the incentive of the status that comes with priority of discovery. One does not tell one’s colleagues too much about important, but as yet unpublished, results. The fact that there is sometimes theft of new scientific ideas and methods entails that there will be a tension between the norm of communism and the incentive of personal status. To get any personal status, the scientist very often must keep her mouth tightly shut. Yet according to the Mertonian norm of communism, any selfish secrecy of this kind would just stand in violation of the norm. This selfishness is a lamentable example of scientists behaving badly. I think this is about
right. Even if secrecy is an unfortunate result of the rat race of modern science, *methodological secrecy*, in any scientific setting, would be a violation the norm.4

In contrast, many religions adopt a norm of secrecy for at least some parts of their teachings. Religious doctrines are deemed too sacred or too subtle to be available to the general public. Instead, religious specialists are charged with the transmission and protection of secret knowledge. It is this tendency towards a hierarchy of knowledge-holders that separates the scientific norm of communism from the religious norm of secrecy. Sure, science produces its fair share of specialists, but these specialists are not generally charged with *withholding* knowledge from the public or from neophytes, quite the opposite. And again, it is true that much scientific talk is fundamentally impenetrable to the layman, but this impenetrability is not a deliberate ruse designed for the purpose of maintaining some institutionalized goal of secrecy. In contrast, religions have quite different motives for keeping their secret doctrines out of the wrong hands. As Mark Teeuwen notes:

> Such intentional concealment is explained as a defensive measure, taken to shield the secrets from various dangers. Secret matters must be protected from contact with the world’s impurities, from the ignorant criticism of those who do not understand them, from the pressures of historical change, and, not least, from competitors in the religious arena. (2006, 2)

4 Of course, secrecy is very often maintained with regards to scientific results, when such results are sensitive to such things as national security or copyrights and patents. We might consider, for example, biological and nuclear weaponry or pharmacology. These social constraints on the dissemination of scientific knowledge, although very real, do not arise from within nuclear physics or from within pharmacology, but from within the broader society in which the science finds itself.
While Teeuwen here emphasizes the defensive maneuvers of religious knowledge in the face of heterodox thought, he goes on to note that secrets may also be kept from religious neophytes simply on the grounds that the revealed knowledge would be of no use given a lower level of religious training (2006, 11). Teeuwen takes examples from Mahayana Buddhism to illustrate the norm of religious secrecy, but there is a better contemporary example available in the Church of Scientology.

Religious secrecy is a highly formal and regulated affair within the Church of Scientology. Specifically, the Church withholds core myths from members until they have reached the rank of Operating Thetan Level Three (OT3). It is only at the stage of OT3 that initiates are exposed to the Xenu myth, which explains the origins of human existential suffering as being caused by the souls of slaughtered extraterrestrials inhering in human bodies. In order to be initiated to OT3, members of the Church must be invited by higher ranking specialists, and must be prepared to sign a nondisclosure agreement.

While it is true that young scientists-in-training are also taken through their studies gradually, beginning only with the most simple of experiments, there is no established norm that prohibits precocious or curious students from acquiring knowledge at higher levels.

What is the source of the religious norm of secrecy? The norm is encouraged in order to protect sacred knowledge: a form of knowledge that must be treated differently, ceremoniously set apart from other forms. These have been called by Roy Rappaport Ultimate Sacred Postulates, and more will be said about the role of these postulates in the following section. The general idea is that some religious doctrines are not intended to be heard by certain groups on pain of supernatural disapproval.
The transfer of such knowledge to the wrong people may incur supernatural penalties on those responsible. Thus, owing to the spiritual gravitas attached to the knowledge in question, interpersonal testimony is regulated in an attempt to deflect supernatural punishment. The twin notions of the sacred and the taboo are therefore responsible for the norm of secrecy.

3.3.5 Inference

As it was for testimony, so it may also seem strange to discuss general inference in a chapter devoted to the epistemic methods that are distinctive of religion. Logical deduction, for example, is happily deployed by scientists, so there is no indication that deduction is a uniquely religious way of reasoning. Certainly, deduction is an especially important method for natural theologians and for Christian philosophers of religion, but there is nothing about deduction as a method of inference that marks it out as a distinctively religious method. Having said that, there are important differences between science and religion with regards to the sanctioned limits of critical thought, and the proper scope of the reliability of deduction. In this section, I describe the religious tendency towards what I call quasi-axiomatization. This is the adoption of inviolable first principles or core doctrines, resulting directly from religion’s holding certain propositions sacred, and so making their criticism or revision taboo.

The idea that certain objects and activities are sacred, and so ought to be revered and protected, is universally shared among the world’s religions as Émile Durkheim famously showed. Indeed, the notion of the sacred is so centrally important in religious thought that Durkheim took the following definition of religion to be appropriate: ‘a unified system of beliefs and practices relative to sacred things, that
is to say, things set apart and forbidden—beliefs and practices which unite into one single moral community called a Church, all those who adhere to them’ (Durkheim 1995, 44).

While I remain unconvinced by Durkheim’s definition of ‘religion’, his reference to sacred things as ‘set apart and forbidden’ is important for a proper understanding of religious inference, since the label ‘sacred’ can be applied just as well to religious propositions or doctrines as to religious objects or activities. Thus, just as it is forbidden to bring footwear, impure and profane, into the prayer hall of a sacred mosque, certain ideas, words, names, beliefs, moral principles and physical and metaphysical theories are also set apart and given special treatment. As I showed in the previous section, certain doctrines are kept secret from untrustworthy or uninitiated groups, and this ensures that such doctrines are protected from a certain amount of critical challenge. Such doctrines may be kept secret, but they may also be afforded a privileged or fundamental position within any system of inference. These privileged doctrines are then treated as both beyond critical appraisal and unquestionable (Dawes 2016, 12).

5 The sacred and the taboo are not unique notions to religion. Anyone in doubt can attempt defacing a war memorial. However, their normativity, within religious contexts, is derived from their connection to supernatural agents. the existence of gods and spirits who might disapprove of our activities provides the metaphysical backdrop to the sacred and the taboo in a way that secures their status as religious notions. In relation to a discussion of Māori tapu, Jean Smith calls this the ‘ultrahuman sanction’ commanded by tapu objects (1974, 25). In any religion, the power of the sacred and the taboo can always be traced to some origin with a spirit or a god.
One way to understand the way in which religious doctrines can be beyond critical appraisal is to say that the sacred has a strong effect on the *credences* of theories, leading religious adherents to adopt so-called “sticky” beliefs: beliefs with an epistemic probability (credence) of 1. Any theory with an epistemic probability of 1 is unassailable. Thus, even in the face of evidence that disconfirms the sacred doctrine, the believer with a sticky credence is forced to change the credences of other auxiliary hypotheses elsewhere in the web of belief, since no matter what the evidence may be, the sacred doctrine cannot be affected. It is immune to challenge. That sacred doctrine commands a sticky probability was noted by the Dominican philosopher-theologian Joseph Bochenski in his analysis of religious discourse: ‘all sentences designated by the heuristic rule [e.g. a rule such as that whatever has been revealed to Muhammed is true] have to be considered as possessing the probability 1’ (Bochenski quoted in Rappaport 1999, 291—2).

Another way to understand the way in which sacred doctrines are beyond critical appraisal is to point to the fact that sacred doctrines do not merely enjoy a high epistemic probability, but are understood as *fundamental* to the inferential system of which they are a part. They cannot be *derived* from any other propositions and yet they are accepted despite a lack of proof. It is this feature of sacred doctrines that leads me to call them *quasi-axiomatic*, and which leads the anthropologist Roy Rappaport to call these doctrines *Ultimate Religious Postulates* (1999, 287). On Rappaport’s account, Ultimate Religious Postulates behave much like the axioms of logic or mathematics. They are both accepted without proof and serve as fundamental to systems of thought that include many more claims than themselves.
Yet there are also important differences. Rapport notes the following five differences between Ultimate Religious Postulates and the axioms of mathematics and logic:

1. Ultimate Religious Postulates cannot be derived from systems of a higher logical type, whereas in principle this is the case for the axioms of mathematics and logic.

2. Ultimate Religious Postulates fail to play the same role in terms of defining the set of derivable consequences. Various contrary derivations are possible.

3. The scope of the applicability of Ultimate Religious Postulates is typically wider than that of axioms, which are often only taken to apply in special regions of logic or mathematics (e.g. plane geometry).

4. Ultimate Religious Postulates are neither self-evident, nor regularly manifested in material relations, nor necessarily true.


Rappaport stresses this last difference, noting that Ultimate Religious Postulates are often assented to in the context of some public act or performance demonstrating allegiance to the community. Indeed, he refrains from describing the attitude had by the religious towards their sacred postulates as one of belief. Instead, what characterizes the shahādah, for example, as an Ultimate Religious Postulate is that it is a public statement committing one to the Muslim community. Thus, these fundamental points of doctrine often have the form of performative utterances, in J.L. Austin’s sense. The social dimension of accepting these postulates, then, is an important difference between them and axioms.

While these differences show that Ultimate Sacred Postulates are not inferentially equivalent to the axioms of logic and mathematics, a case might be plausibly made
that sacred doctrines are treated in the same way as any other fundamental theory in physical science would be. Therefore, this aspect of religious inference is no different in kind from similar inferential practices in the sciences. The theory of general relativity, it could be argued, is equally sacred, in the sense that it is set apart and treated differently. It is not regularly exposed to criticism. It is protected at all costs. It follows that the quasi-axiomatization of key doctrines is not a distinctively religious method. Scientists engage in quasi-axiomatization too. According to this argument, science suffers from its own set of biases and quasi-axiomatic sticky beliefs, none of which are seriously open to refutation and none of which, it is added, are amenable to any kind of religious evidence.

Although there is some merit to this argument, there are important differences between Ultimate Religious Postulates and the most fundamental theories of science. Perhaps most fundamentally, scientists are not expected to publicly commit to the most fundamental theories of science in the way that religious believers must commit to Ultimate Religious Postulates. Indeed, a range of attitudes are permissible towards even the most fundamental theories of science. Tentative acceptance would be taken as an insufficient degree of commitment where Ultimate Religious Postulates are concerned. Moreover, there is an important sense in which the believer's self-concept is defined by membership of the group. Doubt is actively discouraged with regard to the Ultimate Religious Postulates, since to publicly doubt is to publicly renounce.

### 3.3.6 Paradox

Bodies of religious knowledge often contain contradictions, but then it is equally true that within the body of scientific knowledge, one can easily find contradictory views. In general, contradictions in the body of scientific knowledge arise as disagreements
between rival theories, or as inconsistencies internal to one theory or another. These inconsistencies make up the body of scientific **problems**, and part of the aim of science is to **resolve** these inconsistencies. The inconsistencies of science are taken to be works in progress. In contrast, contradictions within bodies of religious knowledge are often not taken to be problematic at all. They are not works in progress, but the finished article. Indeed, sometimes contradictions form **integral** parts of religious doctrine. Strictly speaking, religions accept, not contradictory theories, but **paradoxical** theories. A paradox is not simply a contradiction, but a peculiar kind of contradiction. Matthew Bagger has defined a paradox as a claim that is self-contradictory, but which is nevertheless able to ‘tempt our assent’ (2007, 3—4). A paradox is a contradiction that makes an attractive candidate for belief.

Paradox—sometimes called **sacred mystery**—is at the heart of much religious discourse, yet in the naturalistic study of religion, little focus has been put on the reasons for the centrality of paradox. One of the most popular explanations for the persistence of religious paradox is that religious language attempts to describe an ineffable supernatural reality, a reality that can be grasped, but not properly described. Religious language attempts, as F. Max Müller put it: ‘to give utterance to the unutterable, to express the inexpressible’ (Müller quoted in Bagger 2007, 6). Paradoxical language is, then, an attempt to put into words a reality (or at least, to put into words a particular sort of religious experience) that evades our crude or limited conceptualizations. Paradoxical language doesn’t describe; it gestures.

But such an explanation of religious paradox is quite unsatisfactory. It excludes those religious traditions which, far from taking their sacred mysteries as clumsy gestures towards a deeper ineffable truth, take their paradoxes to be accurate
descriptions of that reality. Such realist interpretations of religious paradox may derive from mystical experience (e.g. a sincere belief that ‘black is white and white is black’ [Stace 1960, 65]). Alternatively, realist interpretations of religious paradox may derive from theology: paradoxical formulations of the doctrine of the trinity, for example, are not taken to be clumsy gestures towards the truth, but the actual truth. Thus, religious paradox can be either mystical (when such paradoxes are taken to be either gestures at the ineffable or accurate descriptions of reality) or theological (when such paradoxes are taken to derive from sacred doctrine).

Furthermore, religious paradoxes are commonly put to a different purpose altogether. Often, paradoxes are not gestures or descriptions at all; they are not really about anything. They are just tools. There exist religious traditions in which paradoxes have an instrumental purpose. They are not put forward as gestures towards an ineffable truth or as accurate descriptions of a transcendent reality, but rather as a means by which one can elicit other desirable cognitive states, such as mystical states or trance. The koan of Zen Buddhism is a paradigm example of paradox used as a religious instrument. Meditation on the paradoxical proposition is supposed to break down one’s conceptualizations of the world, to reveal the ultimate reality beneath.

So, religious paradox can be seen as falling into three classes:

1. **Mystical Paradox**: A figurative or accurate description of a state of affairs observed during a mystical experience.

2. **Theological Paradox**: A paradox that results from logical deduction from sacred doctrines.

3. **Instrumental Paradox**: A paradox that is a mere tool, which is used to elicit religious experiences.
Of these three classes, the mystical and theological paradoxes are examples of how the scope of deduction is expanded within religion to accept certain kinds of contradictions as unproblematic. They show that religions sometimes accept what are thought of as true paradoxes. Instrumental paradoxes, on the other hand, acting only as tools, are not examples of deduction being treated differently in religious contexts. Indeed, instrumental paradoxes are merely a means by which mystical experience is elicited. Instrumental paradoxes can therefore be classed alongside those other methods which have already been surveyed for the production of mystical states, such as sensory hyperstimulation, sensory deprivation, the ingestion of hallucinogenic drugs and focused attention.

3.4 Concluding Thoughts on the Epistemic Methods of Religion

Religious epistemic methods all depend on a particular metaphysical view: supernatural agents interact with our cognitive faculties to generate beliefs about the world. The logical methods of religion may not appear to depend on such a metaphysical picture, but once the twin notions of the sacred and the taboo are properly understood as tied to supernatural agency, it can be seen that these methods also derive their alleged reliability from the same metaphysical picture.

It bears repeating that the religious epistemic methods I have surveyed in this chapter are only those that are not also shared by the sciences. These are, then, the distinctive epistemic methods of religion. Naturally, religious people use methods that are also used by scientists, but these shared methods are of no interest to the present study, since they are no part of the conflict. The central argument of this thesis just is that the epistemological conflict between religion and science is a conflict of methods. It is enough for me to say, then, that insofar as there does not
exist any difference in the methods used by religion and science, there is no epistemological conflict.

I have tried to stress, by providing examples of many of the same epistemic methods being used among diverse religious traditions and supporting a variety of conflicting belief systems, that religious methods are striking in their failure to generate agreement about their belief outputs. This failure is a historical anomaly. Historically isolated religions share so many of the same epistemic methods, and yet fail to share any significant overlap in belief as a result. It is strange that methods which have routinely failed to generate independent agreement have nevertheless survived in the epistemic practices of religious cultures through the last several millennia. The very retention of these methods requires an explanation. Alas, I do not have an explanation to hand, but for whatever reason the methods have been retained, this widespread acceptance of religious methods which fail to generate agreement is the cause of the conflict between religion and science.

Before concluding, it pays to mention that acquaintance, or mystical experience, is the only method of religion that generates any notable agreement between independent practitioners from different religious traditions. Mystics, of all epochs and cultures, have tended to arrive independently at many of the same beliefs. They believe, for example, that the universe is one, that opposites share a common universal essence, and that good and evil are not ultimately distinct. This agreement is worth noting, but, as I will argue later, the beliefs of mystics, while able to be corroborated by other mystics, are unable to be convincingly corroborated by any other methods. If there is some deeper reality that the mystic is getting access to, no other methods provide access to it.
In a discussion on the reliability of mysticism, Russell once wrote that we ‘men of scientific temper ... shall naturally first ask whether there is any way by which we can ourselves obtain the same evidence at first hand’ (1935, 181). In Russell’s opinion, the first step to corroborating the mystic’s claims consists in having a personal mystical experience for oneself. Russell is, I think, plain mistaken on this point. To have some personal acquaintance with mystical states only shows that mystical experience is reproducible, and this is exactly what is already established by the notable intersubjective agreement between mystics. The addition of one more mystic to the pile hardly changes the logic of the situation. Having a personal mystical experience may happen to raise the layman’s credence that mystical experience is reliable, but it should hardly give any confidence to we ‘men of scientific temper’ who Russell claims to be speaking for. If men of scientific temper truly desire to corroborate the claims of the mystic—if they wish to show that such experiences are knowledge conferring—*independent support* for the mystic’s claims is needed. Indeed, it seems as though getting independent support for the claims of the mystic ought to be easier to get than mystical experience itself. Mystical experience is exceedingly rare and difficult to attain, often taking years of dedicated practice, and so it is hardly a practical option for most people to pursue. Some psychedelic drugs appear to be able to reliably elicit such experiences, but then some proponents of mysticism, such as William Alston, argue that artificial means will not elicit a veridical mystical experience. Thus, it may be prohibitively difficult to have a personal mystical experience. This, however, should not pose any problem in principle, since we ought to be able to corroborate the information derived from a
mystical experience by other methods. Men of scientific temper ought to be searching for this other corroborating evidence.

If I may make an analogy that makes clear where Russell makes his mistake, there are plenty of conspiracy theorists who are skeptical that Neil Armstrong walked on the moon. We do not rebut these conspiracy theorists by telling them to go to the moon themselves. This is no realistic option. It is as impractical as it is unnecessary. Instead, the conspiracy theorists are directed towards other lines of evidence, such as moon rocks, photographs, video footage, the results of telescopic observations and the testimony of astronauts.
4. Religious Diversity

Sometimes naïve, sometimes penetratingly noble, sometimes crude, sometimes subtle, sometimes cruel, sometimes suffused by an overpowering gentleness and love, sometimes world-affirming, sometimes negating the world, sometimes inward-looking, sometimes universalistic and missionary-minded, sometimes shallow and often profound. - Ninian Smart, The Religious Experience of Mankind

4.1 Introduction

The great diversity of religious opinion demonstrates that human beings are not very good at discovering religious truths. It seems that we are persistently led into error. There is no convergence around a set of religious beliefs that are probably true, and there is no convergence around a single set of religious epistemic methods that are probably reliable. The overwhelming majority of religious believers must be in a state of ignorance. At most, a tiny minority has got things right. Religious diversity, then, poses the following problem for the defender of religious belief: on what grounds can it be reasonable to think that one belongs to the tiny minority of religious experts, and not to the overwhelming majority of religious ignoramuses? One’s own sense of confidence in the truth of one’s own religious beliefs does not count for much, since this confidence appears to be shared by all religious believers.

The problem of religious diversity has been well known since ancient times. A famous fragment from Xenophanes marvels at the fact that while the Thracians say their gods have blue eyes and red hair, the Ethiopians say their gods are snub-nosed and black (Kirk and Raven 1962, 168). Of course, the point of Xenophanes’ wry observation is not that Thracian gods must truly be red-headed while Ethiopian gods
must truly be black, but rather that religious beliefs typically have dubious genealogies. Indeed, he adds that if horses had hands, they would draw their own gods in the image of horses. Thus, our conceptions of the gods appear to say more about our own, very human, natures than about anything supernatural. The diversity of gods is a reflection of the diversity of mankind.

In the first book of his *De Natura Deorum*, Cicero wrote of religion:

> There is in fact no subject upon which so much difference of opinion exists, not only among the unlearned but also among educated men; and the views entertained are so various and so discrepant, that, while it is no doubt a possible alternative that none of them is true, it is certainly impossible that more than one should be so. (1997, i. II. 5)

It should also be added that, for these ancient writers, the true extent of religious diversity was poorly understood. After the voyages of discovery, a far greater number of divergent religious traditions was unveiled. The problem was exacerbated with each new description of a foreign religious culture. The probability that one’s own view is correct shrinks with every addition of every new conflicting view to the pile. Today, the list of world religions is not only long, but daily growing. It includes such oddities as atheistic Buddhism, UFO religions, psychedelic religions, new age mystical movements and the famous “cargo cults” of Melanesia and Papua. Mainstream religions commonly laugh these stranger candidates out of contention as serious candidates for religious truth. But why? On what grounds?

And let’s take a moment of silence to remember the religions that are no longer with us. As often as we witness the birth of a new religion, we witness the extinction of another. The polytheism of the medieval Norsemen left an indelible mark on the culture of Northern Europe, and yet nowadays the religion persists only as an
assortment of cultural fragments, a word here or there, a superhero movie. The magnificent civilization of ancient Egypt was molded by a religious system that dominated every aspect of Egyptian life. Yet the artifacts by which we are acquainted with that religion are nowadays little more than curiosities for the cabinets of Egyptologists. The great pyramids, for all their forgotten sanctity, are glorified tourist attractions. How many other religions have perished without leaving any monumental headstones such as these? We may assume that the number of these cannot be counted. How many more have perished through deliberate acts of oppression, genocide, and war? Surely, more than presently exist.

The innumerable variety of religions, both extinct and extant, with their contradictory doctrines and conflicting rituals, makes the task of finding the one true religion, if there is one at all, Herculean. The probability that one has, without much difficulty, happened upon the right religion is vanishingly small. Yet so often, religious ideas are not only believed, but beloved and held indubitably. This goes as much for the Mormon as it does for the Sikh. Each party believes that her own justification is superior in force to the justifications of others. The religious person, against all odds, typically believes that she is among the tiny minority of religious experts.

On what grounds can religious belief be maintained when the chances that one has happened upon the one true religion are so low, and when it appears that all believers have an equally strong sense that they are justified in their own belief? There are three popular apologetic strategies to counter the problem of religious diversity, and in their simplest forms they run as follows:

1. All religions are basically right.
2. All religions are partly right.
3. My religion is right, and the others are wrong.

The first apologetic strategy belongs to a school of thought called ‘pluralism.’ According to the pluralist position, most famously propounded by John Hick, all the world’s religions, while superficially inconsistent, are actually differing conceptualizations of an ineffable, noumenal ultimate reality. On this account, religious diversity is the result of our diverse religious perceptions and conceptions, but none of these different conceptions can be considered more accurate than any other.

The second apologetic strategy belongs to a school of thought called ‘perennialism’. According to the perennialist position, despite the wide-ranging differences between the world’s religions, there exists a common core of mystical wisdom that all religions express at the foundations of their creeds. On this account, religious diversity is largely just accidental, yet the common core of mystical wisdom among religious traditions is in agreement. On the perennialist account, all religions have things partly right.

Lastly, I will examine William Alston’s exclusivist solution to the problem of religious diversity. Alston accepts as common sense that not every religion can have it right. But Alston argues that it may nevertheless be rational to maintain one’s religious belief in the face of religious diversity, since religious diversity does not give the religious person any reason to think that there exist any superior alternatives to her own religious epistemic practices.
As I will show, none of these approaches cure the problem of religious diversity, which remains among the most serious objections to the claim that there exist reliable religious epistemic methods.

4.2 Pluralism

John Hick is the most famous proponent of a variety of religious pluralism, according to which the various world religions, while superficially contradicting each other, are all responses to our experience with a fundamental noumenal reality that Hick terms ‘the Real’ (1989, 278). Hick argues that there need not be any overlapping propositional content between the contents of religious doctrines in order for different religions to be correct. Make no mistake. Hick is no anti-realist; religions make knowledge claims that may be true or false. Yet the diversity of the world’s religious teachings need not lead us to skepticism concerning religious belief, since religious belief is grounded in different reactions to a common object, the Real, and in a desire to transform one’s life from self-centredness to Reality-centredness (1985, 86). Thus, it is mistaken to think that there is just one true religion—one religion that both accurately describes religious truths and which efficaciously transforms human life from self-centred to reality-centred. Each religion provides a context in which individuals encounter and respond to the Real on different terms.

But are we not all human beings? If there is a religious reality, shouldn’t we expect to find a common conception of it, given our common epistemic faculties? Hick does not think so. His argument for religious pluralism begins with the observation that the universe is religiously ambiguous. Our world admits to various religious and non-religious interpretations. The descriptions of the universe offered by different religions are therefore descriptions of different phenomena. None of these
descriptions can claim to be better supported by the evidence, yet all strive to express something about how the world appears to the believer and how one ought to live within it. As Hick writes, the different interpretations are to be taken as ‘alternative soteriological “spaces” within which, or “ways” along which, men and women can find salvation/liberation/ultimate fulfilment’ (1989, 240).

What does Hick mean by the term ‘religiously ambiguous’? His meaning is something like this. Cosmological arguments, design arguments, arguments from evil, arguments from religious experience, from divine hiddenness etc.: none of these are conclusive and many fail to be convincing at all. The premises of these arguments are open to either religious or naturalistic interpretations, and we inevitably understand them in the light of our own interpretative framework. Moreover, even if the arguments were able to lend support to some religious position, the premises themselves have no objectively quantifiable probabilistic value (1989, 12). So, the strength of the arguments will ultimately be subjectively determined from within one’s own worldview anyway. Given that this is the situation, we are all within our rights to believe what our experience tells us is the case (1989, 13). That is to say that it is reasonable to follow some kind of principle of credulity, according to which we are within our epistemic rights to believe that the universe is the way it appears to us, until we have good reason to doubt that our experience is veridical. All of our various worldviews are equally reasonable to hold. It just so happens that the world appears religiously to some people.

But doesn’t the universe tend to, under normal circumstances, appear in more or less the same way to independent observers? When a duck is present under normal conditions, everyone agrees a duck is present. When there is a loud noise, everyone
gets a fright. On what grounds, then, should we assume that the universe is religiously ambiguous, when in most other contexts the universe is not particularly ambiguous at all?

To arrive at religious ambiguity, Hick's thesis depends on the Kantian distinction between noumena and phenomena. In adopting a Kantian metaphysics, Hick believes he can account for the diversity of the world's religious teachings without impugning their validity. The Real, the fundamental noumenal reality, if it is to be experienced at all, must be experienced in some way. We do not have direct epistemic access to the noumenal Real, but we do have access to the phenomena. Thus, our different perceptions of, and conceptions of, the Real explain why there is so much religious diversity, despite all religions having a common object of veneration. He says:

The differences between the root concepts and experiences of the different religions, their different and often conflicting historical and trans-historical beliefs, their incommensurable mythologies, and the diverse and ramifying belief-systems into which all these are built, are compatible with the pluralistic hypothesis that the great world religions constitute different conceptions of and perceptions of, and responses to, the Real from within the different cultural ways of being human. (1989, 375—6)

Hick's pluralism has often been compared to the fable of the blind men and the elephant. One blind man feels the trunk and declares that it is a tree. Another feels the tail and declares it is a rope. Yet another feels the tusk and declares it is something made of porcelain. Of course, none of the men know what it is like to actually see the elephant, yet it is clear that they are in fact experiencing the elephant by way of their existing concepts and expectations. John Godfrey Saxe's poem, The Blind Men and the Elephant, concludes:
So, oft in theologic wars,
the disputants, I ween,
tread on in utter ignorance,
of what each other mean,
and prate about the elephant
not one of them has seen! (2007, 29)

For Hick, not only has nobody seen the elephant as it really is, but it is not even possible to accurately describe the elephant's real properties. The fundamental noumenon underlying religious experience is ineffable, lacking all positive characteristics. Yet since our beliefs about the Real are grounded in our phenomenal experience, we are right to believe what we do (including that the Real has certain positive characteristics). We can only accept what seems to us to be the case. What other policy could we maintain? Our phenomenal experience is our only legitimate guide. So, Hick argues, religious diversity is perfectly compatible with the theory that all religion is an attempt to articulate and relate to a common noumenon.

Hick is right in his judgment that extensive religious diversity is logically compatible with the hypothesis that religious belief is caused by our reaction with a common noumenal substrate. However, bare logical compatibility is not very good evidence that a hypothesis is true. Indeed, if the world’s religions agreed on a few more important doctrines (say, for starters, that religion is grounded in a reaction to an experience with an ineffable noumenon), this interesting fact would not only be compatible with Hick’s thesis, but would actually constitute evidence for it. The fact that the phenomena of religious experience differ so radically is reason to suspect that the object of the experience is not held in common.
Hick’s rebuttal to this point is predictable. He has already argued that the Real is *ineffable*. There is no such thing as an accurate description of its positive attributes, and so we should not expect any convergence around any particular description. As Philip Quinn puts it: ‘we must assume that every guise in which [the Real] can appear is a disguise’ (1995, 149). Thus, it is unlikely that there would be agreement concerning that which no-one can veridically experience or faithfully describe. Yet even if we accept Hick’s claim that nothing can *literally* be said of the Real, this does not preclude agreement in its figurative or poetic descriptions.

It is true that there is nothing in Hick’s argument which implies that we should expect any religious agreement. Yet it is strange that when agreement is so easy to find for matters concrete and empirical, disagreement is the norm for matters religious. In any case, the objection does not show that Hick’s pluralism is internally inconsistent. However, the charge of inconsistency can be successfully made once we learn what Hick has to say about soteriology, and specifically, once we learn how Hick thinks we are able to meaningfully talk about salvation or liberation.

Hick identifies the common motivating factor of “post-axial” religions (a set comprised of the “great world religions” of the near and far east) as the shift from self-centredness to Reality-centredness. Salvation, or liberation, is the culmination of this shift. But how, if the Real has no positive characteristics, may we come to shift our attention away from the self, and towards the Real? If salvation depends on relating oneself *in the proper way* to the Real, then in which direction ought I to turn? How will I know when I am approaching the Real, and how will I know when I am distancing myself from it? To solve this problem, Hick outlines a pragmatic account of truth which he terms *mythological truth*. This is a ‘practical truthfulness,’
that ‘rightly relates us to a reality about which we cannot speak in non-mythological [literal] terms’ (1989, 248). If some description of the Real is mythologically true, then it serves the pragmatic purpose of positioning us in the right relation to the Real with regards to salvation. If a statement is mythologically true, then it is not to be taken literally (1989, 348). Since Hick claims that mythological truths are not assertoric, he believes that their existence does not undermine his pluralism. Victoria Harrison clarifies this point:

At the literal level different religions describe different phenomena and hence do not contradict one another, and at the mythological level there is no contradiction because, not being literally true or false, myths are just not the sorts of things that can be in contradiction.’ (2015, 263)

Yet Hick has now unknowingly tied his own noose. Even if mythological truth is not assertoric, even if it only serves the purpose of placing us in the “right relation” to the Real, we may now reasonably ask what the right relation is, and whether our mythology guides us towards that relation. We may ask whether the mythology is effective. Whatever the right relation is, it is fair to assume that there must be an opposite wrong relation which one might adopt. Therefore, if it is the case that mythological truth serves to place us in the right religion to the Real, it seems to be the case that different religions, through their different mythological exhortations, place believers in different relationships with their divine object(s). Indeed, different mythologies from different religious cultures often recommend opposite courses of action in the quest for salvation or liberation. It follows that some may be right and some may be wrong. So which is it? Jihadism or pacifism? Asceticism or sybaritism? These are very different, even contradictory, relationships with the Real that have been endorsed by different religions through the course of history. Different
mythologies underwrite these relationships, and there do not seem to be any independent grounds for taking up one mythology over any other. How am I to tell whether my religion is salvific if I have no independent way to tell? Thus, given the extent of religious diversity, it would be unreasonable to suspect I am positioning myself correctly with respect to the Real. It would be unreasonable to suspect that I am among the tiny minority of religious experts.

Hick anticipates this problem, and suggests that it can be solved in the following way:

The basic criterion [for grading religions] is the extent to which they promote or hinder the great religious aim of salvation/liberation. And by salvation or liberation I suggest that we should mean the realisation of that limitlessly better quality of human existence which comes about in the transition from self-centredness to Reality-centredness (1985, 86)

But such a suggestion is patently question-begging. What is required is some independent criterion by which we can identify which religions are successful at achieving the aim of salvation and which are not. But Hick gives this problem very glib treatment. He says ‘the ways to salvation/liberation are many and varied,’ and then continues ‘we should respect ways other than our own, whether or not we can truly appreciate them,’ and concludes ‘so far as we can tell, they are equally productive of that transition from self to Reality which we see in the saints of all traditions’ (1985, 86—87).

But are all religions equally salvific so far as we can tell? Frankly, so far as I can tell, I cannot tell. Hick fails to provide any criterion independent of one’s religious tradition by which to judge whether any religion is producing salvation. A related problem is that, in lieu of any such independent criterion, the claim that every
religion is equally salvific is improbable, given their very diverse and incompatible mythologies. Without any independent corroboration of the salvific effects of, say, violent jihad compared to vows of silence, it is an odd and improbable assumption that both of these methods will yield the *very same result*. In lieu of any further information, we must assume that different processes produce different results. Thus, the more probable hypothesis (if we assume that salvation is some kind of state that can be achieved by some kind of method[s]) is that very different methods are likely to produce different results.

Hick says that we see salvation at work in the saints of all traditions. But who are these saints that Hick is referring to? By what independent criterion can we recognise them as saintly? Indeed, the behavior of those men typically labelled ‘saintly’ often takes us by surprise. Satya Sai Baba is regarded as a saintly, if not godly, figure by millions of Indians, and yet it is alleged that he regularly preyed on young boys. Are we then to assume that he is not a saint? That he is a saint, but that pederasty was a weakness attributable to his mere humanity, and therefore not to be considered saintly behaviour? Or are we to assume that pederasty is actually one of the marks of the saintly life? I have no way to tell. The first Guru of Sikhism, Nanak, preached a pacifist doctrine: ‘no-one is my enemy, no-one is a foreigner.’ The tenth and final Guru, Govind Singh, preached holy war: ‘Lawful is the flash of steel. It is right to draw the sword.’ Muhammad, regarded as the greatest of all men by Muslims around the world, famously kept sex slaves, had upwards of ten wives (in violation of, or as a convenient exception to, Islamic law), consummated his marriage with Aisha when she was approximately nine years old, and executed over 600 surrendered Jewish men of the Banu Qurayza tribe. Is this what it means to be Reality-centred? Are these
saintly lives? I do not know who Hick’s saints are and I cannot pretend that it is just obvious who they are.

The lack of any independent measure makes the identification of true saints a hopeless task. The fundamental issue is that the salvation which is so essential to the state of sainthood is always defined within the religious tradition to which one belongs. This may make it obvious to the believer, from her point of view, who the true saints are, but it is not clear to any outsider. At one point, Hick says that ‘the fruits of openness to the divine Reality are gloriously evident’ in the lives of religious men and women on the path to Reality-centredness (1985, 91). This is just table thumping. Such an answer is of no help to me, since I simply do not see these ‘gloriously evident’ fruits; or rather, what is labelled a fruit by some religions seems often to me to be a vegetable.

In a discussion on the marks of saintliness, William James states the problem most clearly:

If, for instance, you were to condemn a religion of human or animal sacrifices by virtue of your subjective sentiments, and if all the while a deity were really there demanding such sacrifices, you would be making a theoretical mistake by tacitly assuming that the deity must be non-existent; you would be setting up a theology of your own as much as if you were a scholastic philosopher (1999, 360)

Yet faced with this situation, James’ advice is to ‘test saintliness by common sense, to use human standards to help us decide how far the religious life commends itself’ (1999, 363). That is to say, the salvific fruits of the religious life can be measured in the same way that we might measure other, more mundane, moral fruits. Unfortunately, for James and Hick, there is no such singular ‘religious life’ that we can test by our common sense moral intuitions. Religions are various, and their
associated mythologies suggest very different relationships with the Real. It is unlikely that they are equally productive of salvation. Moreover, the idea that human standards approximate divine standards needs some justification. The reason that costly religious practices, such as violent jihad, place such extreme demands on their practitioners is that such practices are not measured by human or secular standards, but by the standards of supernatural beings, whose expectations are rather different from ours. A life of self-torture may recommend itself to no sane person, but it may be precisely what the gods demand from us in exchange for some heavenly reward. The basic problem for James’ argument is that different religions may be equally effective at producing happy and virtuous people, but not equally effective at saving people.

To return to Hick’s notion of mythological truth, if it is not true that violent jihad effects personal salvation, then the statement ‘violent jihad effects personal salvation’ is a mythology that is not only assertoric, but truth-apt and wrong. If selfless service to others produces personal salvation, then this can be truthfully stated. Indeed, if mythological truth were our only tool by which we could gesticulate about salvation, then Hick could not truthfully say, as he does, that ‘the ways to salvation/liberation are many and varied’. Yet he takes this latter claim to be quite accurate.

This all goes to show that Hick’s pluralism is only skin deep. While he argues that all religions are basically right, he accepts that some religions have to be more right than others, more efficacious at producing salvation. Some of the religious practices are more effective than others. However, Hick argues that we ought to be even-handed in our judgments about the salvific efficacy of other religious traditions. His argument depends on the epistemological claim that it is beyond the ken of the
human mind to decide which religions are more likely to be on the money and which
ones are failing dismally. Indeed, on this point I think he is right. Probably, it is
beyond our ken to decide which religions are succeeding and which are failing, but
that’s no defense of religious belief against the problem of religious diversity—quite
the contrary; it is a recapitulation of the problem. In Hick’s own words:

For each of these long traditions is so internally diverse, containing so many
different kinds of both good and evil, that it is impossible for human judgement
to weigh up and compare their merits as systems of salvation. It may be that one
facilitates human liberation/salvation more than the others; but if so this is not
evident to human vision. (1985, 86)

Well, if it is not evident to our various modes of investigation which religions are
succeeding and which are failing, then it is possible (nay, likely) that one’s own
system is among the set of failures, and so one requires a special reason to believe
that one is among the privileged group of religious experts and not among the group
of religious ignoramuses. The problem of religious diversity stands.

Hick’s last defense is his principle of credulity: we are within our epistemic rights,
he says, to believe that the world is the way it appears to us until such time as
disconfirming evidence arrives on the scene. Perhaps so, but religious diversity is just
that: disconfirming evidence arriving on the scene. Religious perception generates
widespread disagreement and this is evidence that at least one party has made a
mistake or is somehow impaired.

Hick’s principle of credulity can only be maintained in the face of religious
disagreement on the assumption that the universe is religiously ambiguous. If the
universe were not religiously ambiguous, then religious diversity would be evidence
against the reliability of religious perception. Only after we assume that the universe
is religious ambiguous does it make sense to expect that our religious perceptual faculties will generate disagreement. So, on what grounds should we assume the religious ambiguity of the universe? It seems that Hick’s only evidence for the religious ambiguity of the universe is the fact that there is extensive religious disagreement.

This is an inversion of our common-sense methodology for perceptual claims. On our regular methodology, we do not infer to the existence of an ambiguous phenomenon from intersubjective disagreement unless we have, at the very least, identified the phenomenon under investigation as common to both parties. This can usually be achieved by having multiple observers agree on some relevant aspects of their experience. Yet if a Haitian mystic has a vision of Papa Legba, and a Bangladeshi mystic has an experience of prostrating himself in the unitive presence of Allah, then given the great distance between them, given the differences between their mythologies, given the lack of any surprising common features shared by Papa Legba and Allah and given the lack of any independent evidence for a common object behind the guises of ‘Papa Legba’ and ‘Allah’, our regular methodology should lead us to the inference that if there are any real objects of the mystics’ experiences, they are two different objects.

4.3 Perennialism

Perennialism is the thesis that all religions agree on a minimal set of claims, typically known via mystical experience. This overlapping propositional content, this agreement, is the totality of true supernatural knowledge. So, it is crucial to the perennialist’s claim that there exist some amount of propositional agreement between the world’s religions. The perennialist does not argue in the style of Hick,
that every religion engages with the same reality in a different way. No. The perennialist argues that religions deal with the same fundamental reality in the same way. Therefore, before discussing any of the perennialist’s supernatural hypotheses, I will briefly outline what kind of agreement is commonly found between different and isolated religions.

First of all, no-one would dispute that there are examples of religious agreement among remote communities that derive from a common historico-cultural source. Samoa and Poland, for example, are predominantly Christian countries. The distance between these two countries is immense and there had been, before the arrival of Europeans, no contact between these two cultures for eons. However, it is no surprise that both communities are now predominantly Christian. The historical dissemination of Christianity via missionaries during and after the age of discovery is well documented. Let us imagine, however, that European explorers had arrived in Samoa to discover the isolated native people already wearing crosses and already believing in a trinitarian god. This discovery, that Samoans had arrived at Christian doctrines independent of cultural diffusion, would have counted as extremely good prima facie evidence for the existence of reliable religious methods.

Is there any surprising agreement like the unlikely scenario described above? Well, almost. Isolated religions occasionally share surprising and detailed overlap, particularly with respect to their origin myths, the existence of human souls, spirits that live without the body, and the existence and nature of the afterlife. In some cases, the resemblance is jaw-dropping. For example, in ancient Greek mythology, a primordial Earth mother and sky father bore a progeny of lesser gods who rule over certain natural domains, such as the oceans. Likewise, Polynesian mythologies
commonly describe a primordial Earth mother and sky father, whose resulting progeny make up the system of lesser gods who rule over special domains. Another common mythological idea is that of the world egg: a primordial egg out of which the universe was born. Such a myth can be found throughout Eurasia, North Africa and Oceania. There is simply no reasonable diffusionist hypothesis according to which all such resemblances are the result of a common cultural source, no serious hypothesis of prehistoric Graeco-Polynesian contact. These are surprising examples of religious agreement that cannot be accounted for by cultural diffusion. History cannot unravel cases like these.

The probability that we would find the idea of a cosmogenic world egg in any given religion is higher than the probability that we would find the idea of a cosmogenic pepper grinder. The probability that we would find the idea of ancestor spirits is higher than the probability that we would find the idea of fingernail spirits. The distribution of ideas is not random. This non-random distribution requires explanation. There are few, if any, religious universals, yet there are nevertheless recurrent themes that we are more likely to find than others. The rate of the recurrence is well above chance (Boyer and Bergstrom 2008, 113). That so many independent myths describe a primordial egg, that so many describe a sky father and an earth mother, that so many describe the souls of the dead descending to an underworld far off in the west, that so many myths describe the earth being fished up from out of the primordial waters by a heroic demigod, all of these similarities are puzzling. Any successful explanation of the sources of religious belief must be able to account for the particular distribution of religious parallelism, while also allowing for the tremendous diversity about which there is no question. This situation creates
something of a tightrope. Indeed, this puzzling agreement poses as much of a problem for the theist as it does for the atheist. For this reason, I will give this problem its own treatment in chapter six. Perennialism, as we shall see, fails to account for most of this agreement, focusing as it does on the reliability of acquaintance and mystical experience at the expense of other religious methods.

To explain the non-random distribution, one might hypothesize that some religious methods are reliable. These methods, by way of some mechanism as yet unknown to us, place practitioners into contact with a supernatural realm. Such an argument, call it the *Argument from Religious Agreement*, might run as follows:

1. Otherwise isolated religions share some surprising overlap in their doctrinal contents that cannot be accounted for as the result of a shared cultural history.

2. If this overlap in content cannot be accounted for as the result of a shared cultural history, it must result from the independent exercise of reliable methods.

3. These reliable methods are the distinctive epistemic methods of religion

   *Therefore*, the overlap in content among the world’s religions is accounted for by the independent exercise of reliable religious epistemic methods.

This argument, or some version of it, is the cornerstone of the perennialist position. The perennialist argues that there is a common core of religious truth, some deep wisdom or supernatural experience which all the world’s religions express as a part of their total doctrine. However, the perennialist is not usually interested in the examples of agreement alluded to above (world eggs, sky fathers, ancestor spirits etc.). Instead, the perennialist takes the deliverances of mystical experience to put the practitioner into contact with a divine or ultimate reality, and believes that this
experience, along with its associated fundamental moral and soteriological insights, is accurately described by many religious traditions.

Aldous Huxley’s *Perennial Philosophy* (1945) is the most famous work drawing together the supposedly common teachings of the great world religions, claiming that such teachings are common expressions of deep religious truths. Huxley focuses on the mystical wisdom of the “great world” religious traditions in their shared claim to a unitive knowledge of the divine. However, he acknowledges that this knowledge is not restricted to scripture-based religions, as he says that even the ‘traditional lore of primitive peoples’ contains the rudiments of this knowledge (Huxley 1945, vii). Huxley takes a relatively large subset of all religious knowledge claims to be accurate. William James is somewhat more skeptical about this latter claim. He maintains that there are non-negligible differences between the doctrines of different religions, that ultimately, ‘feeling is the deeper source of religion’ and that popular religious doctrines have almost invariably been garbled by philosophical and theological considerations that corrupt the original content much like ‘translations of a text into another tongue’ (James 1999, 470). For James, the task of uncovering perennial mystical wisdom is more difficult than Huxley might imagine. This task, he says, belongs to philosophy. Rather than generating a priori conceptions, definitions and deductive arguments for some divinity, the role of philosophy is to appraise existing doctrines, to reject those that conflict with scientific or historical facts and to point us in the direction of those perennial doctrines which are common and essential to different religions. Lady Philosophy can lead us towards the set of verified religious hypotheses: ‘from dogma and from worship she can remove historic incrustations’ (James 1999, 496). While James and Huxley disagree over exactly how much
doctrinal agreement we should expect to find among religions, they agree that there is a core of common religious truth that can be uncovered by mystical experience.

One may accept the claim that mysticism does tend to generate some amount of independent agreement between practitioners, while rejecting the claim that mystical experience is a reliable source of knowledge. There are two reasons why we might be doubtful about the mystic’s claim to reliable knowledge.

The first reason is that mystics agree overwhelmingly that mystical experience delivers knowledge that is utterly unlike the mundane knowledge of our everyday experience; so much so that it is commonly taken to be either inherently self-contradictory or ineffable. Now, if we assume there are no true contradictions, then given that the knowledge is self-contradictory, it is no knowledge at all. If, on the other hand, the knowledge is ineffable, then we have no way to appraise its truth value. Of course, this latter position leaves open the possibility that mystical experience may be veridical—it may be an experience that places the mystic in contact with a deeper, spiritual reality—but if this reality is not independently verifiable, nor even capable of being described, then mysticism cannot be shown to be reliable. If the mystic’s claims are simply not amenable to independent confirmation, then so much the worse for the mystic’s claims.

The second reason that we may be unconvinced that the mystic is arriving at bona fide knowledge is that the agreement delivered by mystical experience, when it is not self-contradictory or ineffable, is not particularly surprising. There is a certain obviousness to most of the unitive metaphysical and moral claims of the mystic that makes the existence of independent agreement unremarkable. The most common mystical claim is that all things are one. Reality is an indivisible whole. Good and evil
are one and the same etc. This is not terribly unlikely agreement. Monism is one of a limited number of obvious metaphysical alternatives. Either there is (a) nothing at all, (b) just one thing or (c) Several things. Now perhaps monism is correct and the mystic comes to learn this through mystical union with a divine mind; or perhaps monism is just the most attractive option to the human mind when it is in some state of trance or ecstasy. In either case, the observation that mystics converge on monism never had a terribly low prior probability. (Consider how strange it would be, in contrast, if mystics from different eras and cultures independently agreed that there were precisely 17 things).

Moreover, while the question as to which of (a), (b) or (c) is correct remains a matter of philosophical speculation, we have no independent support for the truth of (b). This does not show that the mystic is wrong by any means. However, it does show that independent agreement converging on one proposition from among a limited number of relatively likely alternatives is not particularly strong evidence for the reliability of the method used, and that this is especially so when the question is an open one regarding the ultimate number of components of the universe, since we have little independent support to suggest that the mystic has indeed hit the nail on the head.

On the other hand, and as I will discuss in chapter six, there is a great deal of incredibly surprising and unlikely religious parallelism which the perennialist simply neglects to discuss. This surprising religious agreement is some of the best evidence available for reliable religious methods, and yet the perennialist prefers to focus on the relatively banal example of mystical agreement: all things are one. Since I will be saying more about this topic in due course, I will refrain from saying too much about
it here, but what I will say is this: The fact that many religious societies independently attest to the existence of a cosmogenic egg is utterly extraordinary and too improbable to be a mere coincidence. Many other religions independently converge on the belief that the world formed from a pair of primordial parents. A perennialist does not, and indeed, could not argue that both the primordial egg and primordial parents myths are both true and literal expressions of a single fundamental truth. They are contradictory accounts of the origin of the universe.

4.4. Exclusivism

Against Hick’s permissive pluralism, William Alston thinks it is quite reasonable to believe that Christianity is the one true religion. That being said, he also argues that Sikhs may be entitled to think the very same thing about Sikhism, and that Siberian shamans may be entitled to think the same thing about their shamanism so long as certain conditions hold. Indeed, every religious believer could, in principle, have good reasons to accept her own tradition as veridical. Yet Alston’s is nevertheless an exclusivist position: at most one of the world’s religious traditions has got things right. Specifically, Alston takes it that he is quite within his rights to continue to use his own preferred religious epistemic method, which he terms Christian Mystical Practice or CMP.

Alston has two central arguments that together challenge the claim that religious diversity invalidates religious epistemic methods. Firstly, he argues that different religions use quite different epistemic methods to develop and appraise beliefs. Therefore, he argues, religious diversity is not evidence of intra-practice unreliability, and only establishes that the results of different methods do not converge. Secondly, he argues that religious diversity is not evidence indicating that any particular
method is the unreliable one. One is entitled, therefore, to “sit tight” with the methods that one is fluent in using, since religious diversity is not evidence that one’s own method is unreliable.

Alston’s first argument runs as follows. The mystical practices of different religions are not identical. There are important differences in the ‘overrider systems’ of the mystical practices of different religions. These differences are extensive enough to justify our classifying them as different methods altogether. Now, when the religious person applies his own particular method, the outputs of the method are internally consistent. That is to say, none of these distinct methods habitually generates contradictory beliefs. Therefore, religious diversity is not evidence of internal inconsistency (1991, 269). Religious diversity is just evidence that different epistemic methods generate different results.

What does Alston mean here by ‘overrider system’? An overrider system is a set of procedures for evaluating the likelihood that some output of an epistemic method is true. It is especially important with regards to those beliefs we have some independent reason to doubt (1991, 187). Alston says that the overrider system of each method ‘determines how we go from prima facie to unqualified justification’ (1991, 189). Overriders of beliefs divide into two kinds: *rebutters* and *underminers*. A rebutter is a background belief that contradicts the belief in question. An underminer is a reason for supposing that the method justifying the belief may not be performing reliably in the present context (1991, 191). Practices with very different overrider systems cannot be counted as different branches of one and the same practice. Typically, the background beliefs of different religions differ, and so different rebutters may be brought to bear on any religion’s mystical practices.
Moreover, the conditions under which mystical perception is taken to be reliable (i.e. the underminers) differ from tradition to tradition (e.g. as was noted in the previous chapter, the Ten'a Alaskans understood all dreams to contain prophetic messages, whereas in medieval Islamic dream divination, only a subset of dreams were construed as prophetic messages. So, these different traditions accept quite different underminers).

The overriders for our everyday perceptual beliefs are familiar and command an almost universal assent. Imagine that one day I see a red flash dart past my window. I form an immediate belief that a macaw just flew past. After applying my overrider system, however, I come to be sceptical about that belief. I have the following rebutter at hand: there are no wild macaws, as far as I'm aware, in New Zealand. I also have the following underminer. The red flash was moving particularly quickly. There are other overriders too of course: the window is small, and so the object was in my frame of vision only briefly. I heard no parrot calls, either before or after the event. I was watching a documentary on macaws at the time, and so I might have had macaws on the brain etc. On balance, I decide it is unlikely that a macaw flew past the window.

What about the overrider systems for religious methods? What are their associated rebutters and underminers? Alston argues that each religious tradition sanctions a different overrider system for its mystical practices. It may be the case that some beliefs of some people who claim to have had mystical perceptions may be overridden within some traditions. As an example, Alston considers the case of Jim Jones, of the People’s Temple, who reported that God revealed to him that it was His will to have all those at Jonestown commit suicide. Alston notes that: ‘it seems very unlikely, given the account of the nature, purposes, and pattern of activity of God in
the Christian tradition, that God would command any such thing’ (1991, 190). Thus, concludes Alston, Jones’ revelation is simply discordant with the Christian tradition. The Christian community, then, is right to think that Jones was mistaken in some way. The idea is that there was a rebutter of the alleged revelation that Jones’ failed to apply.

Now, it is interesting to note that Alston thinks the least controversial candidate for an overrider is internal inconsistency (1991, 170). A large enough number of internally inconsistent belief outputs would be evidence that the method in question is unreliable. Thus, Alston argues that since mystical practices, as practiced within each religious tradition, do not generate a large number of internally inconsistent belief outputs, religious diversity is not evidence that some single mystical practice is unreliable. Of course, one mystic may arrive at a belief that contradicts some belief held by mystics of another stripe, but this is no problem. Typically, says Alston, there is no internal inconsistency generated by any particular mystical practice.

But Alston is just plain wrong about this. Mysticism, as practiced within most religious traditions, does generate a large number of internally inconsistent belief outputs. I need only point to the vast literature on mysticism, surveyed in the previous chapter, according to which avowedly paradoxical, inconsistent and contradictory beliefs are characteristic outputs of mystical experience. There is no shortage of direct quotes from mystics themselves that make clear that many of the belief outputs are paradoxical. Furthermore, the paradoxical nature of mystical experience is supposed to be a hallmark of the depth and awe-inspiring mystery of that kind of knowledge. Either Alston is unaware of the pervasiveness of paradoxical deliverances of mystical experience, or he simply does not count these mystics as
giving literal descriptions of their experience, but if the latter, why should we say that *reports* of their experiences are reliable?

Now, I admit, the above objection depends on understanding ‘mysticism’ somewhat narrowly. In Alston’s sense ‘mystical perception’ does not only apply only to what was termed ‘mystical experience’ in the previous chapter, but also to a variety of associated religious methods from which mystical experience is often difficult to untangle: visions, prophetic dreams, the internal testimony of the holy spirit etc. So, while there is good evidence that mystical experience routinely generates internally inconsistent outputs, and so is unreliable, this is not evidence that indict any of these other associated practices. That being said, the objection at least shows that Alston would be forced to reject an important subset of relatively highly esteemed religious epistemic methods as unreliable on the grounds of internal inconsistency.

What can we say about the associated religious practices with which Alston is concerned, such as dreams and visions? Are these internally inconsistent too? To find out, we would have to identify some mystical practice within some religion, and observe what kinds of outputs resulted. However, it is very unclear exactly how to draw a non-trivial line between different religions according to their different mystical practices, even given what Alston has to say about differences in overrider systems. As Evan Fales notes: ‘the mystical practices of snake-handling Pentecostals more closely approach loa possession in Haitian Voodoo than they do the leadings of the Inner Light experienced by a sedate Philadelphia Quaker’ (1996, 30). An appeal to different overrider systems just does not seem to help us draw a line between religions, since this leads us to triviality.
This triviality is seen better when we consider again Alston’s example of Jim Jones’ suicidal revelation. Alston argues that Jones’s alleged deliverance from the Christian god is overridden by a rebutter that Jones failed to apply. That rebutter is that God’s purposes and behaviour are inconsistent with Jones’ suicidal revelation. If Jones’ belief is overridden by this rebutter which is a part of CMP, and if Jones failed to take this particular rebutter seriously, then Jones was using a distinct, non-Christian mystical practice. Simply in virtue of accepting the apocalyptic revelation, Jones accepted a different set of overiders and so does not count as having applied CMP. Yet by adopting this kind of procedure, Alston can trivially define his way to internal consistency. This is a point also noted by Fales: ‘rescuing the internal consistency of a practice by excising from it all conflicting elements is to trivialize the claim of consistency’ (1996, 29).

In response to this concern, Alston would say that Jones’ suicidal revelation is overridden by a rebutter within Christianity as a socially established religious tradition. Therefore, says Alston, since Jones’ revelation is entirely out of step with the conception of God within Christianity as a socially established religious tradition, Jones failed to apply CMP. Whatever Jones was preaching, it was not consonant with Christianity as a socially established religious practice. Yet Jones described Jesus as ‘the greatest of prophets from time immemorial,’ and among his final words to his congregation, he justified the mass suicide by quoting from John (10:18): ‘No man may take my life from me; I lay my life down’ (Jones quoted in McGehee 2017). Nearly one thousand members of the People’s Temple sect followed Jones to Guyana, and ultimately to death. The argument that Jones was not a Christian, or that the sect was not a socially established branch of Christianity, is simply unconvincing.
However, if we broaden the scope of the term ‘mystical practice’ such that different religious traditions tend to share many of the same practices in common, then the problem of internal inconsistency is doubly intensified. Not only do such practices generate inconsistency with regards to the results of mystical perception, but they also generate disagreement about what the rebutters and underminers of mystical perception are. There is no convergence with regards to beliefs about the world, and no convergence with regards to beliefs about the bounds of reliability of mystical practices. The problem of internal inconsistency is much greater than Alston presumes.

All this shows that there is a stark contrast between the overrider systems of religion and perception. Regular perception generates internal consistency both about its results and about its underminers. Indeed, regular perception has many underminers that generate universal assent. Every member of the epistemic community is familiar with these underminers, even if they cannot verbalise them. No developmentally normal human being, from any community, accepts that visual identification is more reliable when applied to very small and very fast moving objects than to large and slow moving ones. We reliably discover the underminers of perception by a process of cross-checking with other methods. Alston himself acknowledges that the underminers of perception are discovered by a process of applying a variety of tests that rely on a variety of different faculties (1992, 70). Yet we have no ability to cross check the deliverances of mystical perception, since, as Alston notes, religious perception is an autonomous epistemological enterprise. ‘We are simply unable,’ he says, ‘to go about testing a particular report of perception of God in the ways we can test reports of sense perception’ (1992, 72).
If religious perception is autonomous in the way that Alston says, then how could religious believers, from distinct religious communities, ever converge around true beliefs about what the underminers of mystical practice are? In principle, there could be no cross-checking by which we could establish that some patch of epistemic territory was more solid than any other. And if the underminers are themselves constitutive of mystical practices—if the underminers determine what kind of mystical practice we’re engaging in—then how could we ever converge around the truth with respect to which religion is likely true? We are given no rational procedure for choosing between “competing” mystical practices, and the internal inconsistency is, therefore, not only widespread but in principle unavoidable. Thus, Alston’s first argument for exclusivism fails. Religious diversity is often evidence of (unavoidable) intra-practice unreliability.

I turn to Alston’s second argument for exclusivism. This runs that the mere existence of religious diversity is a fact that is silent about which, if any, of the competing religious practices is the reliable one. He says, ‘in the absence of any external reason for supposing that one of the competing practices is more accurate than my own, the only rational course for me is to sit tight with the practice of which I am a master’ (1991, 274). In other words, the existence of disagreement between competing mystical practices is no threat to any particular mystical practice, since no particular mystical practice is more firmly established than any other. By ‘firmly established’ Alston means that there is no particular mystical practice that is better socially established, or which delivers a more tangible degree of self-support. For the Christian, this self-support comes in terms of an increase in ‘serenity, peace, joy, fortitude, love and other “gifts of the spirit”’ (1991, 276). For believers of other
religions, self-support may take up a different form. Yes, there is disagreement, but this disagreement does not, on its own, indicate which of the available religious alternatives is the best one. Believers are therefore entitled to sit tight with whatever they are familiar with.

This is an expert sleight of hand by which Alston stacks the deck. Alston omits to mention the fact that the problem of religious diversity not only forces us to decide which mystical practice is reliable, but also to decide whether any are. Alston says that he has no external reasons to think that some competing mystical practice is more reliable. This may be true, but Alston ignores the question of whether there are any external reasons to think that some non-religious epistemic method might be. Perhaps there are non-religious methods that deliver more accurate information about allegedly supernatural things than the deliverances of mystical perception. Even if we accept Alston’s claim that the social establishment and self-support of a mystical practice lend warrant to that practice, reason and sense perception are more widely socially established and more convincingly self-supported than mysticism anyway. Therefore, if the deliverances of mystical perception clash with the deliverances of reason, the believer would not be rational to “sit tight” with her mystical practice.

Having said all this, there is another problem to note. Alston’s exclusivism faces the same problem that the perennialist position stumbled over. For the diversity of the world’s religions is only one small part of a larger problem. There is also surprising religious agreement that has to be accounted for. Religions worldwide share puzzling overlap, especially in their mythologies and cosmogonies. Indeed, for Alston’s Christian exclusivism, the problem is arguably more severe than for either
the Christian perennialist or the Christian pluralist. Alston’s personal brand of Christian monotheism generates relatively little agreement among separate investigators independently applying their various mystical practices. Alston’s brand of Christianity is largely an oddity in the history of religious thought, despite being, for purely historical reasons, the dominant religion in the world today.

Why, exactly, is this problem particularly acute for Alston? The reason is that if some reliable religious methods exist, then the religious beliefs that garner a greater degree of independent agreement are, all things being equal, more probably generated by those methods. If exclusivism is right, and there are some reliable religious epistemic methods, then we ought to be able to identify which methods are reliable partly by their convergence on similar belief outputs. Christianity has few elements that are independently corroborated by a range of alternative religious methods. It is very improbable, therefore, that CMP is reliable.

In contrast, compare the tenets of Christianity with the tenets of the following mock religion that I dub the ‘Church of the Surest Bet’. The Church of the Surest Bet is a syncretist religion that takes up only those beliefs that exhibit remarkable or surprising recurrence in isolated cultures. The Church’s doctrines are decided by a meta-study of the belief outputs of religious methods. The doctrines of the Church of the Surest Bet would probably consist in something like the following: An Earth mother and sky father produced four divine children who are devoted to the maintenance of certain biospheres, such as the oceans, forests, rivers and animals. From the waters all things were formed, including dry land, plants, animals, and human beings. Human spirits survive death and remain in the Earthly realm for some period of time before either entering the bodies of newborns, or departing for
the underworld, depending on the quality of their behavior in this life. These spirits may also be manipulated into entering physical objects, statues and amulets, in order to protect their relatives from spiritual harm. Condemned spirits travel far into the west, where they descend into the underworld. There once was a very serious flood, survived by only a handful of people. Even-toed ungulates are sacred.  

The Church of the Surest Bet is far better justified by independent agreement than Christian monotheism. Sure, it might not be a socially established religion, but the degree of independent agreement converging around those particular mythological claims is a better indicator of truth than social establishment anyway. If Alston takes independent agreement to be at least some indicator of reliability (and he does), then it seems he will struggle to explain why Christianity is rationally preferable to the Church of the Surest Bet.

4.5 CONCLUSION

Neither the perennialist, the pluralist nor the exclusivist can successfully defend the reasonableness of religious belief against the evidence of religious diversity, which remains the strongest evidence against the claim that religious methods are reliable. As noted at the beginning of this chapter, the ongoing emergence of new religious movements and the extinction of others compounds the problem for the defender of reliable religious methods. For with the addition of each new and contradictory

6 This last note on the totem of the religion covers a variety of animals commonly regarded as sacred by various religious cultures, including cattle, camels, bison and whales.
religious doctrine, the argument that the methods generating the doctrines are reliable gets weaker and weaker.

The perennialist’s argument is perhaps the strongest of the lot. In arguing that mysticism is a reliable religious method, the perennialist can at least appeal to evidence of convergent agreement between mystics of different cultures and eras. The weakness of the perennialist’s argument, however, is directly tied to the weakness of the propositions about which the practitioners agree. The proposition that everything is one thing does not immediately suggest any obvious predictions which we might then proceed to test. Moreover, the proposition that everything is one should be taken to possess a relatively high prior probability, and so the existence of intersubjective agreement among mystics is not incredibly surprising. One final point to note is that even if it is assumed that the deliverances of mystical experience are entirely uniform in all mystical traditions, there does not appear to be, at present, any other methods that might convincingly corroborate the mystic’s claims. This has led some defenders of mysticism, such as William Alston, to argue for the rational autonomy of mystical practices. Mystical practices, says Alston, are not to be appraised by the same standards as perception. Mystical practices have their own in-house rules and standards. I will have more to say about this argument in §7.9. For now, I will only suggest that the lack of independent corroboration for the mystic’s claim is a very serious shortcoming.

I would also like to suggest that the preceding discussion of religious diversity has been carried on under the shadow of a more fundamental debate. That debate concerns the extent to which a disagreement with others counts as evidence against one’s own view. Why is disagreement with others any kind of evidence at all? When
should a disagreement with others lead one to suspend one’s own belief? What is a reasonable response to religious disagreement? I will now turn to these questions, as the answers may help to clarify the nature of the problem of religious diversity.
5. Religious Disagreement

*Few sometimes may know, when thousands err* — John Milton, *Paradise Lost*

5.1 Introduction

The problems posed by religious diversity can be understood more clearly by examining the epistemological implications of religious disagreement. In particular, they can be understood by asking the question: on discovering a disagreement between oneself and others, what is the rational response? And more relevantly to our present discussion, what is the rational response to the discovery of such an enduring and pervasive disagreement as we find in the case of religion? After all, if we were entitled to be dogmatic in the face of disagreement, if we were quite within our epistemic rights to ignore the testimony of others, then religious diversity would pose no problem for the religious person as to whether religious belief is justified.

What sort of evidence is disagreement? We disagree often and about all kinds of things: the quickest way to get to the bus stop, who the lead singer of the Kinks was, whether this song is any good etc. Although such disagreements may cause us to change our beliefs, it is odd to think of disagreement itself as a sort of *evidence*. Disagreement is a peculiar kind of evidence. Whereas material evidence can either confirm or disconfirm what we already believe, disagreement with our peers, if it has any effect at all, has only the ability to *disconfirm*. Persistent disagreements can be a cause of social disharmony, and yet the criticism of strongly held ideas is also valued as a means of discovery, especially in fields such as philosophy and science. 'I may be
wrong, and you may be right,’ Popper liked to say, ‘and with an effort, we may get closer to the truth.’

Sometimes, very little effort is required to resolve disagreements. This is especially so when disagreement arises in a context in which there happens to be agreement on how the dispute should be rationally resolved. The situation is a familiar one: you and I are having a beer at the local pub. We start to disagree over some bit of trivia, perhaps: ‘which is bigger: a megalodon or a humpback whale?’ You say a megalodon; I say a humpback. Without a word, we both pull out our smartphones and check Wikipedia. Just like that, our disagreement is quickly resolved. You are right, it seems. Megalodons were probably a bit bigger, but only by a nose. I grumble. You gloat. We go back to drinking our beers. Of course, the method we have used for resolving our dispute is fallible—perhaps a vandal has been wreaking havoc with the ‘humpback whale’ page—but we accept the method for the time being, since it is reliable enough for the purposes of settling a trivial dispute.

So then, what about cases in which the disagreement under consideration, unlike the example above, cannot be settled by some agreed procedure, such as whipping out our smartphones or consulting an expert? Some disagreements are just like this. They seem to go on endlessly, having no shared principles of dispute resolution. They do not last twenty minutes, but twenty generations. These disputes do not appear to lead anyone closer to the truth, or to a suitable compromise. Social disharmony and conflict is often the result. Pervasive and intractable religious disagreement is a paradigm example. The same old arguments have been hashed and rehashed. Personal stories of hope, redemption and grief are recounted. Alleged evidence is given of the supernatural, the natural, the observable, the unobservable etc. Few
change their minds. When minds are changed, the reasons given are often unconvincing. It all seems to be in vain. Faced with such prolonged disagreement, what should we do? Check Wikipedia again? Consult a priest or a philosopher? Or do we require a radically different approach?

In his influential paper ‘Reasonable Religious Disagreements’, Richard Feldman has argued that the existence of irreconcilable religious disagreement is a good reason for everyone to adopt an agnostic attitude towards contentious religious propositions: the believer and the atheist alike should drop their commitments and converge on a conciliatory middle ground. Feldman’s argument, in brief, is that if we, as investigators, come to a disagreement after having shared our evidence, this disagreement is evidence that one party to the dispute has made some kind of mistake. Yet if our opponent is an epistemic peer, having roughly similar cognitive abilities to our own, we have no reason to believe that she is more likely to be mistaken than that we are. It follows that all parties ought to withhold belief with respect to the contentious proposition until more relevant evidence is brought forward.

This brief outline of Feldman’s argument will be developed in due course. But I can sketch, equally briefly, where I think the argument goes wrong. Feldman overlooks the fact that religious disagreement, in practice, is very often generated by the use of distinctively religious epistemic methods which are prone to deliver conflicting information to believers. Since the secular person has good reasons to reject these methods, it follows that the secular person is not obliged to give up her belief. The argument, then, is that persistent religious disagreement, like religious diversity in general, is generated by methods that are prone to deliver conflicting
belief outputs. It follows that the mere existence of irreconcilable religious disagreement is not on its own a good reason for the scientist *qua* secular person to adopt a conciliatory middle ground.

Feldman’s paper begins with the following question: is it possible for epistemic peers to continue to disagree about some religious matter, after all parties have fully shared their evidence, and while still maintaining that all parties are behaving reasonably? In short, he asks whether reasonable religious disagreement is possible. His conclusion is that reasonable religious disagreements are not possible. He suggests that persistent religious disagreement between epistemic peers should cause all parties to suspend judgment with regards to the contentious proposition(s). Since religious disagreement is so widespread and since religious and non-religious views can be found at all levels of education and intelligence, it seems that almost everyone who doesn’t live in a cave ought to adopt an agnostic attitude.

This is a surprising conclusion, since it pushes hard against our everyday practice. In practice, we do not jump ship on our views simply because someone disagrees with us, and Feldman’s suggestion that we ought to strikes most people as impractical, not to mention spineless (Elga 2011, 164). A simple disagreement should not cause us to abandon our most cherished beliefs since ‘the things that one believes about fundamental questions in life are partly constitutive of one’s sense of identity’ (Simpson 2013, 568). We disagree with our friends and our enemies just because we are unique individuals, and any suggestion that all parties to a dispute ought to abandon their beliefs seems repugnantly conformist and epistemically cowardly. It is not immediately obvious how Feldman would reach such a troubling conclusion, but there are several key assumptions in his argument that pave the way.
5.2 Preliminary Assumptions

To begin with, Feldman assumes the Uniqueness Thesis, which states that for any proposition $p$ and any body of evidence $E$, exactly one doxastic attitude is the rational attitude to have toward $p$ on the basis of $E$, where the possible attitudes include believing $p$, disbelieving $p$ and suspending judgment. (Feldman 2011, 148) One might want to amend this principle to accept a more finely grained range of doxastic attitudes, such as degrees of belief or credences. Thus amended, the Uniqueness Thesis would state that for any proposition $p$ and any body of evidence $E$, exactly one credence level is the rational attitude to have toward $p$ on the basis of $E$. So, the introduction of more finely grained levels of confidence does not change the core of the Uniqueness Thesis: that any given body of evidence uniquely determines just one rational attitude to a proposition. The Uniqueness Thesis is a very strange assumption. It strikes some as obviously false, while for others it appears close to a truism. The Uniqueness Thesis implies that, in ideal circumstances, two rational investigators with the very same evidence should have all the same doxastic attitudes towards all the same propositions. They should be led by the evidence to agree. If the available evidence $E$ recommends believing $p$, then there is no rational road to disbelieving $p$ given $E$. Reasonable disagreement is still a possibility, however, and Feldman notes two causes of reasonable disagreement.

First, epistemic peers may not have fully shared their evidence. If the evidence has not been fully shared, then each investigator will reason from two different bodies of evidence, and will arrive at different conclusions. We might think of two equally intelligent jurors, Anne and Bart. While Anne paid close attention to the trial, took notes etc., Bart was tired, inattentive and even slept through the important bits.
During deliberation, Anne and Bart come to disagree over whether the defendant is guilty. Obviously, this is due to the fact that Anne has seen more of the evidence than Bart, who has not been paying attention. Yet Anne is unaware that Bart has been napping, and Bart is unaware that Anne has been paying excellent attention. While Anne and Bart remain ignorant of their different sets of evidence, they may continue to disagree and for quite rational reasons. One might think that this conclusion pushes against the Uniqueness Thesis, for what we have here is a case in which rational agents have been led to disagree, but remember that the Uniqueness Thesis only dictates that a particular body of evidence uniquely determines just one rational attitude towards a proposition. It just so happens that, in this case, Anne and Bart have different bodies of evidence. Once Anne brings Bart up to speed, Bart ought to revise his verdict in Anne’s direction. So, reasonable disagreement may be caused by differences in evidence sets.

Second, reasonable disagreement may be caused by a disparity in the cognitive capacities of the disputants involved. My elderly mother-in-law sometimes forgets that the story she is currently telling me is the same one she told me just half an hour beforehand. She is not irrational, but the strength of her memory is typical of most octogenarians. In such cases, it is natural that I will disagree with my mother-in-law about whether the story she is telling is new to my ears. In a case such as this, my disagreement with my mother-in-law can be rationally maintained, since she is apparently not my epistemic peer. I am simply in a better position to evaluate the available evidence than she is. I am aware of how unreliable her memory is, while she has failed to notice that her memory is failing. Thus, she would be rational to maintain her own belief, and I would be rational to maintain mine. We would
continue to disagree over whether she is repeating herself. In such a case, I have independent reason to think that I am right and that she is wrong.

So, disagreements may be rationally maintained when the evidence is not fully shared between epistemic peers, or when the disputants are not epistemic peers. But some disagreements just cannot be rationally maintained at all. Feldman argues that when a dispute is more like a “fair fight”, then a disagreement should count as evidence against one’s own position. Indeed, when a dispute is a fair fight, Feldman says that one ought to give equal weight to the views of one’s opponent. What does it mean, however, for a dispute to count as a fair fight? Is any dispute a fair fight? After all, in the real world it is apparently the case that (1) no two people are exactly alike in their ability to evaluate evidence and (2) no two people have exactly the same bodies of evidence. In short, reality dictates that there are no epistemic peers and the evidence is never fully shared. Indeed, when we consider religious disagreements, some of the evidence held by the disputants is allegedly not even able to be shared. It is private, intuitive or “spiritual”.

5.3 No Epistemic Peers?

In answer to (1), Feldman defines ‘epistemic peer’ in an unhelpfully vague way. He takes it to refer to disputants who are ‘roughly equal with respect to intelligence, reasoning powers, background information, etc.’ (2011, 144). This imprecision in his definition is obviously problematic from the outset: if A and B are roughly equal in intelligence, then might it not be the case that A is slightly cleverer than B? And might not this slight difference serve as justification for A to maintain her belief in the face of a disagreement with B? When is the threshold of rough equality crossed? I think we would improve Feldman’s definition by replacing the phrase ‘roughly equal’ with
‘indiscernible’. This allows the term to be applied uniformly in real cases, and avoids any problematic ambiguity in scope.

However, I am still not satisfied with Feldman’s definition. Adam Elga has better characterised epistemic peerhood as the quality of being just as likely as the other disputant to be right in the case of some disagreement (2011, 169). Elga notes that we grant the status of epistemic peerhood to others only with respect to given fields of expertise. He says: ‘one might count an advisor as a peer with respect to arithmetic but as less than a peer with respect to . . .’ (2011, 169). To my mind, this is a major improvement on Feldman’s definition. I would go one step further, and define epistemic peerhood in terms of one’s relative competency with some epistemic method(s). On this account, my mother-in-law may very well be my epistemic peer with respect to multiplication, but not with respect to memory. I therefore advance here what I believe to be an improved definition of ‘epistemic peerhood’:

*Epistemic peerhood:* a relation that holds between epistemic agents A and B, given equal competence in their use of the same epistemic methods.

What I mean by ‘equal competence’ may be unclear. To be *equally competent* at applying a particular epistemic method, one must be equally likely (or indiscernibly likely) to generate belief outputs that would be independently corroborated by separate investigators if they were to apply the very same method. Moreover, competency with methods is nonadditive. If we are otherwise impeccable cognizers, but my sense of hearing is unreliable half of the time, while your sense of smell has the same problem half of the time, we are not thereby made epistemic peers on balance. Different questions demand different cognitive skills, and one cannot be an expert apart from being an expert at applying those skills within some particular
domain of inquiry. Having an unreliable nose is no impediment to identifying Beethoven’s fifth symphony, and if our disagreement concerns this piece of music, your malfunctioning nose places you under no obvious disadvantage.

5.4 No Fully Shared Evidence?

To answer the objection that epistemic peers never fully share their evidence in real cases, Feldman argues that although epistemic peers may have quite different sets of evidence, this difference has a negligible effect on the rationality of the disagreement, since once both parties discover that the other has some undisclosed evidence for their conclusion, this evidence of evidence counts as evidence. If both parties are epistemic peers, then both parties are equally placed with regards to this private, or forgotten, or unspoken, or incommunicable evidence. Even though a compelling argument may have been forgotten, even though some personal religious experience may be incommunicable, even though one might just have a bare sense of confidence that one is on the right track, these facts would hardly count as evidence that outcompetes the evidence provided by one’s peers’ undisclosed reasons. The fact is, both parties have evidence that the other has private evidence that has led them to their preferred conclusion. Therefore, there is nothing about one’s own private evidence that privileges one’s own position, since one has evidence that one’s opponent has evidence of the very same kind. In slogan form: evidence of evidence is evidence.

With these preliminaries done with, we may proceed to lay out Feldman’s argument.
5.5 Feldman’s argument

Finally, we can set up Feldman’s argument with regards to religious disagreement. Religious disagreements are intractable. They are pervasive and irreconcilable. They have been going on for centuries without resolution. Most civil people have heard all the arguments, and have agreed to disagree. Yet if we assume that the Uniqueness Thesis is true, and if we assume that the disputants are epistemic peers, then religious disagreements simply cannot be rational to maintain. All parties should by now have agreed to adopt a conciliatory middle ground. We should all have put our beliefs on ice. We should be waiting for more evidence to turn up: the solution to religious disagreement is agnosticism.

The argument is that, after having shared all their evidence, epistemic peers continue to disagree about important religious propositions. The disputants do not seem to be cognitively impaired, and the available evidence has been raked over ad nauseam. Religious experts, philosophers of religion, sociologists of religion, theologians, historians, mystics and professional skeptics have the same body of evidence available. Given the Uniqueness Thesis, there is only one rational attitude to have toward any particular proposition given the same body of evidence. Given that the disagreement is between epistemic peers, none of the disputants is more likely to be the bearer of that unique rational attitude than any other. It follows that none of the disputants can maintain the disagreement at the same time as maintaining that their opponent is being reasonable (this is a consequence of the Uniqueness Thesis. For if your opponent is being reasonable, then you are not and vice versa). So, if both parties accept that the other party to the dispute is an
epistemic peer, then both parties ought to withhold judgment towards the contentious religious proposition until more evidence is forthcoming.

What sorts of religious disagreements is Feldman talking about? By ‘religious disagreement’, Feldman really means the dispute between the theist and the atheist. Feldman’s conclusion, then, implies that suspension of judgment is the proper attitude for all parties to adopt across the gamut of existing religious belief, including religious disbelief or atheism. In a dispute between the theist and the atheist, if both parties take their opponent to be reasonable, then both parties should suspend judgment until further evidence arrives on the scene. The theist and the atheist should converge on a sceptical middle ground. Both should give up on their dogmatic belief, and settle for agnostic non-belief.

To many of us, Feldman’s conclusion will seem intuitively wrong. But the strength of Feldman’s argument is seen more clearly when we apply his principles to simple examples in which two epistemic peers disagree about the results of the same method (usually some perceptual method). In these highly-simplified cases, Feldman’s principles seem to lead us to the intuitively correct result. Feldman considers an example in which two epistemic peers disagree over whether the Dean is in the Quad:

Suppose you and I are standing by the window looking out on the quad. We think we have comparable vision and we know each other to be honest. I seem to see what looks to me like the dean standing out in the middle of the quad. (Assume that this is not something odd. He’s out there a fair amount.) I believe that the dean is standing on the quad. Meanwhile, you seem to see nothing of the kind there. You think that no one, and thus not the dean, is standing in the middle of the quad. We disagree. Prior to our saying anything, each of us believes reasonably. Then I say something about the dean’s being on the quad, and we find out about our situation. In my view, once that happens, each of us should suspend judgment. We each know that something weird is going on, but we have no idea
which of us has the problem. Either I am “seeing things,” or you are missing something. I would not be reasonable in thinking that the problem is in your head, nor would you be reasonable in thinking that the problem is in mine. (2011, 150–1)

This conclusion seems around about right, and the analogy with religious disagreement is clear. You “see” God, and I do not. We cannot both be right. And so, Feldman concludes, the only reasonable attitude to take to religious disagreement is non-belief (not disbelief). To maintain a religious disagreement, one would need some special reason to dismiss the testimony of one’s opponent. It seems that one must either say that the evidence has not been fully shared, or that the opponent is not truly an epistemic peer, yet Feldman believes that these options are not on the table in most cases.

5.6 Maintaining Belief in the Face of Disagreement

I think there are good reasons to disregard the testimony of religious believers while nevertheless accepting that all the material evidence has been fully shared and that the disputants are epistemic peers (at least, in Feldman’s sense of that term). How can I have my cake and eat it too? I argue that it is typically the case that religious believers have rationally adopted an irrational epistemic system. Religious people typically apply religious methods to religious questions. Religious disagreement stems from a more fundamental conflict between opposing epistemic systems. Therefore, I maintain that first-order disagreement about contentious religious propositions may be rationally maintained in most cases, while higher order disagreements about the relative merits of rival epistemic systems may not always be. To reach that conclusion, I adopt a form of benign epistemic relativism. In doing so, I follow a path already trodden by Goldman (2010).
Epistemic relativism is the thesis that there is more than one epistemic system that one might rationally adopt. This relativism need not be global or nihilistic. This is not epistemological anarchism. Indeed, while there are multiple epistemic systems that one could rationally be led to adopt, only one epistemic system is rational. Goldman argues that even in a world with only one normatively correct epistemic system, it may be rational, given one’s evidence, to adopt an incorrect epistemic system. Examples are not hard to dream up. The North Korean child may come to believe, for rational reasons based on the testimony of elders, that anything the dear leader says is true, but while the child comes thereby to adopt an incorrect epistemic system, it is nevertheless a rational choice, given her evidence. Similarly, I argue that religious believers are often led, for quite rational reasons, to accept that religious methods are reliable and effective, and that religious disagreement stems from the acceptance of such methods.

Given that the epistemic systems of epistemic peers may differ, there may be reasonable religious disagreements even given the same body of evidence. Agents may still reasonably disagree if they apply different epistemic systems to the same body of evidence. In short, Goldman says:

Two agents can have different bodies of evidence that bear on norm correctness and are relevant to the reasonability of their respective attitudes.’ and ‘Where two agents are equal with respect to material evidence but differ with respect to norm evidence—though the correct norm- system stays fixed—it is legitimate for their attitudes toward a given proposition to diverge. (2010, 208—9)

Such a position emphasises the distinction between evidence relevant to epistemic norm acceptance (norm evidence) and evidence relevant to material disputes (material evidence). This position accepts that there is a matter of fact about what
the correct epistemic norms are, but charges that different bodies of norm evidence may lead to justified (but mistaken) beliefs about what the correct epistemic norms are. This may lead to disagreement among epistemic peers downstream once different epistemic systems are applied to identical bodies of material evidence. Yet such disagreements will nevertheless be reasonable, and will stand between epistemic peers who have fully shared their material evidence.

Note that this conclusion is compatible with the Uniqueness Thesis, since uniqueness is not restricted to one’s first order evidence. The Uniqueness Thesis only says that given some body of evidence there is one unique, rational attitude to have with respect to some proposition. If that body of evidence is supplemented with other higher order, norm evidence, then we have a new total body of evidence that uniquely determines just one rational attitude.

Now my objection to Feldman’s conciliatory view can be clearly stated. Epistemic peers may be led by quite rational considerations to accept incompatible epistemic systems. Having done so, disputants may come to different conclusions concerning the same body of material evidence, since they have applied different epistemic methods to the same questions. In the case of religious disagreement, it is typical that one party has used religious methods. Disagreement routinely results from the use of religious methods, and moreover, we do not have any knowledge of the conditions under which the methods typically produce independent agreement. Therefore, since the atheist is not, one can only assume, applying religious methods, the atheist may reasonably maintain her disagreement with the theist. The theist, in applying religious epistemic methods, is no longer the atheist’s epistemic peer.
Although the disputants would count as epistemic peers in Feldman’s sense (roughly equal with respect to intelligence etc.), they would not count as epistemic peers in my sense, since a religious believer is not equally competent at applying the most effective epistemic methods to religious questions. Indeed, the religious believer is applying methods that routinely fail to generate independent agreement, while affording the results of those methods a very high evidential weight.

5.7 The Disanalogy of the Dean in the Quad

Consider again Feldman’s Dean in the Quad analogy. In Feldman’s analogy, we disagree about whether the Dean is in the quad when we are both applying the same epistemic methods to the same question. Both of us are looking out the window from similar angles, under similar lighting and having similar visual abilities to see if the dean is in the quad. Since we both have eyes and we both know how to use them in the normal way, we are epistemic peers insofar as that is concerned. We are applying a public method, the conditions under which agreement is generated being well established and explained in terms of the causal effects of light on our sense organs. We are competent users of vision. We know that agreement is commonly generated by the faculty of vision under certain favourable conditions, and we know that the present conditions are those favourable sorts of conditions. If we happen to disagree while using our eyes, under such conditions, then we know that one of us must have gone wrong somewhere. We have independent means of discovering who has gone wrong where and, furthermore, we are also aware of the kinds of conditions that would normally lead to a total breakdown of agreement (e.g. in the dark, over great distances, or for objects moving at great speed).
It should be clear already, then, that there is an important disanalogy in Feldman’s argument. Let’s compare the ‘Dean in the Quad’ example with the situation as we find it vis à vis religious disagreement. In the case of a disagreement with atheists, theists typically disagree after having applied religious methods. These are methods that the atheist does not share. It follows that there is an extremely important disanalogy between a religious disagreement, of the sort that might hold between a theist and an atheist, and the straightforward kind of disagreement that holds for ‘Dean in the Quad’. In the case of religious disagreement, it is not the case that both parties have applied the same public method under favourable conditions, that they have unexpectedly encountered a disagreement about what the results are, and have concluded that ‘something must have gone wrong somewhere’. On the contrary, in the case of religious disagreement, it is typically the case that incompatible epistemic systems are being applied. Thomas Kelly is another philosopher who has cried foul over these kinds of disanalogies in the literature on disagreement (2011, 208). Such toy examples are used to pump our intuitions that we ought to give equal weight to the testimony of our peers in any and all cases. Yet such toy examples only manage to successfully pump these intuitions because we are so intimately familiar with the epistemic methods described and the favourable conditions under which they tend to generate agreement.

I propose we amend the ‘Dean in the Quad’ to make the analogy a better fit with religious disagreement understood in light of my discussion of the epistemic methods employed by religious communities. Let us imagine that some large section of the population, call them ‘sniffers’, routinely relies on subtle variations in odour to detect deans in quads, while most other people use their eyes. Indeed, sniffers regard vision
as systematically unreliable when it comes to observing deans in quads. One day, you and I are standing at the window, looking out over the quad. You say: ‘Fancy that! The dean is in the quad again,’ pointing towards the quad. I am puzzled, and reply: ‘What are you talking about? I don’t see the dean there.’ I proceed to ask how you came to believe that the dean was in the quad, and you tell me that you are a sniffer. ‘Oh, I see,’ I groan, rolling my eyes. At this point, I would be wise to disregard your testimony that the dean is in the quad, since I cannot see him, and I am aware that you are using a method that routinely generates disagreement under all conditions (both between sniffers and the general population, as well as between sniffers and other sniffers). It is obvious that if I used my eyes to detect the dean, but you used your nose, I would be forced to disregard your evidence, since noses make for sorry dean-detectors.

Moreover, if sniffers were commonplace—part of some bizarre cultural fad—then it would be par for the course that there would be irreconcilable disagreement about whether any particular dean was in any particular quad since noses do not generate agreement about deans in quads under the stated conditions. Disagreements about deans in quads would be humdrum and predictable, and non-sniffers would grow exhausted of the endless controversy generated by the sniffers’ acceptance of this peculiar and inappropriate method. Moreover, whenever any disagreement arose about a dean in a quad, non-sniffers would quickly infer that one party must be a sniffer, since agreement is otherwise par for the course under the right conditions. Such disagreements would not count as surprising evidence that someone had gone wrong in applying a public method like vision. On the contrary, each new
disagreement about a dean in a quad would be yet more evidence of the disagreement generated via the method of sniffing.

The analogy should be clear. The important thing that persistent religious disagreement tells us is that religious methods, such as alleged perception of the divine or divination or dream interpretation etc. routinely produce conflicting testimony. Upon unearthing a religious disagreement, the secularist is entitled to retain her belief just because it is clear one party is probably using religious methods, which routinely generate disagreement.

5.8 Religious Disagreement Without Religious Methods

I have so far argued that scientists (or more broadly, anyone applying secular methods) may disregard the testimony of religious believers on the grounds that their beliefs are generated by the use of methods that fail to indicate that the scientist may have gone wrong in applying any of her methods. The results of religious methods do not serve as indicators for error in the results of secular methods. If that is so, then when might it be reasonable for a religious disagreement to cause one to adopt a conciliatory middle ground?

I answer that if the theist has arrived at her belief entirely through the use of public epistemic methods, then the scientist and the theist ought to put their disagreement on ice until they can discover what has gone wrong. What I would wish to emphasise, however, is that such a situation is not typical of religious disagreement at all. Generally speaking, religious disagreement is a product of one party’s use of religious methods.

One might be unconvinced that religious methods really are the root cause of the disagreement. It might be argued instead that religious methods make up only one
small part of the religious person’s myriad reasons for her beliefs. Therefore, since it is possible, as Elga notes, that ‘we may sensibly ask what a given agent believes, bracketing off or factoring off or setting aside certain considerations’ (2011, 169), we may sensibly ask what the religious believer thinks her evidence supports excluding the evidence provided by religious methods. It may be the case that, after setting aside such religious reasons, religious belief persists for reasons that are grounded in public methods. Indeed, there are no shortage of arguments for the existence of God that can be drawn from natural theology. For example, cosmological arguments and design arguments may justify belief in a deity. These are deductive arguments for belief in God and they are public so far as I can tell. Therefore, there are at least some reasons for religious belief that are not generated by religious epistemic methods.

The above considerations seem to indicate that for most of the disputants to a religious disagreement, if we subtract the evidence afforded by religious epistemic methods from the believer’s body of evidence, we may still be left with a perennial religious disagreement which is grounded in shared and public methods. Once we have peeled off a few layers of private reasons, there is a public argument to be found at the heart of the disagreement. If the disagreement is like this, if it is really a public dispute hidden behind a fog of private justifications, then it would follow that religious disagreement still gives the atheist and the theist reason to move to a conciliatory middle ground.

The question is, then, whether it the case that religious belief persists once the evidence generated by religious epistemic methods is disqualified. Typically, it does not. Indeed, this is a point that has been urged more often by theists than atheists. Alvin Plantinga has famously argued that natural epistemic methods hardly suffice
for the formation of reasonable religious belief. Anyone who reasons their way to
religious belief is taken to be without sufficient justification. Plantinga puts the point
colourfully:

Christians do not reason as follows: ‘What is the best explanation for all that
organized complexity and the rest of what we see about us? Well, let's see, perhaps
there is an omniscient, omnipotent, wholly good being who created the world. Yes
that’s it; and perhaps this being is one of three persons, the other two being his
divine son and a third person proceeding from the first two (yet there are not three
Gods but one); the second person became incarnate, suffered, was crucified, and
died, thus atoning for our sins and making it possible for us to have life and have
it more abundantly. Right; that’s got to be it; that’s a dandy explanation of the
facts.’ What Christian would reason like that? Hardly any. Rather, the traditional
Christian thinks she knows these things by way of faith and its correlate, divine
revelation. (Plantinga 1996)

It is a characteristic of religious disagreement that it is rooted in, to borrow Victor
Stenger’s phrase, opposed epistemologies. Without the evidence provided by
religious epistemic methods, religious belief is an empty husk. When the believer is
asked what she would believe bracketing off the evidence provided by religious
methods, the response is almost uniformly ‘I would not believe.’ Even the
“evidentialist” Richard Swinburne argues that without the evidence of religious
experiences, the probability that theism is true barely cracks the 50% mark (2004,
341—2). In other words, with religious methods disqualified, believers either fail to
believe, or have the justifications for their beliefs severely handicapped. It is
therefore the case that in a typical religious disagreement, the application of religious
epistemic methods generates disagreement, whereas once these methods are
disqualified, agreement resumes.
5.9 Conclusion

To conclude, Feldman asks what attitude one should take when one encounters religious disagreement. But this question can only be properly answered once we know why religious disagreement is so very pervasive and so very intractable. To answer this question, we must ask what methods were used by the disputants to arrive at the results that they did in the first place. We must ask how suitable those methods are for answering the question posed. We must ask whether agreement or disagreement is usually generated when those methods are used. We must ask whether the investigators are competent at using those methods. Until these methodological questions are answered, the brute fact of disagreement is no guide to action. We must ask: what kind of disagreement are we facing? Is this a disagreement about the deliverances of public methods? Are both parties using the same methods? Under what conditions do those methods generate agreement?

If we encounter a disagreement, the existence of which is commonplace, familiar and known to be caused by one party's persistent use of methods which regularly generate disagreement, then we are entitled to maintain our belief provided we are using methods that tend to generate agreement. Our own attitude should not shift in response to such a predictable disagreement caused by such an obvious culprit. Of course, if religious methods were public and usually generated agreement, but merely happened to fail on some particular occasion, then this particular disagreement would be cause for us to abandon our belief until we could figure out who had made the mistake (and in such a case, there would be an agreed procedure for figuring this out, since the conditions under which the method is reliable would be familiar). But
it is simply not the case that religious disputes are the result of someone having “gone wrong somewhere”. Religious disagreement is not the exception, but the norm.

It seems to me that Feldman's argument rests on an unstated assumption that is commonplace in much of the literature on disagreement: that all parties are in some sense “doing the same thing”, that everyone is using the same sets of public methods whose disorderly performance might be eventually explained to the satisfaction of all parties. Yet it is clear that religious folk are not doing the same thing as secular folk. Far from it; they are using methods that have an established track record of generating disagreement between independent investigators. To illustrate the point, it is remarkable that early in the Feldman’s article, he writes:

> The students in my class disagreed with one another about significant religious matters. Some—the atheists like me—believed that there is no God. The majority believed that God does exist. Among the theists there were notable differences about the nature of God and about God’s relation to the world. The details of those differences will not matter for the discussion that follows. (Feldman 2011, 141)

If I may paraphrase the above quote, I would like to emphasise just how absurd Feldman’s omission seems to me:

> The students in my class disagreed with one another about significant religious matters. Some—the people not using religious methods, like me—agreed that there is no God. The people using religious methods believed that a god does exist. However, among the people using religious methods there were notable differences about the nature and number of gods, their capabilities, their corporeality and their causal relationship with the world. But the details of those differences will not matter for the discussion that follows.

*How* could those details not matter for the discussion that follows? It is an incredible omission. Such massive discrepancies in the outputs of religious methods are
evidence of the utmost importance for the discussion that follows, for they are prima facie evidence of the unreliability of religious methods.
6. Religious Parallelism

*And I appeared unto Abraham, unto Isaac, and unto Jacob, by the name of God Almighty, but by my name JEHOVAH was I not known to them.* — Exodus 6:3

6.1 Introduction

Although the problem of religious diversity receives a lot of attention, the opposite problem of religious parallelism is relatively neglected. As we have seen, it is highlighted by defenders of perennialism, but it is largely neglected by philosophers of religion. The neglect this problem has received is quite surprising. Worldwide, there are notable parallel myths and common metaphysical commitments shared by distant and isolated religious communities. These similarities would appear, on first glance, to be strong evidence in support of religious epistemic methods. For if it is the case that there is some surprising independent agreement among the world’s religions, then the argument from religious diversity loses much of its force. It would appear *not to be the case* that religious methods generate widespread disagreement. Similarities between different and isolated religions, then, would be strong *prima facie* evidence speaking in favour of the reliability of religious epistemic methods.

The puzzle of religious parallelism has only gained serious attention since the rise of comparative mythology as a distinct discipline in the mid-nineteenth century (Tylor 1929a, 275). It was then that the new field of anthropology placed man at the centre of scientific investigation. No longer was man looking only *outwards* on an external world that was both lawful and alien, but his attention was now shifted to his own nature, with its own quantities of lawfulness and strangeness. Religion, that uniquely human phenomenon, soon attracted the attention of the new science. Ground-breaking work by Durkheim, Tylor and Frazer sought to explain the
consistent and recurring patterns of religious thought. The extent and nature of religious diversity, which had unsettled men of earlier eras, was reappraised. Educated men and women grappled with the new and arguably more puzzling problem of religious parallelism. For some, religious parallelism provided a renewed sense of confidence in the supernatural: God had endowed all his created beings with some innate knowledge of his being and of his doctrines. For others, religious parallelism was further evidence of the human mind’s enslavement to natural forces. Religion was a natural result of our evolutionary histories. God had no dominion over the human mind, but instead, our neuroses, our material culture, or the inherited structures of human thought were our ultimate rulers. This Victorian pessimism is captured perfectly by Oscar Wilde: ‘The principle of Heredity,’ he wrote, is ‘the only one of the Gods whose real name we know.’

As well as the strides made in the nineteenth century, important contributions to the problem of religious parallelism have more recently been made in the burgeoning field of the cognitive science of religion. Notably, the theories of Pascal Boyer, Stewart Guthrie and Justin Barrett can account for the human disposition to consistently posit supernatural agency. While these approaches are major advances on the work of the Victorian anthropologists, I do not find these explanations on their own sufficient to account for religious parallelism. In the course of this chapter, I draw on theories from within the field of comparative mythology alongside the cognitive science of religion in an attempt to provide a comprehensive account of the causes of religious parallelism.

What sorts of explanations are available that account for religious parallelism? How can we account for the puzzling and surprising overlap in contents? In very
many cases the similarities are easily explained by appeal to nothing more than a shared cultural history. One is able to give a diffusionist explanation: one can point to a common cultural source. Stories of a heroic demigod, Maui, stretch from the Western Pacific Ocean far into the East. Of course, this is no surprise. Polynesian navigators carried the story with them, just as they carried their linguistic and material culture.

While diffusion can account for much of the observed parallelism, it cannot account for all of it. In many other cases, diffusion is extremely unlikely, with the religious cultures in question having been isolated from each other for tens of thousands of years, and so the similarities must be explained by some other means. These are the sorts of religious similarities that ‘history cannot unriddle’ (Brinton 1876, 161). They are the similarities that concern this chapter. Given that the rates of recurrence of certain religious and mythological ideas are clearly above chance, we cannot assume that so many similarities in the contents of religious belief are merely coincidences either. It seems that either (a) the similarities are the result of independent thinkers applying public or reliable religious methods, or (b) the similarities are the result of independent thinkers applying other natural methods. In this chapter, I argue that the similarities are sufficiently accounted for on the latter hypothesis.

6.2 Boyer’s Theory of Religion

In attempting to provide a rigorous definition of ‘religion’, anthropologists have surveyed the world’s religions noting the most stable ideas found across different cultures. Although it is difficult to find any truly universal religious ideas, there are nevertheless commonalities that cross a wide range of vastly separate communities.
Tylor notes belief in ‘spiritual beings’ as a defining characteristic of religion (1929a, 287). In a similar vein, Boyer points to ‘intentional agency that one does not physically encounter’ (2003, 120), and Scott Atran writes: ‘Supernatural agency is the most culturally recurrent ... concept in religion’ (2002, 57). Related to these ideas of hidden or disembodied agency we find the idea of the personification of natural objects and artefacts, such as personified mountains, planets or statues. Durkheim famously argued that it is not hidden agency, but the twin concepts of the sacred and the profane that define religious thought. However, since the religious notions of sacredness and profanity are almost always applied according to some system of thought that draws on the authority of some supernatural beings, the sacred and the profane, in religious contexts, are more often consequences of the near universal belief in supernatural agency.

The belief in supernatural agency is common enough and found across such a wide range of religions that we have reason to take seriously the claim that there is some overlap here that is not explained by diffusion or chance. The religious cultures in question are isolated from each other not only by thousands of kilometres but, in some cases, have been isolated from each other for tens of thousands of years.

If we were to express the belief upon which religions almost universally agree in the form of a single proposition, it would consist in a rather vague existential statement of the form ‘some spirit-like things exist’. Note the exceeding generality of the preceding proposition. The closest we get to a truly universal religious belief, then, seems to concern the existence of a certain class of objects, described as causally efficacious disembodied minds or minds embodied in surprising places. The agreement is very coarse grained and the common overlap constitutes a proposition
that is descriptively impoverished. Moreover, there remains broad disagreement over what the spirits are like, what they do, where they live, how they feel about extra-marital sex, when they interfere with the natural world, how they effect their will, whether they feel pain etc. As Boyer emphasises: ‘there do not seem to be any substantive universals in religious ideas, beyond the very vague notion of “supernatural” entities and agency’ (1994, 9). This is an important point. For while the world’s religions appear to agree on the existence of some things that we might call spirits, this very general agreement does not translate to a coherent picture about the nature of these spirits. For example, two religions from distant cultures may both attest to the existence of living mountains, yet will disagree over which mountain is living. If spirits themselves were doing the causal work in the formation of the common belief that spirits exist, then we should expect more surprising intersubjective agreement among investigators or religious specialists when they are asked particular questions about spirits.

There are two promising accounts in the cognitive science of religion that I would like to discuss, which are jointly able to explain the pervasiveness of (and propensity for) belief in spirit-like entities. These explanations are superior to any explanation that appeals to reliable religious methods, since such explanations are able to account for both (1) the widespread agreement in the existence of spirit-like things and (2) the widespread disagreement in the actions or behaviours of those spirit-like things. The first explanation is Pascal Boyer’s broadly memetic approach which points to the minimal counterintuitiveness of religious ideas to explain their pervasiveness. The other is Justin Barrett’s theory of a Hypersensitive Agency Detection Device, or
HADD for short, which is a cognitive mechanism that routinely overpredicts intentional agency in the world. I begin, in this chapter, with the theory of Boyer.

In *The Naturalness of Religious Ideas*, Boyer argues that the furniture of religious theories is counterintuitive enough to be interesting and memorable, and therefore easily transmissible from one generation to the next. Religious ideas violate some of our most basic intuitions about the way the world works, yet these counterintuitive ideas are nevertheless subject to certain cognitive constraints. It is this fine balance between counterintuitiveness and intuitive constraint that makes religious notions so easily transmitted from generation to generation. What is so special about this fine balance? Boyer argues that while the counterintuitiveness of religious ideas makes them particularly memorable and imagination-grabbing, the intuitive constraints by which such ideas are bound create a rich inferential framework. Religious ideas, then, are counterintuitive enough to command our attention, yet intuitive enough to be reasoned about in a systematic and explanatory way. This is all rather abstruse, but need not be. Some examples will help us to be clearer about what Boyer is getting at.

With regards to the counterintuitiveness of religious entities, Boyer lists three typical ways in which that most common of religious entities, spirits, violate our intuitions:

1. Spirits are typically either very strange physical objects, or they are non-physical altogether.
2. Spirits do not die, are not born, do not age etc.
3. Spirits have unusual or heightened cognitive and communicative abilities. (1994, 117—8)

So, in the first case, spirits violate our intuitions either that agents must be embodied, or that some objects cannot be agents. In the second case, spirits violate our intuition
that agents are living things that are biologically determined to mature, grow, age and die. And in the third case, spirits violate our intuition that there are natural limits to what may be known or communicated. These are violations of our deep intuitions about everyday objects. Intuition violation makes religious ideas memorable and easily transmissible from one generation to another. Counterintuitiveness thus plays an important part in accounting for the popularity of spirit beliefs in human beings.

I can imagine that the reader may find Boyer's account of counterintuitiveness difficult to swallow. An obvious objection is that religious people actually happen to accept claims like 1, 2 and 3. Therefore, it is quite obviously not the case that these claims violate their intuitions. The proof is in the pudding: these believers accept the claims as intuitively plausible. They wouldn't believe them if they didn’t find them intuitively plausible. What Boyer must be getting at is that religious ideas are counterintuitive if you are an outsider. He must mean something like ‘religious ideas are counterintuitive if you’re a non-believer, but of course, they’re intuitively plausible if you’re a believer.’ Right?

Wrong. Boyer is clear that his notion of an ‘intuition’ does not describe the explicit commitments held by members of particular communities. For Boyer, intuitions about classes of objects are constrained by innate features of our cognitive make-ups. Specifically, there are domain specific ontological assumptions that humans grasp in an apparently innate way. These are fundamental ontological categories that make up a general framework of human thought. These can be seen as the seemingly spontaneous assumptions that shape our expectations about the behaviour of objects given their category membership, and these assumptions appear to develop in human beings from a very early age. Thus, for example, having learnt that some
individual is joint with the predicate 'likes to eat meat', we are likely to assume that such an individual can also be joint with the predicate 'breathes', but it would be counterintuitive if we were told that the predicate 'is difficult to build' could also be applied. Here we have an innate distinction between the ontological categories *living creature* and *artifact*. Once we learn that an object has some of the properties distinctive of one category, an intuitive classification scheme launches into action that warrants certain other predications, while forbidding others. Religious ideas violate our innate intuitions about category membership and predication. Of a ghost, we might predicate 'watches over its relatives', an activity usually associated with agency, while also predicating 'travels through walls', an activity associated with non-agentive phenomena, such as sounds.

So, religious ideas *do* violate basic intuitions, and they even violate the intuitions of religious believers themselves. Religious ideas are just plain weird to everyone. Yet it is this very weirdness, this counterintuitiveness, that makes the ideas so attractive to the human imagination. They are believed, to borrow a phrase from Tertullian, *because they are absurd*. Note that this is not to render the existence of the object believed an impossibility. Counterintuitiveness itself is no blight on the worthiness of a belief. A Venus flytrap is a counterintuitive object, yet this is no reason to reject any and all beliefs about Venus flytraps. All that Boyer’s theory says about counterintuitiveness is that counterintuitiveness is part of the explanation for the fidelity of transmission of religious ideas from one generation to the next.

While absurdity may capture the imagination and make religious ideas good candidates for transmission, there are limits. Specifically, there are limits to the kind of absurdity that religious ideas typically embrace. Boyer gives an interesting
example of the negative effect that some of our cognitive constraints place on religious belief: ‘a religious system that includes more than a thousand different classes of supernatural beings, each class with its particular properties and associated rituals, would certainly overload human memory’ (1994, 17). So, a religion that postulated thousands of entities as diverse as ghosts, goblins, angels, gods, demi gods, sprites, demons, witches etc. would not get off the ground, since such a list would not make a promising object of transmission in the long term. It could always be the case that one lone religious enthusiast might develop such a list, but such a list would probably be a hopeless candidate for transmission to future generations. Boyer gives another example of a religion that would be absurd, but would probably fail to be transmitted: one which posited a god who is construed as ‘omnipotent but having no mind’ (1994, 121). Although this would be an absurd idea, which might be capable of attracting our attention momentarily, it would make a poor candidate for transmission in the long term, since a being that can do anything but has no reasons for doing any particular thing does not make for a very satisfying explanatory tool. Without an account of the psychology of the god in question, we could not make sense of the relationship between human affairs and the actions of the god (1994, 122). We could not give fruitful and interesting explanations for such diverse phenomena as floods, wars, a run of bad luck or an epidemic of a deadly virus. The success of religious ideas depends on the balance that they strike between the explanatory power of our intuitive ontologies and the attention-grabbing power of counterintuitive claims.

Although I think Boyer’s account of religious ideas is attractive, it goes only part of the distance to account for the pervasiveness of spirit beliefs. His theory may
account for why these ideas are so readily transmissible, yet it does not entirely account for why the core element of religious agreement manifests as it does. Why spirits? Why agency? Surely there are other ideas that could strike just as fine a balance between our intuitive ontologies and absurdity that could be easily transmitted from one generation to the next. Here’s an idea. Why not posit invisible artefacts that have special causal powers? This idea seems to strike a particularly good balance between absurdity and explanatory power. Why do religions not so commonly contain this idea? Why is the persistent theme of religion the idea that some agents exist who don’t have the regular kind of body? What is it about the idea of hidden or mysterious agency that is so particularly attractive to human minds?

Boyer’s theory may be able to explain the ease of transmission of religious beliefs about mysterious agency. However, his theory finds difficulty in accounting for the recurrent generation of similar religious ideas. Boyer’s theory, then, depends on the diffusionist assumption that the parallelism of different religions is the result of their transmissibility.

If we were to accept a scenario according to which there existed a common prehistoric cultural source for all the world’s religions, then Boyer’s theory would be sufficient to explain the observed overlap in content. If all modern religions happened to share a common ancestor religion in the depths of human prehistory, and if this ancestor religion just happened to posit the minimally counterintuitive idea of a spirit-like thing, then we might rest content with Boyer’s theory. It would be reasonable to expect the minimally counterintuitive ideas of the common ancestor religion to feature in all extant religions. If the common ancestor hypothesis were true, then it would be nothing more than a historical accident that modern religions
share the minimally counterintuitive content that they do. Boyer could then account for the overlap in modern religions as the result of inheritance. I think it is clear, however, that such an account rests on a rather implausible pre-historical scenario. If we wish to account for the spirit motif common to the world’s religions as a recurrent rather than an inherited idea, then we require more than Boyer’s theory alone.

6.3 Barrett’s Theory of Religion

Justin Barrett’s theory of religion appears to be able to account for the spirit motif of religions as a recurrent idea rather than an inherited one. Barrett builds on the earlier theory of Stewart Guthrie (1993), who took religion to be caused by systematic anthropomorphism. Building on Guthrie’s foundations, Barrett posits a module in the brain responsible for the pervasiveness of the idea of hidden agency. He calls this module a Hyperactive Agency Detection Device (HADD for short) (2004, 32). The gist of Barrett’s theory is that human beings are prone to overpredict agency in the world. This chronic overprediction of agency is evolutionarily adaptive, since the negative value of the occasional false positive is minor compared to the negative value of any false negatives. In other words, a person who overpredicts agency may be more likely to spot a lion where there isn’t one, but this is a small price to pay if he is also more likely to spot a lion where there is one. Failing to identify agency when it is present could result in missing an opportunity to capture dinner, or even worse, becoming someone else’s. Over-predictors of agency, despite their embarrassing skittishness, would have a clear evolutionary advantage over under-predictors.

Barrett says that HADD is activated under certain conditions:
When HADD perceives an object violating the intuitive assumptions for the movement of ordinary physical objects (such as moving on non-inertial paths, changing direction, inexplicably, or launching itself from a standstill) and the object seems to be moving in a goal directed manner, HADD detects agency. (2004, 33)

So, grass that spontaneously rustles or ponds that suddenly splash may activate HADD. Barrett adds to this list some other conditions in which HADD may be activated. HADD may be activated when some phenomenon is observed that apparently lacks any known natural cause, and which might be in the interests of some agent to carry out (2004, 34–5). When an unexpected storm sinks a vessel on its way to battle, HADD will activate, causing us to ask and then answer the question ‘cui bono?’ Thus, there are three kinds of conditions that spark the activity of HADD:

1. Any observation of objects that act with apparent volition.
2. Any observation of a phenomenon that fails to be accounted for by the usual natural mechanisms.
3. Any observation of an event that might be taken to be in the interests of some agent.

Once HADD is activated and we ascribe an agent as the cause, our Theory of Mind (ToM) kicks into action, and the agent’s behaviour comes to be explained in the familiar belief-desire terms of our innate folk psychology. After HADD has been activated in cases such as these, the entities posited become a part of our working ontology. A splash or unexpected wake on the surface of the lake may cause us to posit an agent, or lake monster, or water sprite. And so, from the puzzling phenomena we develop a system of mythic entities with characteristic behaviours.

Thus, while Boyer’s theory helps to account for the relative attractiveness and reliable transmissibility of religious ideas, Barrett’s theory sheds light on why the
ideas that are so often generated happen to concern mysterious or counterintuitive agency. So, with both theories in hand we are able to explain both (1) why religious belief so often concerns strange agents, and (2) why those agents are so commonly spectacular and counterintuitive.

In addition, Barrett’s theory can explain why the agency ascribed as the cause of some phenomenon is so often mysterious. When some ambiguous or unfamiliar phenomenon is observed, an agent may be ascribed as the cause, yet being an unfamiliar phenomenon, the mind infers an unfamiliar or alien kind of agency. Naturally, our ancient ancestors were aware of the usual suspects that caused ripples in tall grass (lions, smilodons, baboons, snakes, etc.); less sure were they about the agents who might be causing tsunamis, disease epidemics and runs of bad luck. Ascribing a supernatural agent as the cause of such phenomena is the natural response for beings like us, equipped as we are with our HADDs and our Theories of Mind (ToMs).

Barrett notes that the HADD+ToM account of religion predicts that those with more developed ToMs may find that religion affords a more fruitful inferential scheme than those with less developed ToMs (2004, 43). One might expect, then, that religious belief would be more prevalent in groups whose ToM is better developed generally, since the explanatory power of spirits is enhanced if more can be said about the probable emotional states, beliefs and desires of such beings.

Barrett notes that there is evidence for just such a difference in the development of ToMs holding between men and women. It is for this reason that sufferers of disorders primarily affecting ToM, such as those with Asperger’s syndrome, have been characterised as exhibiting ‘extreme male brain’ traits. Women outperform men
on a range of so-called ‘mind-reading’ tests, and are better at decoding non-verbal communication at all age levels (for examples, see Baron-Cohen [2002]). As was noted in the previous chapter, women vastly outnumber men when it comes to the practice of spirit possession. Yet even with regards to more mainstream religious practices, Barrett notes that women tend to be more religiously involved and committed than men (2004, 42). Thus, the HADD+ToM theory, while not developed in order to explain this gender discrepancy, accounts for it quite elegantly. Moreover, there is evidence that those with developmentally abnormal ToMs, such as those with Asperger’s syndrome, are less inclined towards ascribing supernatural causes than the general population. Notably, when people with Asperger’s syndrome ascribe a supernatural cause to some phenomenon, they exhibit a tendency to describe this cause in relatively impersonal or deistic terms (Visuri 2012, 363). In one study, Asperger’s subjects were commonly found to describe spirits in the terms of modern physics, such as being composed of pure ‘energies’ and ‘electrical impulses’ (Visuri 2012, 362).

6.4 Approaches Within Comparative Mythology

Boyer and Barrett can account for some of the agreement found between diverse religions, specifically with regards to their near universal metaphysical commitments. The theories of Boyer and Barrett are jointly able to explain why we find agreement in the existence of spirit-like things. But what about the agreement that we find between diverse religions with regards to the specific narrative contents of their cosmogonies, myths and folklore? Religious parallelism is not restricted to intersubjective agreement about the existence of spirit-like things. As noted earlier, we commonly find world eggs, flood myths, earth mothers, sky fathers, primordial
bodies of water from which the earth emerges, spirit as represented by breath, god as by wind, battles between man and dragon, reincarnation, heroic demigods etc. How are we to explain this kind of puzzling agreement? Often, this agreement has little to do with the existence of spirit-like things, and more to do with the mythical or historical relationship between the supernatural and natural realms.

Certainly, much of the agreement can be explained as resulting from a common cultural source, and we may in such cases trace a probable history of diffusion, but what about those cases of convergence for which a common source is extremely unlikely? Without a common cultural source, what could possibly rein in and constrain the human imagination in such a way as to reliably generate the same sets of characters and scenarios again and again? Myth does not seem to be subject to any external constraints on its content. No authority prescribes which myths shall be passed down. Indeed, myths are a fantastical kind of imaginative expression, in which any event seems possible, so why is there such striking agreement between them? The comparative mythologist, Claude Lévi-Strauss, puts the problem like this:

In the course of a myth anything is likely to happen. There is no logic, no continuity. Any characteristic can be applied to any subject; every conceivable relation can be met. With myth, everything becomes possible. But on the other hand, this apparent arbitrariness is belied by the astounding similarity between myths collected in widely different regions. Therefore the problem: if the content of a myth is contingent how are we going to explain that throughout the world myths do resemble one another so much? (1955, 429)

Diffusionist explanations aside, existing solutions to the problem of mythological parallelism have tended to emphasise that human beings have universally shared cognitive makeups or universally shared primeval ideas that regulate or inform all our myth-making activity. The common motifs of isolated myths are determined by
features common to all human minds. Hence, I dub this position the ‘innatist theory of myth’. Its exponents include Lévi-Strauss, Sigmund Freud and his disciple, Carl Jung. In contrast to the innatist theory, I develop and endorse a natural analogy theory of myth, which points to similarities across natural environments, and analogical reasoning about those environments, as neglected factors in the convergence of mythologies across cultures.

The structuralist theory of myth put forward by Claude Lévi-Strauss posits a common underlying structure of human thought that all myths share as a substrate. The particular elements of myths (heroes, ghosts, tricksters, etc.) are ultimately irrelevant to capturing the deeper meaning of the myth, since they act as mere placeholders. What is important is the relationship between the elements, as this relationship is identical cross-culturally. Myth is grounded in a pattern of thought according to which binary opposites find eventual mediation in some intermediary element. Thus, in answer to the question as to why Native American myths concerning trickster gods so often see the god taking the form of either a raven or a coyote, Lévi-Strauss points to the fact that these stories seek to mediate the binary opposites of life and death. In an attempt to find a likely mediator between the two, an empirical deduction is performed. This is an analogical induction that draws from regularly observed associations of relations in one’s environment (especially from the pool of available ethnozoological and ethnobotanical knowledge). Thus, since herbivores live peacefully without killing to survive, they come to be the animals most regularly associated with life. Their opposite, the predators, come to be regularly associated with death. The animal reconciling life and death, then, would be the scavenger or carrion-eater, who lives on the flesh of the dead, yet who does not
necessarily kill to survive e.g. the raven or the coyote (1955, 440). All human myth is arranged according to this pattern of mediation of opposites, and the study of myth is reduced to the search for this deeper structure hiding underneath any particular myth.

As intriguing as his analysis might be, it is improbable that there is a universal mythological structure of the sort that Lévi-Strauss describes. The key innovation of his theory is the idea that myth is structured according to universal rules of human thought. However, myths simply could not be always so confined to such an internally imposed pattern, since myths are often born from external inspirations—accidents of language for example. The nineteenth century ethnologist D.G. Brinton gives just such an example:

There is a cave, near Chattanooga, which has the Cherokee name Nik-a-jak. This the white settlers have transformed into Nigger Jack, and are prepared with a narrative of some runaway slave to explain the cognomen. (1882, 22)

Similarly, myths may be inspired by (while not being accurate descriptions of) true stories or historical episodes. If the narrative structure of the myth roughly maps the progress of the historical events, then it is unlikely that they will express Lévi-Strauss’ deep logic of myth. Myths may also be put forward as imagination-capturing explanations for why things are the way they are. They are not attempts to mediate opposites. They may be just so stories. All of these would be examples of myths lacking the logical structure of binary opposition and mediation that Lévi-Strauss says is essential to mythology.

It is peculiar that Lévi-Strauss places such a low emphasis on the common elements of isolated mythologies. In contrast, the psychoanalyst Carl Jung argues that the common elements of isolated mythologies are due to the unconscious
expression of innate human ‘archetypes’, contained within the unconscious mind. Jung is best known as the rebellious pupil of Sigmund Freud. Freud’s own theory of religion is as fantastical as it is unlikely. The theory appeals to a deep and hidden memory of an ancient oedipal murder (Pals 2006, 79), and this troubling unconscious memory holds sway over all members of the human race. Since Jung’s theory is an advance on Freud’s wild speculation, I will omit the work of the master to focus on the pupil.

Jung’s notion of archetype is central to his explanation of religious parallelism. However, he is painfully ambiguous in his definition of ‘archetype’. He says archetypes are ‘inexpressible’ (1960, 124), while at other times he says that archetypes are: ‘typical forms of behaviour which, once they become conscious, present themselves as ideas and images’ (1960, 137). Still elsewhere, Jung seems to present archetypes as unconscious ideas and categories that shape the typical mythic descriptions of human life, something akin to Platonic forms for mythic elements such as giants, dragons, evil stepmothers, heroic demigods etc. This latter interpretation seems closest to his general intention. However, given the fatal ambiguity in usage, it is probably best to avoid the term altogether.

In his more concrete moments, Jung makes a comparison between animal and human instinct: birds instinctively build nests and flap their wings, human beings likewise raise their hands to the sun or ritually immerse their newborns in water (1960, 136—7). Yet human beings, unlike birds, also come to associate particular ideas with their own behaviours. The result is that human beings, acting instinctively and without understanding the meaning of their behaviour, attempt to explain why they behave as they do. Why do I prostrate myself before the sun? Why do I set up a
Christmas tree in December? The reason that the explanations are so similar across distant mythologies is that they are rooted in similar ritual behaviours, which appear to be expressions of reverence for the same objects and persons. The sun, pure water, tall trees, or human breath, for example, are objects that are instinctively treated with reverence. They have come to occupy a sacred status in mythic systems worldwide. Thus the common ritual behaviours give rise to the common ideas. The behaviours antedate the explanations.

It is difficult to know how much weight to give to such an account. At least sometimes, conscious mythological ideas appear to antedate the resulting ritual behaviour. So, to explain similarities in mythologies as resulting from common ritual behaviours appears to be, at least sometimes, putting the cart before the horse. Jung’s own example of decorating the Christmas tree, for example, appears to be an example of a ritual activity whose mythic pagan origins has, for many Christians, become lost in the course of the cultural dislocation of pagan ideas. Certainly, one might be tempted to argue that the pagan tree worship from which the tradition was originally drawn was equally carried out in an unreflective way. But such accounts as this are in the same family as the Wittgensteinian account of religion outlined in the first chapter, and fall victim to the same objections.

The accounts of Lévi-Strauss and Jung differ markedly, so what do these innatist accounts have in common? Both accept that the role of the environment in shaping myth is relatively minor. The human mind takes the primary causal role. Our cognitive makeups ensure that, no matter the environment, there will always be substantial similarity across isolated human mythologies. For Lévi-Strauss, mythological similarities are caused by a deep logic of human thought. For Jung, they
result from common unreflective or unconscious ideas. Both theories point to the causal priority of the mental. This priority claim is rejected on a natural analogy theory of myth. According to a natural analogy theory, structural similarities in external conditions play the causally prior role.

A natural analogy theory retains part of Lévi-Strauss' account of myth-making, specifically, his notion of empirical deduction or analogical reasoning, which can explain many of the similarities in isolated myths. The theory of natural analogy accepts as unproblematic the innatist claim that human beings are cognitively similar, yet the theory adds that many features of the environment are equally common to all human beings. These common environmental features do much of the legwork in explaining common and recurring mythological elements.

Consider the pervasiveness of similar Earth mother and sky father myths. What common environmental features can be appealed to that explain this myth? Well, human beings share in common observations of a terrestrial and a celestial realm. It is common to observe liquid rain, that falls from the latter onto the former, which nourishes plants and makes fruitful the earth below. Without rain, the Earth is barren. There is an analogy that presents itself: liquid semen makes fruitful a womb. There is a structural relationship common to both cases, which is difficult for any intelligent person to overlook. It may be concluded, by analogy, that the mechanism of procreation observed in the one case applies in the other: that rain is a variety of semen. If rain is semen, and originates in the celestial realm, then the celestial realm is masculine. A myth (or hypothesis) emerges: a masculine presence in the sky inseminates the earth mother below, and therefore the fruits of the Earth have two supernatural parents. The analogy between the two cases can be traced to the
common structural relationship that holds between the two cases, and it is not mysterious that cognitively similar human beings placed in environments sharing many of the same structural features will be drawn to make similar analogies and so will produce similar myths. The probability that some given culture will produce a myth of sky father and Earth mother will be higher than the probability that it will produce a myth according to which the sky and the earth are associated with, respectively, a box and a spider. There is no easily imaginable structural relationship that holds between a box and a spider that maps that relationship between sky and Earth.

Similar analogical reasoning can go some distance to explain the preponderance of egg or seed origin myths (generation of universes is analogous with generation of creatures), of myths that marry or identify women with a moon spirit (the rhythm of the female reproductive cycle maps the rhythm of the moon’s cycle), and of myths that recurrently associate the same animal spirits with the same behaviours and personalities (fearsome wolves, cheeky monkeys, cunning ravens etc.).

Historical precursors to a natural analogy theory can be found in nineteenth century cultural anthropology in the United States and Britain. A good example is Tylor, who states: ‘Similar ideas... are found in different lands, but this similarity seems in large measure due to independent recurrence of thoughts so obvious’ (1929b, 73—74). Tylor also remarks that empirical observation informs myth by a process of ‘mere imaginative analogy’ (1929b, 48). Elsewhere, he states that mythology is informed by ‘that great doctrine of analogy, from which we have gained so much of our apprehension of the world around us’ (1929a, 297). And, perhaps
most clearly, he writes: ‘through all such endless varieties of mythic conception, there runs one main principle, the evident suggestion and analogy of nature’ (1929a, 298).

While Tylor is emphatic that natural analogy is the most important method of the myth-maker, he gives relatively few examples of this analogical reasoning in action. For such examples, we must turn to the relatively under-appreciated American linguist and ethnologist, D. G. Brinton, who also takes analogy to be key to explaining parallel myths. Brinton agrees that the similarity of the world’s mythologies may be accounted for in part by the existence of common observations causing common analogical inferences. The similarities of the world’s myths are explained, he says, ‘by the identity of the laws of thought acting on similar impressions’ (1876, 161). Among other examples, Brinton accounts for the persistence of the religious significance of the number four as deriving from the four cardinal points. This explanation goes some distance, he argues, in accounting for the ‘four brothers’ or ‘four gods’ myths, found among a range of religious cultures in the Americas, the Near East and the Subcontinent. The four gods are often subservient to a primary god of light or fire, commonly associated or identified with the sun. Brinton further gives a detailed account of the way in which the daily motion of the sun maps the progress of the soul after death in Egyptian, Indian and Aztec religious belief (1876, 140—7).

A natural analogy theory of myth predicts that cultures from radically different environments should produce radically different myths. While I cannot demonstrate this here, there is some evidence it is true. At least, I will give one example provided to us by Tylor. He observed that there is a relative scarcity of werewolf myths in Britain since the later middle ages, despite these myths having once been very popular and well distributed. In contrast, werewolf myths remained popular on the
European continent. ‘This has been,’ writes Tylor, ‘not so much for lack of superstition, as of wolves’ (1929a, 313). Indeed, the grey wolf has been extinct in England since the early 16th century (Matheson 1943, 15).

6.5 Conclusion

There is surprising agreement found among different religions, particularly with regards to their general metaphysics and mythological overlap. Naturalistic accounts of religious belief suffice to explain why there exists surprising religious agreement across a wide range of isolated cultures. The accounts of Boyer and Barrett happen to explain why religions agree on the existential claim that there are spirit-like things, while often finding disagreement about most predicative claims concerning spirits. Both Boyer’s and Barrett’s accounts of religion explain religious agreement in terms of cognitive faculties that have evolved for reasons that are fitness-enhancing yet not necessarily truth-tracking. It is therefore unsurprising that (1) belief in spirits is widespread, and that (2) beliefs about spirits often fail to converge independent of a common historical or cultural source. Yet Boyer’s and Barrett’s accounts do not on their own account for the widespread similarities found in the specific narrative contents of isolated mythologies. Boyer and Barrett can explain why the metaphysical commitments of religion often converge, but their accounts lack the machinery to explain why the characters and stories in so many isolated mythologies overlap. While many writers in comparative mythology have stressed either an innatist or diffusionist hypothesis for this overlap, I have instead presented a theory of natural analogy, which I believe is able to supplement the accounts of Boyer and Barrett in a way that better accommodates the existing data.
In short, religious parallelism is a problem that can be explained by appeal to natural cognitive mechanisms. Although I have not argued the point here, it can be easily seen that this parallelism cannot easily be explained by reliable religious epistemic methods. If there were such reliable religious methods, then we should expect not just agreement on the proposition that spirits exist, but agreement concerning where, when and how they operate. Moreover, the lack of convergence around some single mythological narrative is unlikely on the theory that such narratives are delivered by reliable religious methods, yet to be expected given a natural analogy theory of myth, according to which isolated cultures often inhabit different kinds of environments, and are wont to make conflicting analogical inferences.

It is a striking fact that the often highly detailed, narrative agreement found in religious mythology is best explained by the exercise of a non-religious method, in this case analogy. When religions do agree, this is no work of magic or miracle; it is the result of our natural cognitive faculties operating on similar inputs, producing similar outputs.
7. Religion, Science and Epistemic Circularity

By an attentive and repeated inspection, I found that my object was very well seen in red; better in orange and still better in yellow; full as well in green; but to less advantage in blue; indifferently well in indigo, and with more imperfection in violet. — William Herschel, *Investigation of the Powers of the Prismatic Colours*

Or

*For now we see through a glass, darkly.* — 1 Corinthians 13:12

7.1 Introduction

What work still needs to be done? To this point, we have arrived at the following three general conclusions about the relationship between religion and science:

1. The knowledge claims of religion often conflict with science.
2. Religions have distinctive ways of acquiring and justifying those claims that are unlike those used in science.
3. Religious methods of investigation are excluded from science on the grounds that such methods are private.

As they stand, these three facts do not indict religious methods as unreliable. Indeed, all that has been shown is that religious methods do not generate the same kind of intersubjective agreement that scientific methods regularly do. All that has been shown is that when religious folk make claims about the world, these claims are justified by methods that are private. To show that they are not simply private, but unreliable, some further argument is needed. Moreover, the above three conclusions tell us nothing about the reliability of scientific methods. All that has been shown is that scientific methods produce surprising intersubjective agreement. But it does not
follow that *because* scientific methods produce this kind of agreement, they are therefore reliable. To show that scientific methods are reliable, and that religious methods are not, some further argument is required. Is such an argument available?

Some have argued that no such argument is available, on the grounds that it is impossible to independently establish the reliability of *any* epistemic method. William Alston, for example, has argued that it is impossible to establish the reliability of our most basic epistemic methods in any non-circular way. We are wedded to them, it seems, but unable to demonstrate their reliability without recourse to their use. The flipside of this argument is that it is impossible to show that any epistemic method is *unreliable* without appealing to other epistemic methods that have been accepted only on circular grounds. Alston’s argument, simply put, is that any justification of the reliability of an epistemic method will rely on premises that presuppose the reliability of that very method. Alston regards such circular justifications as inevitable for our most basic epistemic methods, yet he does not believe that this fact should lead us into scepticism. On the contrary, he argues that we are entitled to “sit tight” with the methods that we have competently mastered.

I will argue against Alston that there exist non-circular justifications for the reliability of some epistemic methods. Before presenting that argument, I shall first outline Alston’s claim that, in attempting to demonstrate the reliability of our best methods of inquiry, we are all chasing our own tails.

### 7.2 Epistemic Circularity

Alston argues that epistemic circularity infects all of our most well-regarded epistemic methods. While Alston takes perception as his case study, he argues that it
is reasonable to think that his conclusion can be applied to other methods such as memory, deductive reasoning, intuition etc. As was made clear in §4.4, Alston’s defense of the reasonableness of using religious methods depended on his individuating distinct mystical practices with a very fine toothed comb. However, for the sake of this argument, says Alston, no such pedantic concern for individuation is necessary. The problem of circularity is a feature, not of this or that well-specified method, defined as such-and-such a process applied under such-and-such conditions, but rather of our fundamental epistemic methods understood in a very broad sense. As I will show later, this failure to individuate methods precisely is part of the problem with Alston’s argument for epistemic circularity. Once we individuate epistemic methods more precisely, the apparent circularity vanishes.

Alston’s argument begins with the observation that most of us accept the following proposition to be both true and well justified:

(A) Sense experience is a reliable source of perceptual beliefs. (1986, 4)

So far so good. This seems about as unproblematic an assumption as they come, at least to a non-philosopher. It is worth noting that Alston takes ‘reliable’ to mean the tendency of the belief forming mechanism to yield true beliefs in normal circumstances of use, rather than the track-record of the belief-forming mechanism in generating true beliefs. I accept that definition in the rest of this chapter.

We all unreflectively accept a principle like (A). Indeed, the philosopher who doubts that his senses are reliable ‘will be the first to join in the laugh against himself,’ as Hume put it, ‘all his objections are mere amusement, and can have no other tendency than to show the whimsical condition of mankind, who must act and reason and believe’ (1966, XII, ii). Whether or not human nature dictates that we are hard-
wired to blindly accept the reliability of sense experience, we may still ask what reason any of us have for supposing a principle like (A) to be true. Perhaps we have no choice about believing (A), but this is irrelevant to whether there are any reasons for believing (A).

Alston argues that our best reason to believe (A) is an argument from the track-record of sense experience. We can point directly to a history of true beliefs generated by sense experience. He adds that there may be other indirect ways to justify (A). For example, there may be theoretical arguments, such as theological or evolutionary arguments to the effect that we have been so formed as to have reliable perceptual faculties. Still, says Alston, it seems that the simplest way to justify belief in (A) is to make a list of all the times that sense experience has produced true beliefs in the past. If the list is very long, then this would then be good evidence that sense experience is reliable.

Alston proceeds to an example. Let us assume that you have seen what appears to you to be a goldfinch out the window, and so you come to believe that there is a goldfinch out the window. In fact, it is also true that there is a goldfinch out the window. How do we establish that, in this case, sense experience has produced in you a true belief? Alston suggests the following procedure, and goes on to explain why it is ultimately circular:

The most obvious way is to take a look myself and see if there really is a goldfinch there. But then I am relying on the reliability of sense perception to amass my evidence. In supposing that I have ascertained in each case that the perceptual belief under examination in each case is correct, I have assumed that my sense experience is yielding true beliefs. Thus I am assuming (A) in adducing evidence for it, and so it would appear that my argument is circular. Of course, I could determine the accuracy of your report without taking a look myself. For one thing,
I could get someone else to take a look; but that hardly changes the logic of the situation. More relevantly, I could have arranged to have a continuous photographic record of the scene outside the window. But even in this case I, or someone, must look at the photographs to determine what they show. Or if we have the photograph read by still another instrument, and the output of this instrument recorded by still another..., at some point someone must use his/her senses to determine the reading of some instrument. No matter how much sophisticated technology we employ, we must rely in someone’s sense perception at one or more points. Any track record argument that depends on ascertaining the truth value of particular perceptual beliefs will involve a reliance of sense perception to obtain some of its premises. (1986, 6)

On first sight, that seems like a very convincing argument. I must use perception to establish the track-record of perception. So, any argument appealing to the excellent track-record of perception is a circular argument.

If track-record arguments are circular, then what about Alston’s suggestion that we may establish that our methods are reliable indirectly, by appeal to theological or evolutionary theories, for example? Such an argument might go like this: Perception must be reliable because if it were systematically unreliable, natural selection would have weeded it out long ago. Would this justification also be circular? Alston argues that indirect justifications are also circular. For how would we go about establishing that these indirect justifications are true or probably true? It seems that, if we can confirm them at all, we can only do so by way of inductively surveying the available facts, or by way of testing the theory against experience, and in either case we are taking the reliability of our perception of the available facts or test results for granted. You cannot justify a theory that justifies perception without using perception. Thus, indirect justifications fare no better.
Let us return, then, to the track-record argument. The track-record argument, although circular in some sense, is not circular in the traditional sense of containing the conclusion within its premises. Formally stated, the argument would run as follows (1986, 9):

1. At $t_1$, $S_1$ formed the perceptual belief that $p_1$, and $p_1$.
2. At $t_2$, $S_2$ formed the perceptual belief that $p_2$, and $p_2$.

... . . . . .

Therefore, sense experience is a reliable source of belief.

As can be seen, the conclusion is not strictly speaking contained in the premises. However, the argument is circular at one step removed. For even if the track-record argument shows that sense experience produces true beliefs 97% of the time, we only accept the second conjunct of each premise on the grounds that it has been delivered by sense experience, which is reliable 97% of the time.

Alston predicts that circular justifications are the only ones likely to be available for a class of epistemic methods that Alston dubs ‘basic’. These include such methods as ‘memory, introspection and inductive and deductive reasoning’ (1986, 8). For such methods, there does not exist any justification for their reliability that does not make use of premises drawn from that method. The idea is that if we were to be confronted by the sceptic, who doubts that sense experience or memory or introspection is a reliable source of belief, then any appeal to the track-record of such basic methods will not successfully convince her. When she asks us for a good reason as to why we should accept any of the premises as true, our only resort is to beg the question, to tell her that each premise was delivered by the basic method and that the basic method is reliable. We have judged, using the basic method, that the basic method is
reliable, and back aboard the endless merry-go-round we go. The sceptic, of course, will hardly take this to be a good reason to buy a ticket to ride, and neither do I.

Does epistemic circularity *undermine* our ability to justifiably believe the deliverances of our basic epistemic methods? I think that depends on how certain we are that the circular justification is the only available justification. How exhaustive has our search for justifications of the method been? At the very least it is clear that non-circular justifications are preferable to circular ones, since any method, whether reliable or unreliable, can be given a circular justification. Producing a circular justification, therefore, does not provide us with any further security in using the method.

Alston argues that although we have only circular justifications available for our basic epistemic methods, we need not lose us any confidence in using those methods. Where perceptual experience is concerned, says Alston, we are reasonable to accept the following principle of perceptual justification (PJ):

**PJ:** If one believes that p on the basis of its sensorily appearing to one that p, and one has no overriding reasons to the contrary, one is justified in believing that p. (1986, 12)

Similar PJs could be provided for other basic sources of belief *mutatis mutandis.* These principles would warrant us in accepting the deliverances of basic methods even when we cannot show these deliverances to be reliable, so long as there exist no overriding reasons or defeaters. Our basic methods are innocent until proven guilty. I have little to say about Alston’s PJs, other than that they are unnecessary, since most of our most well-established epistemic methods have perfectly good non-circular justifications. Perhaps there are some methods for which there are no other justifications available than circular ones. Perhaps these require something like
Alston’s PJs. But if it is the case that non-circular justifications are available, especially for methods as integral to our intellectual activity as perception, then we need not settle for overly permissive principles of justification of the sort that Alston is selling.

7.3 The Justificatory Role of Agreement

I would like to suggest that the kind of track-record argument that Alston presents seriously misconstrues the way in which we typically defend knowledge claims derived from perception, or indeed, from any sources whatsoever. Let us consider Alston’s example of the goldfinch once again. Imagine that you see a goldfinch out the kitchen window, and that I am sceptical of your claim that there is a goldfinch outside. What can I do? To be more specific, what can I do to bring more evidence to bear on the proposition that there is a goldfinch out the window? The first thing I would do, as Alston rightly suggests, is look out the window and check if the goldfinch is there for myself. After a quick inspection, I find that my eyes concur with yours. “Fancy that! There is a goldfinch there,” I would say. In most cases, that would be the end of it. The inspection greatly increases my confidence that your original assertion about the goldfinch was true. But why is my confidence so greatly increased? After all, as Alston says, this ‘hardly changes the logic of the situation.’ We are still relying on perception to justify perception. We have no independent reason to think there is a Goldfinch there. Right? Not quite. Let us think a little more clearly about ‘the logic of the situation’.

You and I were in the kitchen. You applied your eyes in the usual way to answer the question ‘what’s out the window?’ You had a visual impression of a goldfinch. I then applied my eyes, not yours, to answer the question as to whether there was a
goldfinch outside. After a quick check, I also had a visual impression of a goldfinch. This intersubjective agreement between independent observers greatly raises the probability that there is a goldfinch outside. Why? Because two independent investigators have converged on the same answer to the same question using the same method. We are not, as Alston would have it, justifying perception by the lights of perception. That is a crude caricature of what is going on. Rather, we are justifying a particular deliverance of a perceptual faculty by appealing to intersubjective agreement. Thus, it is not brute perceptual experience that does the justifying work. Instead, the knowledge claim is justified by the independent convergence between investigators applying the same method. The best explanation for this convergence is the fact that they have a common cause: the goldfinch out the window. Once we bring in a second investigator to apply the same method, we are no longer justifying the proposition that there’s a goldfinch out the window by any appeal to “basic” perception, but by an appeal to a convergence of methods which would be extraordinary if it were not tracking the truth.

Perhaps the reader is not satisfied that the agreement in the above case really is independent. After all, you told me that you could see a goldfinch. Once I learnt what you thought, my own judgment may very well have been affected. No matter. Let us bring in a third person. Let us ask her to look out the window and tell us what she sees on the branch, all the while withholding our own beliefs on the matter. Let us imagine that she also reports seeing a goldfinch. Our new agreement dramatically increases the probability that the original perception was reliable. Having clarified the nature of the justification of perception, it seems that if there is any track-record argument at all, it is closer to the following structure:
1. Under conditions c1, A had the visual perceptual impression that \( p_1 \), and so did B.

2. Under conditions c2, A had the visual perceptual impression that \( p_2 \), and so did B.

\[
\text{Therefore, (probably) } p_1 \text{ and } p_2 \ldots
\]

\[
\text{Therefore, under conditions c1, A and B had the visual perceptual impression that } p_1 \text{ and } p_1 \text{, and under conditions c2, A and B had the visual perceptual impression that } p_2 \text{ and } p_2 \ldots
\]

\[
\text{Therefore, visual perception is reliable under conditions c1 and c2.}
\]

Perception is not justified, as Alston thinks, by some argument that assumes that perception has produced true beliefs on several other occasions. That is patently circular. Instead, perception is taken to be reliable in certain conditions according to the degree of agreement generated by perception under the conditions specified. Giving a general specification of the conditions under which a method is reliable is a difficult task, but any specification is amenable to independent testing by the lights of other methods the reliability of which we have already established. Indeed, the task of testing the reliability of epistemic methods, such as vision, is quite rightly a part of cognitive science.

The modified track-record argument concerns examples of intersubjective agreement; I will also discuss the role of intermodal agreement, or agreement between different methods, shortly. The fundamental point that I wish to stress, however, is that Alston’s argument gets things backwards. We cannot argue from the truth of some proposition to the reliability of the method which produced it. Indeed, if we already knew that the proposition were true, we wouldn’t require any method
to tell us. In practice, we discover that a certain method produces intersubjective agreement in several cases, and we argue from those cases of observed agreement to the reliability of the method.

‘Gotcha!’ Says Alston. ‘You can only discover that perception produces intersubjective agreement by using perception! Your justification of perception is exactly as circular as I have claimed.’ At this point I may as well concede. Alston is right that you can’t perceive without perceiving. That is a trivial matter of fact. The trouble is that “perceiving” (in some unhelpfully broad sense) is not what was being appraised for its reliability. In Alston’s argument, our visual perception was all that we wanted to judge. You saw a goldfinch out the window. Then I looked, and I too saw a goldfinch out there. And if we then wish to know whether our visual perception produced intersubjective agreement, we are quite capable of closing our eyes or wearing blindfolds and describing to each other what we saw. Then I will hear whether you agree with me, and you will hear whether I agree with you. If we do agree, then the fact that my eyes are reliable has been justified, not by my eyes, but by my ears! It is easy to claim that a justification for some method is circular if one is as careless at individuating methods as to class eyes and ears as the very same thing.

Let us assume that we have observed (using our ears) intersubjective agreement with regards to the deliverances of our eyes. This is a strong argument for the reliability of visual perception. But what makes it a good argument? What kind of argument is it? And how does it show that the deliverances of perception under suitable conditions are probably true? The argument, as presented above, is an inductive one, and lends the same kind of inductive support to its conclusion as Alston’s original track-record argument was intended to give to his conclusion.
Whereas Alston’s argument proceeds from the preponderance of true outputs of a method to the reliability of the method, I argue from the agreement generated by a method to the reliability of the method. In neither case is the conclusion deductively entailed by the premises. Alston’s argument is only supposed to give some kind of inductive support to its conclusion, yet it is possible that some method that has produced many true outputs is nevertheless actually unreliable. Consider a magic eight ball, which consistently gives the right answer when questioned. This previous success has been purely accidental, the run of true answers having been only a matter of chance. However, the magic eight ball does not have any tendency to produce true answers, and so it is not reliable. Examples such as these show that it could always be the case that the track-record of a method leads us to accept a false conclusion. Of course, it is very unlikely that we would encounter such a situation over a long enough run of trials, yet nevertheless it is possible.

A similar shortcoming applies to my own argument. It is always possible that some method generates widespread intersubjective agreement, yet not be reliable. How likely is such a situation to come about? I am not sure. But any answer to such a question must appeal to the results of other methods whose reliability has been independently established. We could only establish the unreliability of a method which has hitherto produced intersubjective agreement by appeal to other methods which we have independent reason to think are reliable. This kind of independent agreement between a variety of different methods is what I term ‘intermodal agreement’. Intersubjective agreement is a mere marker of reliability. Intermodal agreement is the hallmark.
The crucial difference between Alston’s argument and my own argument is that Alston’s argument is circular and mine is not. If we want to check whether some method is reliable, this need not require that we use the very method under scrutiny. Since we can establish the reliability of some method without appeal to the method in question, the circularity is avoided. The reliability of our epistemic methods can be established by independent means, and in science, this is a matter of daily routine. More often, this reliability is determined by comparing the agreement found, not just between different people, but between various different methods, all of which are susceptible to independent justification. I will have more to say about this kind of cross-checking in the section below.

To conclude, I have shown that Alston’s circularity thesis is the result of two mistakes: one, a misconstrual of the premises of the track-record argument in such a way as to beg the question, and two, a failure to individuate epistemic methods in an appropriately fine-grained way. Once these shortcomings are corrected, the circularity fails to rear its head. The upshot is that we can have independent evidence for the reliability of our most well-established epistemic methods.

The trust that we place in our eyes is not founded on the assertion that eyes routinely tell the truth. Indeed, we all know that eyes routinely deceive. How do we judge when our eyes are deceiving us and when they are telling the truth? We judge by applying a range of distinct methods. We cross-check. Indeed, Alston’s argument leaves me wondering whether he believes that sticks truly bend when stuck in water, or whether the world disappears whenever the lights go out.
7.4 Intermodal Agreement

So far, I have argued that intersubjective agreement is a clue that whatever we are agreeing about is probably true. Of course, it is very far from a guarantee. Agreement between two people is, on its own, pretty weak evidence. This is a fact learnt by experience. You and I agree that we feel lucky when we head out fishing in the morning. This does not raise the probability that we will catch any fish. However, if a method produces persistent independent intersubjective agreement in well-specified conditions, given some domain of investigation, this is stronger evidence that the method producing the agreement is reliable. Again, this is stronger evidence, but hardly infallible. It could be the case that you and I both feel lucky about catching fish, but always and only on Tuesday mornings and only when there is no rain. It is reasonable to expect that some very unreliable methods will produce intersubjective agreement intermittently or even chronically. Moreover, reliable methods will fail to generate intersubjective agreement if they are dysfunctional or impaired. Intersubjective agreement is not, and cannot be, the whole story with respect to the justification of epistemic methods.

Let us consider Alston’s goldfinch example again. This time, let’s say you look out the window and see what seems to you to be a goldfinch. You tell me that you see a goldfinch. I am sceptical since it’s the wrong time of year for goldfinches, and so I also take a look. But when I look out the window, I see no goldfinch; I see a possum. We agree that something’s there, but we disagree about what it is. How should we proceed? There is an immediate epistemic effect: we are no longer justified to continue to believe that what we see is the case. We are in a parallel situation to Richard Feldman’s ‘Dean in the Quad’ example. Someone has gone wrong.
somewhere. Our disagreement is evidence that at least one of us is seeing things, but it is unclear which of us has the problem. We appear to be equally good at identifying animals in trees. We are epistemic peers. So who has gone wrong, and where? Of course, people who disagree about animals in trees don’t just sit there and do some philosophy, but tend to physically react. They squint their eyes. They move closer to the animal, quietly and without disturbing it, such that their observations of the creature are more discerning. They seek a better *vantage point*.

What is a vantage point? And what makes one vantage point better than another? A vantage point is a place which affords a more reliable visual perception of some object. A good vantage point is one which, when observers use it, tends to generate more agreement about what is observed. As a general rule, a good vantage point for naked-eye viewing of a fist-sized animal in a tree would have to be concealed and reasonably elevated, within a distance of no more than about fifteen metres of the creature and without any obstructions in the visual field. For the purposes of viewing nesting birds, such as albatrosses and penguins, we have camouflaged hides which allow close proximity without disturbing the animals. How could we discover all this about vantage points if vision were justified only by the deliverances of vision? How could we sort reliable visual observations from unreliable ones? Should we not say, instead, that birds are blurry smudges when far away, but well-defined objects when close to an observer? If vision were justified only by appeals to vision, we would have no concept of a vantage point. The comedian Mitch Hedburg once quipped: ‘I think Bigfoot is blurry, that’s the problem. It’s not the photographer’s fault.’

The fact that we know that some vantage points are better than others tells us two things about the reliability of vision. It tells us, firstly, that the reliability of vision is
not an all or nothing affair. Vision is reliable under certain conditions. It is unreliable under others. And secondly, the fact that we know what these favourable conditions are tells us that the bounds of the reliability of vision cannot be decided by appeal to vision, but must be decided by appeal to other methods. In total darkness, eyes are quite unreliable for predicting where obstacles will be, and we discover this only when we hit our shins on the coffee table. In contrast, under good lighting I can pick up a single poppy seed from the kitchen bench and roll it between my fingers. To determine the reliability of some method, we must consult other methods whose bounds of reliability have been independently established.

‘Gotcha again!’ Cries Alston, ‘you cannot consult other methods to determine the reliability of vision without assuming that those other methods are reliable. Forced to provide a reason for thinking the other methods reliable, you can do no better than to point to the question-begging track-records of those other methods. This is all circular again.’ Yet it is unclear to me that this argument hits its target. There are two ways Alston sets up this objection, and neither argument is successful.

The first rendition of the objection runs that any attempt to justify my sight by appeal to my hearing, for example, ultimately depends on hearing’s being justified by appeal to hearing. If that’s right, then all I have done is to move the problem back a step. I have swept the circularity under the rug for a fleeting moment, but it quickly reappears under examination. Alston gives the example of the visual perceptual belief that the object on the dinner table is a peach pie. Suppose, he says, that we are able to justify this visual perceptual belief by non-circular appeal to our modalities of taste and smell. Have we cleared the problem? Alston is doubtful. ‘Take taste,’ says Alston,
‘if its reliability is established by relying on taste, we are once more embroiled in epistemic circularity’ (2005, 206).

I cannot tell whether Alston entertains this argument seriously, since it is patently false. Taste is as amenable to independent justification as any other perceptual faculty. Indeed, there is no reason to think that, so long as we push for further independent justifications that appeal to different methods, we will eventually "bottom out" at the single basic method (be it smell or testimony or whatever) which governs all others, and which may only be judged to be reliable by its own lights.

Alston proceeds to present the argument slightly differently. Alston’s concern seems to be that even if we try to justify our methods in a piecemeal way, our chain of justifications will eventually circle around to the very method under examination: ‘Narrowing the class of [perceptual beliefs] the reliability of whose formation we are concerned does not enable us to escape epistemic circularity in arguments designed to establish this, but only postpones the evil day’ (2005, 207). More specifically, he writes:

Say the reliability of taste is established by reliance on vision and audition. We are still involved in epistemic circularity, but the circle is larger. Vision is validated by audition and touch, which are validated by smell and taste, which ... are validated by vision and audition. (2005, 206)

So, Alston concludes that when we attempt to defend the reliability of narrower sets of methods we will still encounter a circular justification, it will just take longer to rear its head. I am not convinced by Alston’s argument. For one thing, it is contradicted by the fact that people lacking certain sensory modalities (e.g. blind people) have perfectly convincing arguments for the claim that vision is a reliable epistemic method. Their justifications for the reliability of vision cannot make use of
the deliverances of the modality in question. They cannot see. Their justifications cannot be circular.

Do the blind have good, non-circular justifications for the claim that vision is reliable? What sorts of reasons do they have for accepting such a claim? To begin with, blind people notice that those who claim to have the faculty of sight routinely agree on the finer details of their perceptual experience. Shapes, locations, colours and patterns are described consistently. Moreover, facts about the overrider system of vision command universal assent among the sighted community. Sighted people routinely claim the following underminers: the object moved too fast to see, it was too dark to identify the object, the object was too bright to look at directly, the object was too distant to make out etc. Additionally, blind people find the predictive abilities of those claiming to have the faculty of sight superior to their own. A sighted friend can, for instance, locate lost keys without needing to touch or hear them. Even a guide dog can predict that dangerous obstacles are approaching. If these rudimentary observations did not satisfy the skeptical blind person, she can even perform a test. She can, for example, privately write a short sentence on a word processor, print the document out from her computer and give a sighted person the printed page. The sighted person will read back text that exactly matches the sentence written on the computer. Yet so far as the blind person can tell, the printed text cannot be detected by touch or smell. Therefore, there must be information on the page that came out of the printer that the blind person cannot detect in the same way as the sighted person. Moreover, advanced technology such as Optical Character Recognition software can be used to establish the reliability of optical detection methods without having to rely on the testimony of anyone with the faculty of vision.
This blind investigator would have excellent non-circular evidence that vision is reliable. The evidence is drawn from the independent agreement generated between vision and a variety of other methods: the justification is delivered by intermodal agreement. Moreover, if we sighted folk wish to establish that vision is reliable in a non-circular fashion, then we are welcome to adopt a principle of methodological blindness, according to which any justification for the reliability of vision ought to bracket off or set aside the evidence proffered by vision itself.

Therefore, circular arguments need not be our only recourse to justify perception, as independent evidence is available. Epistemic circularity is not as widespread as Alston claims. However, if his argument is set up another way, it may be a little more successful. If the argument is made that we cannot bring forward some further piece of evidence to independently show that all of our various methods are, as a comprehensive unit, reliable, then I would have to agree. Once we ask for a justification for the reliability of all our various methods, as a single unit, we will be forced to use some method from among that set to do the justifying work. But as far as I can tell, this fact is no blight on their individual reliability. We cannot possibly decide whether all our methods are reliable by collecting them together in a pile and demanding some further piece of evidence which can independently show the whole collection to be reliable. If we have an exhaustive list of all of our epistemic methods, then of course there will be no non-listed method to which we can appeal which shows the methods to be reliable. But this seems no serious problem to me. We already have evidence that shows that each of them is reliable.
7.5 From Agreement to Reliability

Why suppose that independent agreement between different observers and different methods is a reliable indicator of truth at all? What does it matter that everyone agrees? So what if some collection of different methods always points at the same result? What is it about independent convergence that should lead us to infer the probable truth of the converged upon proposition? There is no logical connection between agreement and truth. Indeed, one might argue that drawing any connection between the two is fallacious, a kind of bandwagon argument or an argumentem ad populum. Yet there are very good, probabilistic reasons to think that intersubjective and intermodal agreement about some proposition radically increase the probability that the proposition is true.

To begin with, it should be noted that publicity and reliability may sometimes come apart. To show how, I would like to begin with Alvin Goldman’s example of a method that is public yet unreliable. The method generates independent intersubjective agreement and yet does not track the truth. Goldman gives the details: ‘Suppose that a certain hallucinogenic drug produces vivid belief in any statement S if one takes the drug while asking oneself the question, "Is S true?" Then taking this drug qualifies as a public method’ (1997, 537). Goldman's example needs some tweaking, however, since the drug he describes may generate agreement concerning any S, and so would produce internally inconsistent belief outputs. It would, therefore, generate its own disagreement. Instead we ought to consider a drug that produces vivid belief in some particular set of internally consistent statements S. Taking this drug would qualify as a public method, since it would generate intersubjective agreement.
Clearly, since we know that the method does not track truth, we would not hesitate to call this method scientifically illicit. No scientist would publicly defend a ground-breaking new theory on the basis of having taken the “publicity drug”. So what’s the moral of the story? Goldman takes the example of the publicity drug to show that publicity is not sufficient for a method to count as scientific. Some appeal to the reliability of the method is also required, he says. Reliability, not publicity, is the mark of the methods of science. But then, he ponders, perhaps publicity is not even necessary for a method to count as scientific. If reliability is the true mark of the scientific, then all this talk of the importance of the publicity of scientific methods is something of a post hoc ergo propter hoc. The publicity of scientific methods is only a by-product of their reliability.

Let us imagine that you and I take the publicity drug, and we soon find ourselves in agreement about some set of propositions; among them the belief that a pineapple is on the table, whenever an orange is placed on the table. Anyone taking the drug forms the same pineapple belief. The belief is apparently false and the method unreliable. But on what grounds should the belief be judged false, and the method therefore judged unreliable under such conditions?

Of course, there would be reasonably straightforward ways to check whether the deliverances of the drug were getting things right. Separate investigators would presumably agree that there is an orange on the table by applying a variety of other perceptual tools (eyes, tongues, fingers etc.) and could in principle apply a variety of other techniques (ultrasound, photography, testimony etc.) all of which would converge on the result that there is an orange on the table, if there were in fact an orange on the table. The overwhelming body of corroborating evidence indicates that
an orange, not a pineapple, is on the table. Once these tests had been conducted, the publicity drug would be judged to be unreliable under those conditions. When we began our investigations, the drug generated intersubjective agreement, and this agreement was prima facie evidence for the claim that the drug was reliable. Yet the disagreement generated between the outputs of the publicity drug and the outputs of a variety of other methods is stronger evidence that the drug generates agreement in a proposition which is false.

Let us imagine, on the other hand, that we take the publicity drug, and we soon find ourselves in agreement about some set of propositions, among them the belief that an orange is in on the table, whenever an orange is placed on the table, and importantly whenever this orange is observed in such as way as to exclude the possibility that the apparent reliability of the method has been caused by some other reliable method e.g. by vision or by the testimony of others. To this end, we might consider putting the orange in a sealed box on the table, or putting a blindfold, noseplugs and earplugs on the agent using the drug. If, under such controlled conditions, the agent reliably predicts that there is an orange on the table only when there is an orange on the table, then we would tentatively judge the publicity drug to be reliable under some conditions. Of course, we would have no explanation as to how this method is so reliable under these conditions. We would be astounded and puzzled, and we would investigate, at length and in astonishment, whether there was the possibility of trickery. But once any trickery was ruled out (by the application of a raft of critical tests appealing to a variety of independent methods) we would have to conjecture that something more is going on. Theories would be proposed to explain how this new faculty works. We would suggest several possible mechanisms,
and test these explanations (by the application of a raft of ...). We would investigate whether there are any other conditions under which the method is reliable. Is the method's success restricted to the identification of oranges? That would be a shame. Might we be able to ingest the drug when we need to answer other (slightly more pressing) questions? As our investigations progressed, and our theories changed, it would remain the case that the deliverances of the publicity drug agree with the deliverances of other methods under some specifiable conditions, in a way that is apparently independent of the use of any other methods. This agreement among the different methods that we use, must be either a miracle, a quirk of cosmic chance, or due to the fact that the methods individually give us epistemic access to the same objects.

To return to the central question of this section, what makes it reasonable to think that a method is reliable when we can specify conditions under which it independently agrees with other methods? What argument can be made that draws a connection between agreement and reliability? Surprisingly, the best argument proceeds, not by assuming that our epistemic methods are generally reliable, but by assuming the very opposite. Let us put ourselves in the position of the sceptic: assume for a moment that each of our various epistemic methods, taken individually, has a high probability of giving the wrong answer to any particular question. Adopt, for a moment, a very pessimistic attitude to question of human knowledge. Assume that each of our epistemic methods is, as a matter of fact, very unreliable. Now ask: ‘What is the probability that several very unreliable, but independent, methods would converge on the same answer to the same question?’ Of course, the answer to this question will depend on how many methods we have, how unreliable they are,
and how many possible answers there are to the question. Let’s consider a toy example.

Let us assume that we have just three methods, A, B and C, all of which are believed to be as unreliable as each other. Each method is assumed to have a .01 chance of giving the right answer to some question \( q \). Let us assume that there are exactly twelve possible answers to \( q \). Perhaps we can let \( q \) be the question ‘which egg in the carton is rotten?’ Let us now imagine that methods A, B and C all indicate that the fifth egg on the right is the rotten one. This agreement is utterly improbable if the methods are causally independent and operate according to different causal principles. What is the epistemic probability that methods B and C would converge on the same answer as A by chance? Methods B and C are both taken to have a one in twelve chance of arriving at the same answer as A. Therefore, the probability that B and C would converge on the same answer as A is \( 1/12 \times 1/12 \) or approximately .007. So, the probability that our methods have independently arrived at the same answer by pure chance is very low—lower than the initial probability (.01) that any single method might have got the right answer (and if one did, then they all did).

This argument is a variety of Reichenbach’s common cause argument (1938, 118), more recently popularised by Wesley Salmon (1999). The basic idea is that the likelihood that multiple lines of evidence would converge on the same answer to the same question is low on the hypothesis that such an event is the result of chance, and high on the hypothesis that there exists a common cause for the agreement (which can in this case be reasonably inferred to be the fact that the fifth egg from the right is rotten). The third possible hypothesis, that the results of some of our methods cause the results of the others to agree, might have a likelihood equal to that of the
common cause hypothesis. However, this third hypothesis can be reasonably excluded on the grounds that epistemic methods have often been tested in isolation from each other, and no causal interference between methods has been identified. Elliot Sober makes the point by way of the following example.

When I hold my ears and release them, my auditory impressions stop and start though I continue to have the same visual impressions. The visual (V) and auditory (A) impressions are probabilistically correlated, but manipulating the one does not change the probability of the other. (2011, 14)

This does not necessarily entail that A does not cause V, but it is quite good evidence when no intervention on A appears to have any effect on the production of V.

So, putting aside the hypothesis that some prior method causes the others to agree, we can make the following likelihood assessment of the two remaining hypotheses: The hypothesis that there is some common cause, a common object or objects of our disparate methods, and the hypothesis that the agreement is due to chance.

1. $P(e|\text{Common Cause}) > P(e|\text{Chance})$

Note that the above is merely a likelihood assessment. From it, we cannot conclude anything about the probabilities of the competing hypotheses (Sober 2011, 9). If we want to know how $e$ affects the probabilities of our competing hypotheses, we need to know the prior probabilities of Common Cause and Chance. For my own part, I see no (non-pragmatic) way to choose between the hypotheses. Assuming the (admittedly problematic) principle of indifference, we should split the difference and allocate equal prior probabilities to Common Cause and Chance. Having allocated equal probabilities, the evidence of independent agreement among different
epistemic methods supports the *Common Cause* hypothesis against the hypothesis of *Chance*. The *Chance* hypothesis is the claim that the agreement found between methods is nothing more than a coincidence of outputs. In such a universe, there may still be some reliable method(s), but there will not be any agreement between the outputs of any reliable methods. So, if the reader wishes to allocate a high prior probability to *Chance*, then if there happen to be any reliable methods in the universe of *Chance*, whether religious or natural, we would have no way to identify them as such. Note that depending on how we flesh out the likelihood assessment in 1., *Common Cause* could have a very low prior probability, and yet still be preferable to *Chance* after the discovery of $e$.

### 7.6 The Specialisation of Scientific Observations

One obvious rejoinder to arguments for the reliability of scientific methods is to say that science is not restricted to the application of relatively simple or "basic" methods like perception, or deduction. To use, say, Polymerase Chain Reaction (PCR) to amplify and study some piece of DNA, is a very different thing from using, say, one’s sense of touch to gauge the ripeness of an avocado, or one’s sense of smell to judge which egg is rotten. There is a relative lack of theory, a lack of explicit technical training, involved in the latter cases. I don’t need to know anything about olfactory organs to be able to sniff out a rotten egg. Yet in contrast, no person can just naively grab a pipette and, with no knowledge of PCR at all, amplify a piece of DNA. One has to learn how to use PCR, and this involves lengthy theoretical training by others who are already *specialists*. Part of the training consists in learning how to apply the method in such a way that its outputs tend to agree with outputs of other methods. Therefore, there is some sense in which scientific methods are not truly independent.
The case might then be made that some religious methods are very much like this. Certain religious methods require some kind of appropriate theoretical knowledge, and so are similar to the non-basic, highly technical methods of contemporary science. Indeed, many religious methods require years of specialist training before proficiency can be claimed. Moreover, divination or the interpretation of scripture, for example, can also be developed in such a way that the results of these methods agree with scientific methods. Thus, we find Hugh Ross, an astrophysicist and founder of the old Earth creationist organisation *Reasons to Believe*, arguing that when *Genesis* is interpreted correctly, it can be seen to stand in perfect agreement with the results of modern astronomy. However, to know what the Bible is really saying about astronomy, one needs to be trained in biblical hermeneutics, and this requires at least a passing knowledge of Hebrew and Greek, historical knowledge of the ancient world, literary genres, etc. To be proficient at applying religious methods, one also needs an understanding of modern science, since from such an understanding, one can spot recently discovered scientific facts in the Bible where they may otherwise have gone unnoticed. Ross himself finds biblical support for an *expansionary universe* in many passages from the book of Isaiah (Ross, 2000). Just as is the case with our other, sophisticated scientific methods, when biblical interpretation is carried on naively we are led into error, but this is no blight on biblical interpretation. Indeed, the case is no different from PCR. A layman can’t just grab a pipette and run PCR, and a layman can’t just grab the Bible and know how it interpret it. The Bible, just like PCR, only works, only generates agreement, if you know what you’re doing.
A problem with the above argument is that the kind of agreement generated by such a procedure is not arrived at independently. Of course Genesis can be interpreted in order to agree with the results of modern astronomy and geoscience after the fact, but if the agreement is manufactured like this, then it is obviously post hoc. This is not surprising agreement, and it is particularly difficult to generate surprising agreement by specifying a certain way of approaching biblical interpretation. There are at present no prescribed interpretive rules under which the supernatural testimony of God does generate surprising agreement. Hugh Ross’ reading of Isaiah as endorsing an expansionary universe is not a convincing example. This is an example of one method causing another to appear to be reliable. In this case, the agreement found between religion and science is caused by the results of science. When the results of science change, the biblical interpretation changes accordingly.

Perhaps a more serious objection would run that some scientific methods are so unique in their detection capabilities that there can be no cross-checking for them. If some scientific methods are not amenable to cross-checking, they resemble religious methods, which have been argued to be autonomous, and subject to distinct methods of appraisal. It seems to be the case that some scientific methods detect phenomena that sit at the outer limits of our capability for detection. Thus, PCR, insofar as it amplifies microscopic bits of DNA, makes detectable a world that is otherwise undetectable to us by other means. How, then, are we to tell whether PCR is giving us accurate information about DNA, when the only means we have of “seeing” DNA is via PCR? If scientists rely on such uncorroborable methods, then there is ultimately
no difference between the methodology of the scientist and the methodology of the clergyman.

Perhaps it is no surprise to the reader to discover that PCR is not the only means we have of getting information about DNA. Indeed, if a researcher is sceptical over whether the right bit of DNA has been amplified by PCR, she may visually check the resultant gel to examine the approximate size of the amplified output to check whether the size corresponds to the number of base pairs expected. If the size is as expected, corresponding as it would to a precise number of base pairs, then the result is already highly unlikely to have been an error. Even then, if this simple check did not satisfy the sceptical researcher, she could then sequence the sample by one (or several) independent DNA sequencing methods, to find out the exact order of the base pairs. If the order is as expected, then it is incredibly unlikely that the results of the PCR and the visual check are an error. But we need not stop there. If our sceptical researcher is still doubtful that the results of the sequencing might be erroneous, she can use restriction enzymes, which separate the DNA into smaller sequences, which can then also be inspected on a gel tray. Even when the objects of our investigation sit at the very limits of our methods of detection, we have a variety of ways to assess the results.

Perhaps DNA amplification and sequencing is just a bad example. For although amplification and sequencing technology is in its infancy, having only been developed in the last forty years or so, it has nevertheless been a very busy infancy. The technological advances in this field can hardly be overstated, and a vast range of diverse sequencing methods is now available that rely on different chemical and physical processes. It is, therefore, simply not true to say that bits of DNA sit at the
outer limits of our detection capabilities. Perhaps, once upon a time, we had only a single method for detecting DNA, but that is certainly not the case today given the huge strides that have been made in the development of new detection technologies.

What my critic requires, then, is an example of a scientific method which is widely taken to be reliable, despite not being cross-checkable with other methods. If such an autonomous method could be found, then it would lend weight to the argument that there exists some set of autonomous, but nevertheless reliable methods, among which we may have reason to count such religious methods as mystical experience, haruspicy or divine revelation.

7.7 Autonomous Scientific Methods

Let us consider the old, if overused, example of Galileo’s telescope. Galileo pointed a telescope at Jupiter, and over the course of one week in January 1610, he discovered that Jupiter had four satellites. Why was it that Galileo’s telescopic observations of the moons of Jupiter were taken to be reliable, when all other methods available at the time, and all competing theories, were silent on the existence of these moons, or flatly contradicted that any moons were there? After all, no-one else could see these alleged moons, and the telescope was the only detection tool that yielded the observation. In this case, it seems that scientists accepted a method that was totally illegitimate. Galileo’s contemporaries had only one method of collecting positive evidence for the existence of Jupiter’s moons: looking through Galileo’s telescope. If this single method could not be cross-checked, then we would seem to have a problem. Specifically, we would seem to have an autonomous method—a method that could not be cross-checked—the reliability of which would have to have been
affirmed in lieu of any intermodal agreement. Were Galileo’s telescopic observations able to be cross-checked? If not, then why were his results taken so seriously?

The answer to this last question is that, quite simply, they weren’t taken so seriously. When Galileo published *Sidereus nuncius* in 1610, many of his contemporaries were sceptical that Galileo’s observations were reliable, since they were obtained by way of a mysterious “spyglass” which was regarded as error-prone with regards to celestial observations. Indeed, part of the reason for this scepticism was undoubtedly the fact that the deliverances of telescopic observation flatly contradicted the deliverances of other methods such as naked eye observation. Furthermore, the deliverances of telescopic observation were simply improbable given the prevailing background knowledge of the day. No other method indicated that Jupiter had moons, and the very idea that Jupiter did have moons was improbable on the theoretical backdrop of geocentrism. For these two reasons, the telescope was considered very likely to be giving misleading information, or as one of Galileo’s contemporaries put it: ‘On Earth, it works miracles; in the heavens it deceives’ (Horky quoted in Van Helden 1994, 11). The earthly observations could be corroborated, while the heavenly ones could not be. While public access to the telescope remained minimal, and while the chances of any intermodal agreement were few, scepticism towards the observations of Galileo widely prevailed, and quite rightly. Galileo was apparently either deceived or a deceiver.

This scepticism was almost entirely abandoned within a year or two of the publication of *Sidereus nuncius*, after the corroboration of Galileo’s claims by independent observers. Kepler, for example, was enthused by Galileo’s results and sought a telescope of better quality than his own by which to independently
corroborate Galileo’s observations. In August of 1610, Kepler was gifted one of
Galileo’s telescopes by the Elector of Cologne, and on the first day of September he
made observations of Jupiter’s moons in the presence of the younger astronomer,
Benjamin Ursinus. Together, the pair attempted to show that the observations were
reliable by abiding by the following procedure: ‘what one observed he secretly drew
on the wall with chalk, without its being seen by the other. Afterwards, we passed
together from one picture to the other to see if they agreed’ (Kepler quoted in Van
Helden 1994, 12). This ingenious move by Kepler ensured that any intersubjective
agreement generated between the two men was independent agreement. Indeed,
Kepler and Ursinus found that they converged on the relative positions of three of
Jupiter’s moons, yet disagreed over a fourth. This surprising, all but miraculous,
intersubjective agreement about the moons of Jupiter was one of the first
scientifically scrupulous verifications of the reliability of the telescopic method.
Kepler was concerned to demonstrate that the agreement between himself and others
was not due to any suspicious interference, prior arrangement or trickery. To that
end, Kepler went so far as to withhold all contact from Galileo until publishing his
own observations, so that none could allege that Kepler was merely a Galilean stooge.

In the spring of 1611, one year after his initial observations, Galileo’s findings were
given official verification by the mathematicians at the Collegio Romano, who had
independently corroborated the observations of Galileo. The phenomena were shown
to be intersubjectively observable, and access to better telescopes at the Collegio
Romano ensured that the mathematicians’ observations agreed with those of Galileo.
This was the first step on a road leading from scepticism to belief. It was the first step,
the first clue, that the observations were probably reliable.
Given the rapid pace of telescopic advance in the seventeenth century, it was in the 1630s, only twenty years or so after the initial observations, that Galileo's claims could be widely corroborated by telescopes that worked according to different physical principles. Astronomical telescopes, which make use of a convex rather than concave ocular lens, were first described by Kepler in 1611, and apparently first used by Christoph Scheiner in 1617, although without much fanfare (King 1955, 45). Astronomical telescopes became widespread around the middle part of the seventeenth century, and observations made with them corroborated the observations of Galileo, despite his using a concave ocular lens. Moreover, by using astronomical telescopes, new discoveries were made that were corroborated intersubjectively before coming to be intermodally tested in their turn. Certainly, there was still disagreement, but the route to resolve disputes about the evidence lay in the development of better observational tools that generated still more agreement. Huygens, for example, justified the superiority of his telescopic observations of Saturn’s rings, on the grounds that since his telescope had successfully observed Saturn’s moon Titan, while all others had failed to spot this satellite despite observing Saturn every day, it followed that, in Huygens’ own words: ‘the results of our observations concerning the shape of the planet are also to be considered true in each case when we and they saw different figures simultaneously’ (Huygens quoted in Van Helden 1994, 20).

Huygens’ argument depends on a general principle of reliable observation: in cases of disagreement, the method with the better track-record of generating surprising agreement in a particular domain of inquiry is to be preferred. Once a general theory of the mechanism of some epistemic method has been developed (in
the course of repeated testing by other methods), the conditions under which the method will be reliable can be specified, and the method can be applied ‘autonomously’, in the sense that its deliverances are presumed trustworthy in lieu of any corroboration *whenever the stated conditions hold*.

The seventeenth century witnessed still further advances in technology that greatly expanded our astronomical observations. Although the Jesuit astronomer Nicolas Zucchi experimented with replacing the objective lens with a mirror in his telescope of 1616 (Schreiber 1904, 19), it was not until 1668 that Newton developed a functioning example of a telescope that worked on the principle of reflection rather than refraction. Reflecting, or ‘Newtonian’, telescopes corroborated all that Galileo had said, and, once again, generated new discoveries. Since reflecting telescopes work on quite different optical principles to refracting telescopes, this agreement between the outputs of reflecting and refracting telescopes is miraculous unless there exists a common cause for their agreement. These new telescopes corrected for the problem of chromatic aberration that their predecessors suffered from, and made more discerning observations of celestial bodies, in the sense of generating agreement on a greater number of more precise propositions. Newtonian telescopes were welcomed for yet other reasons too: they were far shorter than the best refracting telescopes, some of which had grown to inconvenient lengths of 10 metres or more.

One might wonder how it was known that the chromatic aberration produced by refractive telescopes was indeed an aberration. Why assume the effect is an artifact, and not an accurate chromatic detail of the heavenly bodies? There are at least two reasons. First, the chromatic aberration varies in proportion to the size of the
telescope. This is a very good clue that the effect is an artifact of the telescope, unless we accept that the heavens change depending on which telescope we use. Secondly, the chromatic aberration of Galileo’s early telescopic observations was so severe as to prohibit meaningful and distinct observations of any celestial bodies other than the moon. Only subsequent modifications to the telescope minimised the chromatic dispersal such that observations of other heavenly bodies were informative. This greatly enhanced the precision of the agreement between observations made with differently powered telescopes and between different observers.

The fact that what was observed with a refracting telescope was corroborated by reflecting telescopes lowers the probability that the initial observations were an error. Indeed, it would be all but miraculous if both the refracting and reflecting telescopes produced such similar errors, since they work on entirely different physical principles. The scope of this intermodal agreement has only increased since the time of Galileo. Nowadays, the results of refracting and reflecting telescopes have been corroborated by radio telescopes and x-ray telescopes to name just two others.

7.8 The Autonomy of Mathematics

If perceptual methods are unlikely candidates for autonomous scientific methods, then perhaps we must turn our attention to a method whose security does not seem to depend on the promiscuity of the senses. Mathematics, for example, may make a better candidate for a properly autonomous method. Science makes extensive use of mathematics, and yet it seems that the results of mathematical enquiry cannot be tested against, or corroborated by, other methods. Mathematics is an oddity in the world of rational investigation. The objects with which mathematicians concern themselves cannot be touched or seen. The whole system of mathematical thought is,
to quote Reuben Hersh, ‘created by fanatics sitting at their desks or scribbling on their blackboards. These wild men go where they please, led only by some notion of “beauty”, “elegance”, or “depth”, which nobody can really explain’ (2006, 320).

For these reasons, Penelope Maddy has argued that mathematics is autonomous in the way described. Indeed, she argues that the Quinean project of naturalizing philosophy demands that we accept mathematics as a field to be justified on its own terms. Mathematics is not proven or justified by appeal to some higher science. She writes:

Where Quine holds that science is ‘not answerable to any supra-scientific tribunal, and not in need of any justification beyond observation and the hypothetico-deductive method’, the mathematical naturalist adds that Mathematics is not answerable to any extra-mathematical tribunal and not in need of any justification beyond proof and the axiomatic method. (1997, 184)

If Maddy’s stripe of mathematical naturalism is correct, then it might be argued that science makes use of a method, mathematics, for which no independent support can be summoned. And if mathematics, which is so integral to science, is autonomous, then this leaves the door open to other autonomous methods, such as religious epistemic methods, to make their own contributions to science.

Before proceeding to discuss the notion of reliability in mathematics, let us briefly reflect on the historical origins and development of mathematics. Sophisticated systems of mathematics were formed at independent locations across the globe, interwoven into the very cultural fabric of the great civilizations of human history. The independent emergence of a range of mathematical systems is not only incredible, but also a convenient fact for us, given that intersubjective agreement is
evidentially relevant only if independent. Written systems of arithmetic and
geometry developed independently, notably in the great civilizations of the
Mediterranean and Near East, North Africa, China, India, and Central and South
America. Strikingly, these isolated mathematical systems were often developed for
the purposes of solving the same problems related to the rise of agricultural and
urban life, among which the most universal problems were related to astronomy and
the related problem of establishing the calendar. The growth of trade naturally
necessitated better techniques in book-keeping. Furthermore, the construction of
major public works required solutions to recurrent problems in the fields of
surveying and engineering, which saw strides made especially in geometry. Thus, the
development of mathematics at all these locations was undertaken in order to solve
common practical problems within the very same domains of inquiry. Now, the fact
that mathematics was the tool developed by all these communities to solve the same
set of relatively specific problems is itself suggestive of the reliability of mathematics;
suggestive, but hardly conclusive.

Indeed, note that elsewhere in human history we also find independent
investigators coming to agree that some method is reliable within some particular
domain, even when the method in question is unreliable in that domain. For
example, many societies independently adopted astrological methods, and
specifically, took up the supposition that the position of the celestial bodies at one’s
time of birth is a reliable guide to one’s future personality. The mere fact that
independent parties agree to use the same particular method in the same particular
domain is a very fallible indicator of the reliability of the method chosen.
What is more interesting with regards to the case of mathematics, however, is the independent, intersubjective agreement generated with regards to the (often obscure) solutions to the problems. The solutions are often difficult and impenetrable, yet they are unmistakeably identical in many cases across cultures. To take one notable example, ancient Chinese scholars independently arrived at Pythagoras’ Theorem, known in China as the *Gougu* Theorem. It was proved in the *Chou Pei Suan Ching* produced between 100 BC and 100 AD (Gustafson 2012, 207). This independent agreement about such an obscure mathematical fact is a remarkable result in the history of human thought. The common result suggests that the method is reliable. Moreover, there are interesting and enlightening differences between the Greek and Chinese justifications of the theorem. Most notably, while Pythagoras’ Theorem was proved in Euclid’s elements by a deductive argument, the theorem was given a *visual proof* in the *Chou Pei Suan Ching*. These are two different methods for demonstrating the truth of the theorem.

Let us return to high school, for just a second, and remember what it is that the Pythagorean Theorem states: the square of the hypotenuse of a right-angled triangle is equal to the sum of the squares of the other two sides. Reflect on the improbability of this proposition, if conceived of unreflectively. Imagine being told that this proposition is true without being exposed to the proof. There is no reason to suppose that it probably holds for all right-triangles. There is no reason to suppose that it holds for *any* right-triangle. Yet once one traces a line through the reasoning, witnesses the proof, and comes to understand the ultimate simplicity of the claim, the original feeling of improbability collapses to a near certainty. Compare Pythagoras’ Theorem (so remote as it is from our immediate, unreflective grasp) to
the claim of the mystic that everything is one. In the first case, the independent
agreement we find between the Greeks and the Chinese is nearly miraculous. In the
second case, the agreement we find between mystics of different traditions and eras
is banal. It is an incredible fact that mathematicians, isolated by language, culture
and numeric systems, independently arrived at the belief that the sum of the square
of two sides of a right-angled triangle is equal to the square of the hypotenuse. Such
a claim is so extraordinary, so improbable, that the independent discovery of the
theorem in both Greece and China lends strong support to the claim that
mathematics is reliable. In contrast, the claim that everything is one pales.

One might argue against the value of this intersubjective agreement. After all, the
Gougu/Pythagorean theorem of the Greeks and the Chinese is similar only because
the preliminary assumptions were identical and the pattern of reasoning was
common in both the Chinese and Greek cases. Therefore, it follows that the
conclusion is bound to be identical in each case, but the fact that the conclusion is
common to the Greeks and the Chinese hardly shows that the mathematics is
reliable. To reach that conclusion, we had better be sure that the assumptions of
mathematics, the axioms, are correct, and there is no reason to believe that they are.
Moreover, the axioms of mathematics are almost as banal as the mystic’s claim of
cosmic unity itself.

It must be admitted that judgments regarding the truth of the assumptions,
postulates and axioms of arithmetic and geometry have historically been shaped by
intuition or by appeal to some similar sort of claim of “self-evidence”. Nevertheless,
we have ways of cross-checking these methods. I will not provide a complete defence
of the publicity of intuition, since this section is a defence of the publicity of
Therefore, I will instead give an example from within the history of mathematics that indicates the extent to which our intuitive decisions about the truth of geometrical first principles is susceptible to the sort of cross-checking I have argued is integral to scientific practice. Specifically, I would like to consider the infamous example of Euclid’s fifth postulate.

The postulate states that if some line segment falls across two straight lines in such a way that the interior angles on one side is less than two right angles, then the two straight lines, if projected on indefinitely, meet at some point on the same side on which the angles are less than the two right angles. When the lines are drawn in the mind’s eye, the conclusion that the lines will meet is intuitively very appealing, if not inescapable. The postulate captures, roundaboutly, the idea that parallel lines, projected indefinitely far, never meet. Nevertheless, there are geometries that do not accept this postulate, and these are collectively labelled ‘Non-Euclidean Geometry’.

Now, there is an empirical matter of fact about whether the concrete space of our universe is Euclidean or Non-Euclidean. In this sense, we can speak of our observations of physical space being in a state of agreement or disagreement with either Euclidean or Non-Euclidean geometry, and so, in this respect, we are able to speak about these opposed geometries in terms of their relative intermodal support. So, any defence of the reliability of intuition in geometry must take geometry as a model of real space, and not as a description of abstract space.

Now, as it happens, despite the intuitive obviousness of the proposition that the intersected lines will meet at some point, this evidence was taken to be inadequate for the purposes of establishing the axiom within geometry. Euclid himself indicates his own timidity, classing the principle among the postulates rather than the axioms.
The reason that the intuition is weak evidence is that the parallel postulate concerns lines drawn out indefinitely, and we have little reason to think that our intuitions are reliable with respect to indefinitely long lines. Who knows what happens if you carry two parallel lines out for an eternity? Our intuition is some evidence, but there is much room for reasonable doubt. In sharp contrast, Schopenhauer regarded the postulate to be 1. as certainly grasped as the principle of noncontradiction itself and 2. as certainly true as all our synthetic *a priori* knowledge. What is interesting about Schopenhauer’s intuitions here is that they were wrong on both points: the postulate was considered far from obvious by many later mathematicians, and the postulate simply isn’t true of space in this universe. Indeed, by the eighteenth century, sceptical mathematicians such as Giovanni Saccheri and Johann Lambert sought to derive the fifth postulate as a consequence of the other four postulates, to no avail. In their attempts, and the attempts of others, to prove the parallel postulate, Non-Euclidean geometries were developed after repeated attempts to show that a *reductio ad absurdum* resulted from Non-Euclidean assumptions failed. The development of Non-Euclidean geometry can thus be seen as something of an accident, resulting from (1) the relative intuitive *unobviousness* of the postulate itself and (2) the repeated failure to demonstrate the fifth postulate as a deductive consequence of other, more certain, Euclidean assumptions.

Now, it is a consequence of general relativity that space curves in the presence of massive objects. In curved space, the parallel postulate does not hold. The shortest distance between two points is not a Euclidean straight line, but a Riemannian geodesic. Therefore, Euclidean geometry is not accurate in this universe, in which space is Riemannian. So, by a somewhat surprising set of circumstances, Non-
Euclidean geometry received intermodal support in the form of empirical confirmations of general relativity. Put another way, the anomalous perihelion shift of Mercury was not only good news for Einstein, but good news for Riemann too. What all this shows is that the relative intuitive unobviousness of the parallel postulate was well founded.

7.9 The Failure of Religious Epistemic Methods

Within most religious communities, there is no requirement that the epistemic methods used should generate independent intersubjective agreement, and nor is there any expectation that the results of some one method should be independently corroborated by means of other methods. Indeed, William Alston has argued that religious experience is (and must be) autonomous. He says: ‘Claims to have perceived God cannot be confirmed by the kinds of checks and tests that are available for claims to have perceived physical objects’ (1992, 70). Alston is aware that this places religious experience in a rather sticky situation. For if there are no checks or tests for religious experience, then how might we check whether any particular experience is veridical rather than illusory? Alston himself is open that this is a serious concern:

Our conviction that sense perception puts us in effective cognitive contact with a surrounding world is intimately tied up with the fact that when we compare our perceptual beliefs with those of relevant others, they exhibit a massive commonality. And if we could have no such interpersonal confirmation how could we distinguish veridical perception from dreams and fancies? (1992, 72)

Yet Alston’s solution is that since religious methods are not amenable to the same kinds of checks as scientific methods, we must take up a different standard of appraisal for religious claims. We must employ criteria of appraisal that are appropriate to the religious domain. We must recognize that religion is a distinct and
autonomous domain, with standards that differ significantly from those appropriate
to sense perception (1992, 70). Specifically, for the example of Christian epistemic
methods, we are to appraise their resulting outputs according to the following two
criteria:

a. Whether the content of the report is in consonance with the picture of the
nature, purposes, and doings of God that has been built up in that
community.

b. Whether the subject exhibits over time a progress in becoming the kind of
person that, according to the tradition of that community, God wants us to
be (1992, 74).

To broaden these criteria to cover a range of religions, I will modify a. and b. in the
following way:

a.* Whether the content of the report is in consonance with the picture of the
nature, purposes, and doings of the relevant supernatural beings that has
been built up in that community.

b.* Whether the subject exhibits over time a progress in becoming the kind of
person that, according to the tradition of that community, we ought to be.

These are supposedly appropriate criteria for appraising religious methods. We
ought to avoid applying to religious methods the very same criteria that we would
apply to our perceptual methods since the domain of experience given to us by
religious methods is apart from the domain of sense experience. Alston argues that
to apply the standards of sense perception to the religious case is to indulge in a kind
of chauvinism. Alas, I am both white and male, so I may as well be a chauvinist too.

Alston’s two criteria for appraising religious methods are worthless. Neither is a
criterion that we can apply independently of the use of the methods we are
attempting to appraise, a fact that Alston readily admits. The first criterion, that the
report coheres with whatever the epistemic community at large supports, essentially prohibits the possibility of a surprising refutation of the claim that the method is reliable. If a method is incapable of contradicting the beliefs of the majority, but only supporting them, then I fail to see what use such a method can be for correcting errors in our thought, an essential desideratum of any epistemic method. The second criterion, that the religious practices should cause one to become the way the religious community prefers, is similarly circular since one draws one’s knowledge about ideal personhood, or saintliness, from the religious practices that are being judged. This was a problem, as the reader may remember, for Hick’s appeal to the fruits of religious methods, which suffered from the very same circularity.

To illustrate the worthlessness of Alston’s criteria, consider the following hypothetical example: a group of Satanists take up some method in order to hasten their moral corruption. If the method is effective at achieving the Satanists’ goal, then it has passed Alston’s second criterion. If the method also leads the Satanists to accept the core tenets of Satanism, then it has passed Alston’s first criterion. Let us imagine that the method in question involves torturing virgins, before sacrificing them to Satan while reciting some terrifying and evil mantra. This would be a terrible method to use, and I have independent reason to think so (the method generates no intersubjective or intermodal agreement and is also harmful to virgins). Alston, on the other hand, is forced to say that the Satanic method has the same degree of self-support as his own Christian Mysticism.

Alston is left with the (frankly ineffective) argument that since this brand of Satanism is not a socially established religion, it fails to clear the first important hurdle. The example of the Satanists, Alston must say, is a contrived example, of little
relevance to the religious situation as we find it. Yet this is simply not true. Sure, the example of the Satanists is contrived, but the method described is not far-fetched. Atrocities such as human sacrifice and the torture or execution of apostates are not especially hard to find in the history of religious traditions which were once, or which still are, socially established. The belief that apostates ought to be put to death, for example, remains the majority opinion in some countries in the Islamic world. I would have to remind Alston that far from being typical, the Sunday morning Christian is an anomalous character in the history of socially established religious practice.

We may now safely put arguments for the autonomy of religious methods to the side, and we may instead ask which religious method is most successful according to the standards that we routinely apply to other methods, such as perception. It seems that the best candidate for a reliable religious method is mysticism. As was noted in §2.3.3, what is noteworthy about mysticism is the agreement generated between independent practitioners. Yet as I have also noted elsewhere, this independent agreement is not especially compelling for two reasons. Firstly, the claims of the mystic have a high prior probability. For this reason, the convergence around the propositions in question is weaker evidence for mysticism than it might otherwise be. If the agreed upon propositions were not so obvious, we might have some cause for suspicion. As it happens, the agreement is not particularly puzzling, and it does not seem to demand that we posit some reliable method as the cause. More troubling for the mystic, however, is the fact that mystical experience is not independently corroborated by any other methods.
Of course, there are alleged cases of veridical mystical experiences, in which the deliverances of mysticism are apparently corroborated by other methods. Since 1967, the Division of Perceptual Studies at the University of Virginia School of Medicine has investigated mystical experiences, particularly near death experiences (NDEs). In the fifty years since its inception, the Division of Perceptual Studies has amassed thousands of reports of NDEs in an attempt to identify reports of extrasensory experiences that bear on the question as to whether near death experiences are reliable. The overwhelming majority of such reports do not generate intermodal agreement. However, a minority of the reports gathered are genuinely puzzling. There are cases in which patients, who were clinically dead at the time, have been apparently able to recall events witnessed from a perspective outside of their own bodies. Details are provided of the appearance of the operating theatre, the discussions had between hospital staff, objects in separate rooms, medical procedures performed etc. Subsequent investigations were then alleged to have supported the patient’s testimony.

Cases such as these are prima facie evidence for the reliability of NDEs, yet there is no shortage of naturalistic hypotheses that might well explain these cases better. If the patient maintains some residual degree of consciousness throughout treatment, then we need not posit an entirely new cognitive faculty to explain the reliability of any information gathered during the NDE. Moreover, the majority of cases are anecdotal reports which are only formally recorded long after the NDE has taken place. For obvious reasons, NDEs are difficult to study in controlled conditions; difficult, but not impossible.
In 2014, initial results of the AWARE study (AWAreness during REsuscitation) were published. AWARE is the most comprehensive study to date to test the reliability of cognition during NDEs. To assess the accuracy of claims of visual awareness during NDEs, participating hospitals installed shelves in their emergency rooms. Each shelf was fitted with an image only visible from above. These shelves allowed researchers to test the claim often made by NDEers that they are able to observe their own resuscitation from a perspective outside their own bodies and usually high above. Over four years, the study observed 2,060 cardiac arrests. Of those, 140 survived. Of the survivors interviewed, nine reported having an NDE. Of the nine reports, two involved detailed descriptions of their surrounds. Of these two descriptions, one was described as ‘accurate’ (Parnia et al. 2014, 1799—1805). Unfortunately, this lone patient was also resuscitated in a room lacking a shelf.
Closing Thoughts on Science, Religion and Methods

*They profess to be possessed of superior knowledge.* – Hippocrates, *On the Sacred Disease*

Scientific methods routinely generate surprising intersubjective and intermodal agreement under specified conditions. Religious methods do not. Instead, disagreement usually results. There are, at present, no specified conditions under which this persistent disagreement can be cured in any way that is not *post hoc*. This persistent disagreement is evidence that the methods are unreliable. Therefore, the ongoing conflict between science and religion can be settled on the side of science, for the time being. Its methods are surprisingly successful.

Can there be any room for religious epistemic methods? Or are believers irresponsible when they take up religious methods? My attitude to these questions is permissive. I have argued that religious methods cannot presently be shown to be reliable, and that, therefore, they should not be used in the justification of scientific theories. Religious methods should not be brought to bear on questions of theory choice in science. This in no way excludes religious methods from contributing to human knowledge in the most general sense. Outside of science, religious epistemic methods may help their practitioners to understand the depth and breadth of their own personal emotional, experiential, and ethical potential. They may expand the imagination and bring narrative structure to human life. No intelligent (or perhaps, no interesting) person is a mere conglomerate of reliable methods. To argue that such methods are best done away entirely with is to commit, as Reichenbach puts it, ‘a naïve intellectualism,’ to which he adds: ‘Music too has an effect of the highest order
on men and may be one of the best means of spiritual and moral education. But we do not speak of the meaning of music’ (1938, 58–9).

Even within science, religious methods have a place, and their place is within the context of discovery. These unreliable methods may legitimately contribute to the development of, or the inspiration behind, new theories. Indeed, the history of science is replete with examples of religious methods being used in just such a way. Modern geology, for example, flourished as a research program many of the assumptions of which were shaped by biblical histories, including the story of the Noachian deluge. Subsequent appeals to fossil evidence, stratigraphy and erosion corrected the theory where it fell short. From religion, the theory was received; from science, the tools were received with which we might put the theory to test.

At present, there is no single board or committee whose role it is to accredit all the scientific methods. The acceptance of a method as scientific is often an organic process, largely achieved through the building of peer consensus, lengthy investigation, argument, and teamwork. Perhaps above all else, criticism of the methods used to justify some claim is the centrally important path to methodological progress. Criticism leads to progress by the discerning exclusion of certain methods from certain domains of investigation, and an increase in confidence of a method’s accuracy when successive attempts to invalidate the method fail. The methods we accept as reliable today are always open to further testing, and may, in principle, be rejected tomorrow. The conditions under which we take some method to be reliable are constantly threatened by new discoveries.

Consider, for example, the early development and subsequent testing of the carbon-14 dating method. The prospects for using radiocarbon as a proxy for dating
organic materials were realized by Willard Libby in the late 1940s (Libby et al. 1949, Arnold and Libby 1949). To establish that radiocarbon might be a reliable proxy, Libby analysed the carbon-14 content of wood samples from the ancient Egyptian tombs of Sneferu and Zoser, whose estimated age was independently established by Egyptologists on the basis of historical Egyptian chronologies and calendars. With gratifying success, Libby found that the carbon-14 content of the wood samples was the same as the estimated content. The content estimate was made according to a theory stating that the half-life of carbon-14 is approximately 5568 years. Libby was slightly wrong about this, and most contemporary researchers presume a half-life of 5730 years. The important point, however, is that Libby’s initial results were highly promising. His method agreed with what Egyptologists had already said was the case, within an estimated margin of error of 450 years (Arnold and Libby 1949, 228).

Despite Libby’s initial success, some of the assumptions of radiometric dating were criticized in the light of other evidence. Indeed, some early discrepancies between dates derived by carbon-14 and well-established historical records led Libby himself to consider the possibility that the concentration of carbon-14 in the biosphere had not remained constant through time. Libby’s original experiments assumed a constant concentration of carbon across all eras. This assumption was in line with a local inductive principle: the future resembles the past with respect to the concentration of carbon-14. However, other researchers were sceptical that the concentration of carbon-14 should have any reason to have remained constant over time. More likely, given that the sources of carbon-14 vary in their rates of emission, the concentration of carbon-14 should vary accordingly. Thus, the deviation between the historical and radiometric records was traced to the variation in the
concentration of carbon-14. Carbon-14 content is now calibrated against other benchmarks such as tree ring data and the results of uranium-thorium dating on cave and coral samples (Reimer et al. 2013). To put the example in Alstonian terms, the overrider system of radiometric dating, the set of acceptable underminers and rebutters, has changed considerably between 1949 and the present day.

Now, just as there is no board or committee to accredit all the scientific methods, there is similarly no committee tasked with accrediting the methods by which new methods are offered up. Libby’s idea to use carbon-14 to measure the age of organic samples came to him upon consideration of the worldwide distribution and mixing of radiocarbon. When asked, in an interview, why he had been the first to even think of the possibility of radiocarbon dating, he answered:

Carbon dating requires you to think of the world as being one system. Consider the propositions, simple as they are, but they involve this assumption of worldwide mixing. That was quite a block. Here I was talking about the ocean, I mean the entire ocean mass, the entire biosphere, the entire atmosphere, as though it were in my test tube. (Marlowe 1979)

Had this picture of worldwide mixing been false, there would be little value in radiometric dating, and Libby would have been drawn down a blind alley. Yet Libby’s method was successful, and his reasoning was inspired by his unique perspective. Galileo also had a unique perspective, suffering as he did from a degenerative eye disease. That is not just a bad joke. Galileo’s worsening vision may have inspired his decision to affix a diaphragm to his telescope, probably after having found that squinting aided his own worsening vision. The reasons that investigators have for devising new methods cannot be accounted for. And of course, as for the common methods of visual or auditory perception, no person devised them or willingly
decided to use them at all. Most of us were just born with eyes and ears attached. This needn’t mean we are compelled to use them, or that we must be hardwired to accept their testimony. That some organ is “strapped to us” for life need not imply that we must use it to investigate the world. There are good reasons that we use our eyes, rather than our genitals, to detect distant objects, yet we are born quite unwillingly, but thankfully, equipped with both.

The emphasis that I have placed on cross-checking as central to the task of justification stands opposed to the foundationalist claim that some methods are basic and deliver non-inferential knowledge to believers. In arguing that some methods require no rational justification, foundationalists attempt to turn the justified application of perception into an irrational faith. In so doing, the door is left open by the foundationalist to accept other irrational faiths. The notion that sense experience is given, or typically unproblematic, is distasteful for reasons that are perhaps more personal than public. I will openly share these personal reasons, if only to illustrate the very practical nature of the problem of justifying perception. As a sufferer of hypnogogic hallucinations, I am often awoken at night by all manner of strange creatures who either crawl along the walls, or who mischievously pull the bedsheets from the bed. Sometimes, large spiders crawl all over the duvet. Other times, giant snails and slugs refuse to leave the room no matter how hard I work to corral them. They are awful little beasts. Most times, I leap from the bed and begin to shoo the apparitions from my room, but quickly I notice that I cannot grab the creatures with my hands, and that I cannot hear them. Try as I might to convince others, no-one else in the house can see them. It occurs to me that a three-foot long snail is not a creature that I have ever encountered before. And although I can see the creatures,
in all their grotesque visual detail, I return to bed, assured not by sight, but by other considerations. Naturally, my initial terror is caused by the strange sight that my eyes behold. But can the terror be justified? On the most rudimentary sort of inspection, it cannot be.

Of course, I could decide to trust the evidence of my vision and throw out all of the evidence from other sources, but this would be to commit a kind of vision chauvinism. One must be fair in one’s dealings with the various sources that one has available for justification. No method is welcome which, after investigation, persistently refuses to agree with the others, and which demands acceptance, obedience, or endless attention at the expense of all others. Yet this kind of chauvinism is regularly taken up by religious believers as a matter of religious practice. Consider the example of Kurt Wise, a young Earth creationist who struggled in the course of his PhD research in geology to reconcile the results of science with the word of the Bible:

Science said the sun came before the earth—or at least at the same time—and the Bible said that the earth came three days before the sun. Whereas science said that the sea creatures came before plants and the land creatures came before flying creatures, the Bible indicated that plants preceded sea creatures and flying creatures preceded land creatures. (Wise 2000, 352)

The persistent disagreement between science and scripture nagged at Wise for months. Finally, he decided to take to the Bible with a pair of scissors, excising any verse that went against the results of science. He sliced and chopped and hacked. By the time he had completed the task, there was very little of his holy book left intact. If science were right, then the Bible was mostly wrong. And if the Bible were right, then science was mostly wrong. He made a decision: ‘It was there that night that I
accepted the Word of God and rejected all that would ever counter it’ (Wise 2000, 354). This is Bible chauvinism. The agreement generated by a variety of natural epistemic methods could not conquer one single, contradictory, uncorroborated method.

Perhaps, like Galileo with his telescope, religious practitioners are pioneers of methods which will soon become commonplace in every laboratory in every university. Yet whereas Galileo’s results were corroborated within only a couple of years from the date of his first observations, the results of religious methods have struggled for tens of thousands of years to find reliable external corroboration. Religious methods have been well studied, both formally and informally. Associated supernatural claims of paranormal, prophetic, and extrasensory abilities have been investigated in a variety of scientific contexts without much success at all. The subsequent decline of formal research in these fields is mostly due to a lack of funding, which has been, in turn, mostly due to a lack of success. If there are reliable religious methods, they are unique in their ability to remain hidden. In this case, the absence of evidence should be considered evidence of absence.

Yet still, religious epistemic methods are argued to provide special knowledge of the world, of a kind that utterly transcends the meagre scraps of belief that reason and sense experience can provide. Religious methods have failed, to this point, to prove their mettle. Practitioners fail to agree with each other, and their results fail to agree with the results of science and common sense. The conflict between religion and science resides at this very point of tension. Religious believers claim authoritative knowledge is delivered to them by methods that cannot be corroborated. This failure to find corroboration is just what we should expect if the
methods are not, in fact, reliable. One who accepts the deliverances of self-supporting religious methods, and thereby believes a proposition that stands in conflict with other results that have been independently established by a variety of alternative sources, is making the worst kind of trade. This is to trade good sense for falsehoods, to exchange justified knowledge for a sense of certainty. Such a trade is akin to selling all of one’s worldly possessions, only to gamble away the money on a single hand. But the way to make money, as any investor will tell you, is to diversify investments and manage risk. And so, if I may conclude with a dose of irony by quoting the book of Proverbs: ‘Buy the truth, and do not sell it, also wisdom and instruction and understanding’ (23:23).
References


