

# Basics of Theism

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## Introduction

The basic argument I aim to make is that theism is a metaphysical, not pseudoscientific, position that can complement rather than violate scientific principles and knowledge. I hope it will be of interest to anyone who accepts that the scientific mindset demands seeking out the best evidence against claims, including claims made about religion. Or maybe you're a Christian worried about claims that your faith demands that you believe things that don't make sense. I'll present evidence that creationism is not the default theistic position, either logically, historically or in terms of faith, that science and religion are valuable in qualitatively different, but not opposed, ways and that claims that religion is inherently harmful and irrational are not compelling. I'll also try to provide a general model of theism that addresses some common issues such as the problems of evil and of complexity. But if you read only one thing on the site, I hope it's this [list](#) of statements concerning faith, reason and sometimes the Genesis stories specifically, made by believers throughout history. It may surprise you.

As an introduction, let's consider what non-Fundamentalist theism entails. If your reaction to the below is disbelief that this reflects any kind of real, orthodox theism, please at least have a quick look at those historical references.

1. The theistic position is that Nature as we experience it is an *expression* of something else that lies in some sense beyond or deeper than empirical reality itself. This is similar to considering certain statements to express truth, or (our experience of) certain works of art to express beauty, except that we're considering what is essentially (as opposed to superficially or transiently) expressed by anything that exists. The theistic Creator, God, is that which Nature, including our minds and experiences, ultimately expresses; the ultimate *sine qua non*.
2. The above implies that theism is a *metaphysical* position, a belief about what being means, not a belief about the content of physical reality. It's an interpretation of all available experience and empirical observations, not a hypothesis concerning any specific observation. That's why demanding empirical proof of God's existence, as if God were an object within the empirical universe, is a category error, and why its lack doesn't make theism irrational.
3. This God is not anthropomorphic, nor a localizable object or agent within the universe, nor some kind of supernatural designer. In contrast, what "God" refers to is supremely elegant rather than incredibly complex, the pinnacle of reductionist explanations, but - therefore - able to generate all possible complexity. This doesn't preclude having an emotionally relevant, "religious" response to God. Note that in for instance Christianity, there's a central role for what could be described as expressions or projections of God - the Word, the "begotten not made" Son, the Holy Spirit - which allow the concept of an elegant, simple God to remain "God-like" in an orthodox sense.
4. Non-Fundamentalist religion is aimed at establishing a Buberian *"I-Thou"* relationship with this God. This is an independent end-goal, its own reward; it's something that has personal value, and hence something that's rational to cultivate.

So theists have a rational reason to pursue this kind of religious goal, and their beliefs don't have to violate reason or science in any way. The only problem is one that's shared by any metaphysical position, including atheism: we can't simply run an experiment to find out about God. We are attempting to apply reason outside of science - and that's going to be difficult to do well. But is it

really that plausible that the theistic metaphysical position in particular plays a causal role in harmful social processes, as opposed to psychosocial factors that have nothing to do with theism and science? Is there really anything anti-scientific about it, something that would prevent someone from studying the deepest workings of the universe? Is the claim that the physical universe has *no* higher meaning, that it expresses nothing, that there's nothing with which we could have a non-imaginary relationship, any more evidence-based? Is it rational to accept that position - *any* position - as being a "default" that somehow doesn't require evidence or reasoning?

I hope to at least provide some interesting counterarguments if your answers to any of the above were "yes".

## Genesis, the Bible and God

### **The creation stories in Genesis were never meant to be taken literally.**

The following is a list of sources that contradict both creationist and certain atheist claims that things like Biblical literalism, in particular concerning the creation stories, a dogmatic belief in absolute Biblical inerrancy and a rejection of reason in favor of dogmatic interpretation are the norm in religious thought. I've also included references concerning what kind of God many (orthodox) Jews and Christians really believe in. What I hope to show is that there exist forms of theism that are diametrically opposed to Fundamentalist beliefs, and that it would therefore be intellectually sloppy at best not to make that distinction when thinking about religion.

#### 1. Origen Adamantius (lived ca. 185-254), On First Principles.

What man of intelligence, I ask, will consider that the first and second and third day, in which there are said to be both morning and evening, existed without sun and moon and stars, while the first day was even without a heaven? And who could be found so silly as to believe that God, after the manner of a farmer 'planted trees in a paradise eastward in Eden'... I do not think anyone will doubt that these are figurative expressions which indicate certain mysteries through a semblance of history.

#### 2. Saint Augustine (408), De Genesi ad litteram.

Usually, even a non-Christian knows something about the earth, the heavens, and the other elements of this world, about the motion and orbit of the stars and even their size and relative positions, about the predictable eclipses of the sun and moon, the cycles of the years and the seasons, about the kinds of animals, shrubs, stones, and so forth, and this knowledge he holds to as being certain from reason and experience. Now, it is a disgraceful and dangerous thing for a non-believer to hear a Christian, presumably giving the meaning of Holy Scripture, talking nonsense on these topics; and we should take all means to prevent such an embarrassing situation, in which people show up vast ignorance in a Christian and laugh it to scorn. The shame is not so much that an ignorant individual is derided, but that people outside the household of faith think our sacred writers held such opinions, and, to the great loss of those for whose salvation we toil, the writers of our Scripture are criticized and rejected as unlearned men. If they find a Christian mistaken in a field which they themselves know well and hear him maintaining his foolish opinions about our books, how are they going to believe those books in matters concerning the resurrection of the dead, the hope of eternal life, and the kingdom of heaven, when they think their pages are full of falsehoods and on facts which they themselves have learnt from experience and the light of reason? Reckless and incompetent expounders of Holy Scripture bring untold trouble and sorrow on their wiser brethren when they are caught in one of their mischievous false opinions and are taken to task by those who are not bound by the authority of our sacred books. For then, to defend their utterly foolish and obviously untrue statements, they will try to call upon Holy

Scripture for proof and even recite from memory many passages which they think support their position, although they understand neither what they say nor the things about which they make assertion.

...

With the scriptures it is a matter of treating about the faith. For that reason, as I have noted repeatedly, if anyone, not understanding the mode of divine eloquence, should find something about these matters [about the physical universe] in our books, or hear of the same from those books, of such a kind that it seems to be at variance with the perceptions of his own rational faculties, let him believe that these other things are in no way necessary to the admonitions or accounts or predictions of the scriptures. In short, it must be said that our authors knew the truth about the nature of the skies, but it was not the intention of the Spirit of God, who spoke through them, to teach men anything that would not be of use to them for their salvation.

3. [St. John of Damascus](#) (676 - 749), *An Exact Exposition of the Orthodox Faith*. Compare this with the claim that what theists believe in is some sort of anthropomorphic designer. In our case, thoughtfulness, and wisdom, and counsel come to pass and go away as states of being. Not so in the case of God: for with Him there is no happening or ceasing to be: for He is invariable and unchangeable: and it would not be right to speak of contingency in connection with Him. For goodness is concomitant with essence. He who longs always after God, he seeth Him: for God is in all things. Existing things are dependent on that which is, and nothing can be unless it is in that which is. God then is mingled with everything, maintaining their nature: and in His holy flesh the God-Word is made one in subsistence and is mixed with our nature, yet without confusion.

...We speak of the Spirit of God, the Spirit of Christ, the mind of Christ, the Spirit of the Lord, the very Lord, the Spirit of adoption, of truth, of liberty, of wisdom (for He is the creator of all these): filling all things with essence, maintaining all things, filling the universe with essence, while yet the universe is not the measure of His power.

...For He does not belong to the class of existing things: not that He has no existence, but that He is above all existing things, nay even above existence itself. For if all forms of knowledge have to do with what exists, assuredly that which is above knowledge must certainly be also above essence: and, conversely, that which is above essence will also be above knowledge.

4. Saadia Gaon (933), *The Book of Beliefs and Opinions* (see the [Reason and Revelation](#) section for a little more discussion on Saadia Gaon; it should be noted that he did not anticipate the correct age of the earth, yet still provides relevant principles not to accept creationism).  
Apropos of [the category of] action, let me say that, even though we denominate the Creator "Maker" and "Agent," the meaning that we attribute to these terms must not be construed in a corporeal sense. [...] When, therefore, we find the Scriptures, in speaking of some of the works of God, make mention of an act and its opposite, it must all be reduced to the fact that, when God creates anything, He brings it into being without actually taking it in hand or coming in contact with it. The Scriptures do, indeed, characterize the positive and negative acts of creation by saying: And God made (Gen. 1:7), And He rested (Gen. 2:2). However, just as the And He made was effected without motion or exertion, consisting only of the production of the thing created, so undoubtedly, when it is said And He rested, it was not relaxation from any kind of motion of exercise."
5. [Maimonides](#) (around 1175), *Mishneh Torah*.  
8) It has been stated in Scripture that God has no physical form, as it is written, "...that the Lord is God in heaven above and on the earth beneath: there is none other". A physical body cannot be in two places at once. It is also written, "...for you saw no manner of form", and,

"To whom then will you compare Me, that I should be his equal?" - had God had a body it would have been similar to other bodies.

9) If so, what does the Torah mean when it says things like, "under His feet" (Exodus 31:18), "written with the finger of God" (ibid), "the hand of the Lord" (Exodus 9:3), "the eyes of the Lord" (Genesis 38:7), "the ears of the Lord" (Numbers 11:1), et cetera? These phrases are in line with the level of understanding of people, who can only comprehend physical existence, and the Torah speaks in terms that we can understand. All examples of this nature are merely attributory. For example, when it says, "If I whet My glittering sword" - does God really have a sword and does He really kill with one?! Such phrases are figurative. Evidence for this is that one Prophet saw God as wearing garments as white as snow, whereas another Prophet saw God as wearing crimsoned garments from Bozrah. Moses our Teacher himself saw, at the time of the splitting of the Red Sea, God as a war-waging warrior, but at Sinai as a cantor to show him the order of prayer. This shows that God has no form or shape [because He appears different to different people]. God's appearance varies according to each prophetic vision and what it contains. It is beyond Man's intellect to investigate or comprehend [the nature of] God's existence, as it is written, "Can you find out the deep things of God? Can you find out the purpose of the Almighty?"

6. The Zohar (13th century).

Now the narratives of the Torah are its garments. He who thinks that these garments are the Torah itself deserves to perish and have no share in the world to come. Wo unto the fools who look no further when they see an elegant robe! More valuable than the garment is the body which carries it, and more valuable even than that is the soul which animates the body. Fools see only the garment of the Torah, the more intelligent see the body, the wise see the soul, its proper being, and in the Messianic time the 'upper soul' of the Torah will stand revealed.

7. John Calvin (1554), Commentary on Genesis.

I have said, that Moses does not here subtly descant, as a philosopher, on the secrets of nature, as may be seen in these words... Moses makes two great luminaries; but astronomers prove, by conclusive reasons, that the star of Saturn, which, on account of its great distance, appears the least of all, is greater than the moon. Here lies the difference: Moses wrote in the popular style things which, without instruction, all ordinary persons, endued with common sense, are able to understand; but astronomers investigate with great labor whatever the sagacity of the human mind can comprehend. Nevertheless, this study is not to be reprobated, nor this science to be condemned, because some frantic persons are wont boldly to reject whatever is unknown to them. For astronomy is not only pleasant, but also very useful to be known: it cannot be denied that this art unfolds the admirable wisdom of God.

8. Galileo Galilei (1615), Letter to the Grand Duchess Christina.

I do not feel obliged to believe that the same God who has endowed us with sense, reason, and intellect has intended us to forego their use and by some other means to give us knowledge which we can attain by them.

I would say here something that was heard from an ecclesiastic of the most eminent degree: 'That the intention of the Holy Ghost is to teach us how one goes to heaven, not how heaven goes.'

9. Robert Chambers (1844).

If there is a choice between special creation and the operation of general laws instituted by the creator, I would say the latter is greatly preferable as it implies a far grander view of the divine power and dignity than the other.

10. Frederick Temple, Bishop of Exeter (1884), [The relations between religion and science](#).

He did not make the things, we may say; no, but He made them make themselves. And surely this rather adds than withdraws force from the great argument. It seems in itself something more majestic, something more befitting Him to Whom a thousand years are as

one day and one day as a thousand years, thus to impress His Will once for all on His creation, and provide for all its countless variety by this one original impress, than by special acts of creation to be perpetually modifying what He had previously made. It has often been objected to Paley's argument, as I remarked before, that it represents the Almighty rather as an artificer than a creator, a workman dealing with somewhat intractable materials and showing marvellous skill in overcoming difficulties rather than a beneficent Being making all things in accordance with the purposes of His love. But this objection disappears when we put the argument into the shape which the doctrine of Evolution demands and look on the Almighty as creating the original elements of matter, determining their number and their properties, creating the law of gravitation whereby as seems probable the worlds have been formed, creating the various laws of chemical and physical action, by which inorganic substances have been combined, creating above all the law of life, the mysterious law which plainly contains such wonderful possibilities within itself, and thus providing for the ultimate development of all the many wonders of nature.

What conception of foresight and purpose can rise above that which imagines all history gathered as it were into one original creative act from which the infinite variety of the Universe has come and more is coming even yet?

...

Science will continue its progress, and as the thoughts of men become clearer it will be perpetually more plainly seen that nothing in Revelation really interferes with that progress. It will be seen that devout believers can observe, can cross-question nature, can look for uniformity and find it, with as keen an eye, with as active an imagination, with as sure a reasoning, as those who deny entirely all possibility of miracles and reject all Revelation on that account. The belief that God can work miracles and has worked them, has never yet obstructed the path of a single student of Science; nor has any student who repudiated that belief found any aid in his study from that repudiation. The rush of Science of late years has for the time made many men fancy that Science is everything; and believers in Revelation have helped this fancy by insisting on their part that Revelation is everything; but such waves of opinion, resting really on feeling, are sure to pass away, and scientific men will learn that there are other kinds of knowledge besides scientific knowledge, as believers are already learning that God teaches us by other methods besides the method of Revelation.

11. Pope Leo XIII (1893), *Providentissimus Deus* 18.

No real disagreement can exist between the theologian and the scientist provided each keeps within his own limits. . . . If nevertheless there is a disagreement . . . it should be remembered that the sacred writers, or more truly 'the Spirit of God who spoke through them, did not wish to teach men such truths (as the inner structure of visible objects) which do not help anyone to salvation'; and that, for this reason, rather than trying to provide a scientific exposition of nature, they sometimes describe and treat these matters either in a somewhat figurative language or as the common manner of speech those times required, and indeed still requires nowadays in everyday life, even amongst most learned people.

12. [C. S. Lewis \(1952\), 'Collected Letters of C.S. Lewis'](#).

It is Christ Himself, not the Bible, who is the true Word of God. The Bible, read in the right spirit and with the guidance of good teachers will bring us to Him. When it becomes really necessary (i.e. for our spiritual life, not for controversy or curiosity) to know whether a particular passage is rightly translated or is Myth (but of course Myth specially chosen by God from among countless Myths to carry a spiritual truth) or history, we shall no doubt be guided to the right answer. But we must not use the Bible (our ancestors too often did) as a sort of Encyclopedia out of which texts (isolated from their context and read without attention to the whole nature and purport of the books in which they occur) can be taken for use as weapons.

My own position is not Fundamentalist, if Fundamentalism means accepting as a point of faith at the outset the proposition 'Every statement in the Bible is completely true in the literal, historical sense'. That would break down at once on the parables. All the same commonsense and general understanding of literary kinds which would forbid anyone to take the parables as historical statements, carried a very little further, would force us to distinguish between (1.) Books like Acts or the account of David's reign, which are everywhere dovetailed into a known history, geography, and genealogies, (2.) Books like Esther, or Jonah or Job which deal with otherwise unknown characters living in unspecified periods, and pretty well proclaim themselves to be sacred fiction.

13. Fritz Rothschild (1971), Truth and Metaphor in the Bible.

The view that the Bible contains God's message to man has led to ever new interpretations, since it constantly forced believing readers of the Bible to reconcile the words of the sacred text with whatever they held to be true on the basis of their own experience, the canons of logic, contemporary science, and their moral insights.... The traditionalist will always feel called upon to interpret the text so that it reflects not ancient error but the highest standards of trustworthy knowledge and insight of his own time.

If we believe that God's message is to be found in Scripture, we can expect that basic motifs, metaphors and paradigmatic tales contain guidance ("Torah") for all ages, and it becomes our duty to delve into their implications with reverence and seriousness. On the same assumption, however, the timeless message can never be read through the spectacles of our great-grandparents. It becomes our duty and challenge to do what previous generations have done: to focus upon the sacred text the fullest light of knowledge at our disposal.

14. R. J. Coleman (1975), [Biblical Inerrancy: Are We Going Anywhere?](#). On the history of belief in Biblical Inerrancy.

The question of biblical inerrancy is remarkably the same now as it was nearly a century ago. Yet it is not the black and white issue commonly conjured up in the minds of most people; namely, one side claiming the Bible contains no discrepancies or inconsistencies whatsoever, with the other side claiming the Scriptures are riddled with error. On the contrary, even Warfield and Hodge conceded that the biblical writers were at times "dependent for their information upon sources and methods in themselves fallible, their personal knowledge and judgment were in many matters hesitating and defective or even wrong." They also recognized that "inspiration does not suppose that the words and phrases written under its influence are the best possible to express the truth, but only that they are an adequate expression of the truth. Other words and phrases might furnish a clearer, more exact, and therefore better expression . . . ." These two concessions in themselves permit an unexpected latitude in the kind and number of errors possibly found in Scripture.

15. Steven Katz (1978), in [God and the Astronomers](#), R. Jastrow, pp. 147-163.

Theological concern with evolution tends to be derived from a literalist reading of Genesis. As I have tried to show, in Jewish religious thought Genesis is not regarded as meant for a literal reading, and Jewish tradition has not usually read it so.

...

The basis for disagreement is not the conflict of evolution with a literal reading of Genesis, but rather the evolutionist's denial of teleology, i.e. the denial of purpose in and through nature, and purposeful movement in and through history, toward some end or goal. While evolution argues for the random, purposeless nature of natural selection, this argument only describes specific events, whether mutations or reproductions, *within* history and nature. It does not offer evidence for or against the purposeful ordering of nature and history as wholes.

As the medievals, for example, Thomas Aquinas in his Five-Fold Way, were wrong when they argued that the existence of a "First Cause" could be proven inductively as a

consequence of observing chain of causation within nature and history, because the observance of a cause *in* nature or history does not prove there is a cause *of* nature or history, so, too, modern men, who deny a cause of nature because of the randomness of natural selection, make the same error of logic, but in the reverse direction.

16. Conrad Hyers (1982), [Biblical Literalism: Constricting the Cosmic Dance](#).

The early ethnologist R. R. Marett is noted for his dictum that "religion is not so much thought out as danced out." But even when thought out, religion is focused in the verbal equivalent of the dance: myth, symbol and metaphor. To insist on assigning to it a literal, one-dimensional meaning is to shrink and stifle and distort the significance. In the words of E. H. W. Meyerstein, "Myth is my tongue, which means not that I cheat, but stagger in a light too great to bear." Religious expression trembles with a sense of inexpressible mystery, a mystery which nevertheless addresses us in the totality of our being.

The literal imagination is univocal. Words mean one thing, and one thing only. They don't bristle with meanings and possibilities; they are bald, clean-shaven. Literal clarity and simplicity, to be sure, offer a kind of security in a world (or Bible) where otherwise issues seem incorrigibly complex, ambiguous and muddy. But it is a false security, a temporary bastion, maintained by dogmatism and misguided loyalty. Literalism pays a high price for the hope of having firm and unbreakable handles attached to reality. The result is to move in the opposite direction from religious symbolism, emptying symbols of their amplitude of meaning and power, reducing the cosmic dance to a calibrated discussion.

What did exist--what very much existed--and what pressed on Jewish faith from all sides, and even from within, were the religious problems of idolatry and syncretism [attempted reconciliation of contradictory or opposing beliefs]. The critical question in the creation account of Genesis 1 was polytheism versus monotheism. That was the burning issue of the day, not some issue which certain Americans 2,500 years later in the midst of the scientific age might imagine that it was. And one of the reasons for its being such a burning issue was that the Jewish monotheism was such an unique and hard-won faith. The temptations of idolatry and syncretism were everywhere. Every nation surrounding Israel, both great and small, was polytheistic; and many Jews themselves held--as they always had--similar inclinations. Hence the frequent prophetic diatribes against altars in high places, the Canaanite cult of Baal, and "whoring after other gods."

Read through the eyes of the people who wrote it, Genesis 1 would seem very different from the way most people today would tend to read it--including evolutionists who may dismiss it as a pre-scientific account of origins, and creationists who may try to defend it as the true science and literal history of origins. For most peoples in the ancient world the various regions of nature were divine. Sun, moon, and stars were gods. There were sky gods and earth gods and water gods. There were gods of light and darkness, rivers and vegetation, animals and fertility. Though for us, nature has been "demythologized" and "naturalized"--in large part because of this very passage of scripture--for ancient Jewish faith a divinized nature posed a fundamental religious problem.

In addition, pharaohs, kings, and heroes were often seen as sons of gods, or at least as special mediators between the divine and human spheres. The greatness and vaunted power and glory of the successive waves of empires that impinged on or conquered Israel (Egypt, Assyria, Babylon, Persia) posed an analogous problem of idolatry in the human sphere.

In the light of this historical context it becomes clearer what Genesis 1 is undertaking and accomplishing: a radical and sweeping affirmation of monotheism vis-`a-vis polytheism, syncretism and idolatry. Each day takes on two principal categories of divinity in the pantheons of the day, and declares that these are not gods at all, but creatures--creations of the one true God who is the only one, without a second or third. Each day dismisses an additional cluster of deities, arranged in a cosmological and symmetrical order.

On the first day the gods of light and darkness are dismissed. On the second day, the gods of sky and sea. On the third day, earth gods and gods of vegetation. On the fourth day sun, moon, and star gods. The fifth and sixth days take away any associations with divinity from the animal kingdom. And finally human existence, too, is emptied of any intrinsic divinity-- while at the same time all human beings, from the greatest to the least, and not just pharaohs, kings and heroes, are granted a divine likeness and mediation.

On each day of creation another set of idols is smashed, These, O Israel, are no gods at all-- even the great gods and rulers of conquering superpowers. They are the creations of that transcendent One who is not to be confused with any piece of furniture of the universe of creaturely habitation. The creation is good, it is very good, but it is not divine.

We are then given a further clue concerning the polemic design of the passage when the final verse (2:4a) concludes: "These are the generations of the heavens and the earth when they were created." Why the word "generations," especially if what is being offered is a chronology of days of creation? Now to polytheist and monotheist alike the word "generation" at this point would immediately call one thing to mind. If we should ask how these various divinities were related to one another in the pantheons of the day, the most common answer would be that they were related as members of a family tree. We would be given a genealogy, as in Hesoid's "Theogony," where the great tangle of Greek gods and goddesses were sorted out by generations. Ouranos begat Kronos; Kronos begat Zeus; Zeus begat Prometheus.

The Egyptians, Assyrians, and Babylonians all had their "generations of the gods." Thus the priestly account, which had begun with the majestic words, "In the beginning God created the heavens and the earth," now concludes--over against all the impressive and colorful pantheons with their divine pedigrees--" These are the generations of the heavens and the earth when they were created ." It was a final pun on the concept of the divine family tree.

The fundamental question at stake, then, could not have been the scientific question of how things achieved their present form and by what processes, nor even the historical question about time periods and chronological order. The issue was idolatry, not science; syncretism, not natural history; theology, not chronology; affirmations of faith in one transcendent God, not creationist or evolutionist theories of origin. Attempting to be loyal to the Bible by turning the creation accounts into a kind of science or history is like trying to be loyal to the teachings of Jesus by arguing that the parables are actual historical events, and only reliable and trustworthy when taken literally as such.

17. Lasor, Hubbard, and Bush (1996), *Old Testament Survey*, p. 72.

Literary device also is found in the names used. The correspondence of the name with the person's function or role is striking in several instances. Adam means 'mankind' and Eve is '(she who gives) life.' Surely, when an author of a story names the principal characters Mankind and Life, something is conveyed about the degree of literalness intended! Similarly Cain means 'forger (of metals)'; Enoch is connected with 'dedication, consecration' (4:17; 5:18); Jubal with horn and trumpet (4:21); while Cain, condemned to be a *nad*, a 'wanderer,' goes to live in the land of Nod, a name transparently derived from the same Hebrew root, thus the land of wandering! This suggests that the author is writing as an artist, a storyteller, who uses literary device and artifice. One must endeavor to distinguish what he intends to teach from the literary means employed.

18. K. Lewis (1997), [On the Heresy of Literalism](#).

The history of American Christianity has been dominated by revivalism and Protestant evangelicalism, particularly in the South. As result, countless earnest Christians have come to rest in the assumption that the only way the truth of the Bible can be maintained is by claiming it to be literal truth.

This is the belief that Scripture should be read as literally as possible in every respect, and

especially wherever not to do so would seem to deny the power of God to operate apart from the laws of nature. Latter-day appeals to "Inerrancy" as a fighting principle insist upon this literalism, often appearing to bait both skeptical and more traditional contemporary minds.

But is this heresy? In 1980 Episcopalian pastoral theologian, Urban T. Holmes observed flatly that "literalism is a modern heresy-perhaps the only heresy invented in modern times." But he did not proceed to argue the case. No one has.

Heresy is traditionally understood to emerge within a community of faith when a legitimate point of belief is over-emphasized to the neglect of other equally legitimate, complementing, occasionally countering points of belief needed to make up the delicate balance of doctrines in an "orthodox" rule of faith. Heresy emerges as a truncating distortion of the faith. From the earliest times, Christian heresies have inflicted damage from within upon the Church's theologically ordered system of faith, constructed from the biblical testimony and crystallized in concise credal formulae.

The heresy of literalism as such is a modern, post-scientific phenomenon.

19. Revd Dr Ernest Lucas (2007), [Faraday Paper 11](#).

The rise of modernism during the nineteenth and early twentieth centuries was associated with two contrasting trends within Christian theology, both of which influenced the interpretation of the Bible. The dominant trend encouraged a more critical analysis of the biblical text in which it was handled 'scientifically' with respect to sources, authorship and dating. But the rise of modernism, with its assumption that scientific knowledge is the only reliable form of knowledge, also stimulated the interpretation of biblical texts as if they were making claims about scientific knowledge, contributing to the rise of creationism in the USA during the 1920s. Scientists and engineers, often with little theological training, began to use biblical passages as a source of scientific information about the age of the earth and the origins of biological diversity, a different way of understanding the Bible from that practised in mainstream theology. One result is that today about half the population of the USA, a world leader in science and technology, adopts this modernist stance in their interpretation of Genesis, leading to predictable conflicts with the scientific community.

Ironically, some anti-religious scientists also share the creationists' modernist stance towards interpreting Genesis.

This paper argues that both sides in this sterile debate base their positions on a mishandling of the Hebrew narratives, failing to use standard methods of biblical interpretation which have been well established since the time of Augustine and the early Church Fathers.

So from the early beginnings of the church up to the work of present day theologians, religious thinkers have explicitly condemned a literalist-Fundamentalist use of Scripture, and evidently believed that reason and revelation could and should be integrated, using the highest available level of scientific knowledge and philosophical sophistication. They had a kind of faith in which religious beliefs or interpretations of scripture which violate reason or which are contradicted by science must be rejected; this leaves certain classes of beliefs which are not reducible to pseudoscience. These beliefs evidently provided some other, extrascientific rather than pseudoscientific, value to these historical believers. Note that Origen, Augustine, Saadia Gaon, Galileo and Calvin rejected a literal, pseudoscientific reading of the Genesis stories long before and hence completely independently of the current evolution-versus-creationism debates. Of course these writers didn't perfectly anticipate everything modern science has discovered about the world and the universe, but their work proves that claims of theism being irrevocably linked to creationism or an anti-scientific attitude are utterly untrue.

So as a historical fact, religion and science are compatible. The following sections are aimed at explaining why.

# The Religious Question

The unifying question underlying naturalism, atheism, agnosticism, theism and other religious and metaphysical stances is this:

## What lies behind the empirically observable universe?

"Lies behind" has two senses here: "what else exists?" and "on what does it depend?" Note that "the [empirically](#) observable universe" includes cosmological and evolutionary processes; it includes all possible empirical information, the best possible scientific models based on objective observation and logical inference. The question remains; the more scientific knowledge, the more the question is *about*. It won't - and shouldn't - go away and there's no trivially obvious "one true rational" response. Note also that "metaphysical" doesn't refer to some kind of "supernatural physics" but to questions beyond the scientific; for instance whether such questions exist, which immediately answers itself. Heidegger's fundamental question of metaphysics was "why are there beings at all instead of nothing" for instance, and regardless of what his beliefs about the answer turned out to be, he did clearly raise the question of what Being *an sich* is, as a separate kind of question from what the characteristics of or laws governing beings are.

The question arises very naturally: we look, see, and wonder: could there be things we aren't seeing? Do things exist we don't or even can't see? Could they be important nevertheless? We've evolved to have the ability to ask such questions, to want to ask such questions, and to potentially benefit from asking such questions. Note that our evolved cognitive capacities have let us understand far more about reality than the local natural environment that selected them. In the words of J. D. Barrow,

There are some who say that just because we use our minds to appreciate the order and complexity of the Universe around us that there is nothing more to that order than what is imposed by the human mind. That is a serious misjudgement. Were it true then we would expect to find our greatest and most reliable understanding of the world in the everyday events for which millions of years of natural selection have sharpened our wits and prepared our senses. And when we look towards the outer space of galaxies and black holes, or into the inner space of quarks and electrons, we should expect to find few resonances between our minds and the ways of these worlds. Natural selection requires no understanding of quarks and black holes for our survival and multiplication. And yet, we find these expectations turned upon their heads. The most precise and reliable knowledge we have about anything in the Universe is of events in a binary star system more than 3000 light years from our planet and in the sub-atomic world of electrons and light rays, where it is accurate to better than nine decimal places.

So the fact that we can speculatively trace the capacity to ask the question to things like tigers hiding in the jungle doesn't logically imply that extending the use of that capacity is necessarily nothing but a malfunction. We do, however, have to find appropriate ways to critically evaluate our answers to the question.

It may be worth noting that scientists do not uniformly consider any answer other than "nothing", or any response beyond "the question is nonsense", to be opposed to science. Please note that these quotes of course don't imply any specific kind of religiosity; the point is to show *that* and some examples of *how* the religious question can be seriously posed by individuals who are well acquainted with science and pose the question in the context of that knowledge.

1. Gottfried Leibniz, Memoir for Enlightened Persons of Good Intention (1690), [Discourse on Metaphysics](#) (1686) and Dialogue (1677).

As for me, I put forward the great principle of metaphysics as well as of morality, that the world is governed by the most perfect intelligence which is possible, which means that one must consider it as a universal monarchy whose head is all-powerful and sovereignly wise,

and whose subjects are all minds, that is, substances capable of relations or society with God; and that all the rest is only the instrument of the glory of God and of the felicity of minds, and that as a result the entire universe is made for minds.

...

Now it is clear, first of all, that the created substances depend on God, who preserves them and indeed even produces them continually by a kind of emanation, as we produce our thoughts.

...

When God calculates and thinks things through, the world is made.

2. Albert Einstein, [On Science and Religion](#) (1940), letter to Maurice Solovine (1952), cablegram reply to Rabbi Herbert Goldstein (referenced in [Schilpp](#) (1988); credit for finding the reference to [Arnold V. Lesikar](#)).

I am not a positivist. Positivism states that what cannot be observed does not exist. This conception is scientifically indefensible, for it is impossible to make valid affirmations of what people 'can' or 'cannot' observe. One would have to say 'only what we observe exists,' which is obviously false.

...

You find it strange that I consider the comprehensibility of the world (to the extent that we are authorized to speak of such a comprehensibility) as a miracle or an eternal mystery. Well a priori one should expect a chaotic world which cannot be grasped by the mind in anyway. One could (yes one should) expect the world to be subjected to law only to the extent that we order it through our intelligence. Ordering of this kind would be like the alphabetical ordering of the words of a language. By contrast, the kind of order created by Newton's theory of gravitation, for instance, is wholly different. Even if the axioms of the theory are proposed by man, the success of such a project presupposes a high degree of ordering of the objective world, and this could not be expected a priori. That is the "miracle" which is being constantly re-enforced as our knowledge expands.

...

I believe in Spinoza's God who reveals himself in the orderly harmony of what exists, not in a God who concerns himself with the fates and actions of human beings.

3. Stephen Hawking, [A Brief History of Time](#) (1990). Note how Leibniz' or St. John of Damascus' concept of an "emanating" rather than "setting-up" Creator could be a potential answer to his question about a place for a creator even in a universe without beginning or end.

So long as the universe had a beginning, we could suppose it had a creator. But if the universe is really completely self-contained, having no boundaries or edge, it would have neither beginning nor end: it would simply be. What place, then, for a creator?

...

Even if there is only one possible unified theory, it is just a set of rules and equations. What is it that breathes fire into the equations and makes a universe for them to describe?... Why does the universe go to all the bother of existing? Is the unified theory so compelling that it brings about its own existence? Or does it need a creator, and, if so, does he have any other effect on the universe? And who created him?

4. [John D. Barrow](#):

We see now how it is possible for a Universe that displays unending complexity and exquisite structure to be governed by a few simple laws - perhaps just one law - that are symmetrical and intelligible, laws which govern the most remarkable things in our Universe

- populations of elementary "particles" that are everywhere perfectly identical. It is to this simple and beautiful world behind the appearances, where the lawfulness of Nature is most elegantly and completely revealed, that physicists look to find the hallmark of the Universe. Everyone else looks at the outcomes of these laws. The outcomes are often complicated, hard to understand, and of great significance - they even include ourselves - but the true simplicity and symmetry of the Universe is to be found in the things that are not seen. Most remarkable of all, we find that there are mathematical equations, little squiggles on pieces of paper, that tell us how whole Universes behave. For there is a logic larger than Universes that is the more surprising because we can understand a meaningful part of it and thereby share in its appreciation.

5. [Ken Miller, Finding Darwin's God](#) (2000).

Each of the great Western monotheistic traditions sees God as truth, love, and knowledge. This should mean that each and every increase in our understanding of the natural world is a step toward God and not, as many people assume, a step away. If faith and reason are both gifts from God, then they should play complementary, not conflicting, roles in our struggle to understand the world around us. As a scientist and as a Christian, that is exactly what I believe. True knowledge comes only from a combination of faith and reason.

As more than one scientist has said, the truly remarkable thing about the world is that it actually does make sense. The parts fit, the molecules interact, the darn thing works. To people of faith, what evolution says is that nature is complete. Their God fashioned a material world in which truly free and independent beings could evolve. He got it right the very first time.

6. [Martin Rees](#):

Let me say that I don't see any conflict between science and religion. I go to church as many other scientists do. I share with most religious people a sense of mystery and wonder at the universe and I want to participate in religious ritual and practices because they're something that all humans can share.

To understand the question and find a rational and meaningful response to it, it's necessary to have a realistic understanding of both science and religion. The following sections attempt to provide some foundations for that.

## Science

Science can be described as a system of generating reliable beliefs, with at its core a *method* of evaluating claims. The method is usually described in terms of falsification: for any scientific claim, independent critics must attempt to demonstrate that it is false, and it must be possible to do so if it is false. In the scientific context, falsifying evidence must ultimately be based on objective and replicable observations or experiments. Falsified claims are either replaced or adapted to deal with the criticism, and so progress is made: claims become able to withstand more and more criticism. The method leads to and defines a body of results - the scientific literature - and is applied by a group of professionals in a social setting - the scientific community. However, science is *not* an ideology or a total world view. No matter how focussed a world view like ideological naturalism is on science, it itself is not scientific: it does not apply the scientific method, in particular not to itself as a whole (note that many elements associated with naturalism - e.g. that science is extremely useful and important - can be tested, but such claims are not at all unique to naturalism). A fortiori, such a worldview is not only not scientific - it's simply not a characteristic of worldviews in general - but either inconsistent or unjustified by its own principles.

Science applies to that [part](#) of reality about which scientifically falsifiable claims can be made, i.e. empirical reality. Recall that the religious question is: what else is there? The scientific method makes no claim about empirical reality being *all* of reality. Nothing about the fact that science

exists, or any logical implications of the rules developed to do it, or the fact that the rules work well in their context implies that unfalsifiable claims are untrue: they are simply outside science. The scientific method cannot be applied to them. All this means is that we need to involve other grounds for justification and criticism - or simply give up. Either way, science itself remains neutral.

The prime example of a phenomenon that is inherently outside the limits of empirical science is the purely subjective component of experience, or qualia. No matter how well we understand the brain and neural information processing - all the correlates of consciousness - we cannot *objectively* measure *subjective* experience: there is a perfect symmetry involved that renders it invisible to science. If my "red" is your "green", and the change is totally consistent, we could never know using objective measurements. Yet the subjectivity of our consciousness does exist, and is maybe the most important factor in our lives. This is perhaps remarkable.

However, [biological evolution absolutely is within the scientific part of reality](#). Claims about evolution can be tested, and these tests can be repeated independently to improve the model of reality the claims provide. Note that it is the *tests* that need to be replicable - as this is a subset of demonstrability - not necessarily the phenomenon about which the claims are made itself.

What science doesn't do, or aim to do, is provide a meaning for empirical reality as a whole, personal guidance or ways to interact with anything not within empirical reality.

An essential point where science and religion may partially touch is the rising hierarchy of explanations that science tends to follow. For instance, psychology is explained by biology; biology is explained by basic physics; basic physics is explained by theoretical physics. The explanations do not become more and more complex, but by contrast, more and more abstract, symmetrical and elegant. Such an Ultimate Principle (UP) is conceptually close to the non-physical, transcendent God of real-life theism (as opposed to some anthropomorphic Straw Man "magical engineer" style designer). There would still be a non-scientific step from inferring such an UP and finding it to be scientifically satisfying, to finding it spiritually satisfying - would or could you worship it? could it somehow be associated with feelings of love and beauty? could it be considered as "the Word which was in the beginning and from which all things come"? could one say that any person or state exhibits the UP more "purely" than anything else in the universe? Nevertheless, a non-anthropomorphic theism seems a quite natural point to which the scientific process alone might lead. This still, of course, is an approach which assumes that metaphysical beliefs must be restricted to the (speculative) reach of science.

## Religion

**"Doubt is part of all religion. All the religious thinkers were doubters." -Isaac Singer**

1. There are (at least) two distinct kinds of religion: "tribal-dogmatic" and "experiential-transformative" religion, and what is true for one style may have no implications for the other. The tribal style treats God as a *thing in the universe*, with definite characteristics and causal relationships with other objects in the universe. The experiential style treats God as the power behind a transformative experience, considered to be [unexpressable](#) at least to a very large extent, and to transcend physical reality. The experiential God is believed to act "from within" in some way: e.g. through the fabric of our reality (cf. Abbott's [Flatland](#)) rather than as an element within it, or indirectly through His creation.

The two types of religion are described for example by Martin Buber in *I and Thou* as follows.

The eternal *Thou* can by its nature not become *It*; for by its nature it cannot be established in measure and bounds, not even in the measure of the immeasurable, or the bounds of boundless being; for by its nature it cannot be understood as a sum of quantities, not even as an infinite sum of quantities raised to a transcendental level; for it can be found neither in nor out of the world; for it cannot be experienced, or thought; for we miss Him, Him who is, if we say "I believe, that He is" - "He" is also a metaphor, but "Thou" is not.

...

Man desires to possess God; he desires a continuity in space and time of possession of God. He is not content with the inexpressible confirmation of meaning, but wants to see this confirmation stretched out as something that can be continually taken up and handled, a continuum unbroken in space and time that insures his life at every point and every moment. [...] Thus God becomes an object of faith. At first faith, set in time, completes the acts of relation; but gradually it replaces them. Resting in belief in an *It* takes the place of the continually renewed movement of the being towards concentration and going out to the relation. The "Nevertheless I believe" of the fighter who knows remoteness from as well as nearness to God is more and more completely transformed into the certainty of him who enjoys profits, that nothing can happen to him, since he believes there is One who will not let anything happen to him.

2. Nothing in mainstream theology obligates Christians to treat [creation myths](#) as literal truths about physical reality: this was [never their intention](#). To insist that Christians "must" believe certain things that have no justification is a form of either a Straw Man fallacy or hypocrisy: a fake exaggeration of the kind of religious faith Christ taught.
3. [Faith](#) does not only mean "belief without proof": this would be such an absurd, empty foundation for religious beliefs that the continued and widespread existence of religion and the deep impact it has on believers contradict that. "To have faith" may also refer to an engagement with the transformative process, a decision to follow its guidance, loyalty to what is perceived as the Will behind it, or convictions that may well involve some form of personal, subjectively accessible proof or evidence.
4. Russell's teapot, the Flying Spaghetti Monster, invisible pink unicorns and so on provide thought experiments that show that the lack of disproof of something isn't proof it exists; this is a perfectly valid logical point. However,
  1. they are not associated with the cross-cultural transformative experience of religion,
  2. they are presented as objects in the universe, and
  3. they are by design characterized by specific absurd or contradictory combinations of characteristics,so belief in such things is not necessarily a realistic analogy of faith in God. To claim so begs the question of falsifiability being the only justification for belief. Note that what really makes these imaginary objects absurd is always something other than simply being non-empirical.
5. A possibly useful analogy for how the experiential God exists is [the way logical or mathematical truths exist](#): they do not exist as physical objects; they are true independent of location; nothing in the physical universe can violate them; they cannot die or decay; they are discovered using the mind, and considered to have inherent beauty and value. Yet nobody considers all this delusional or dismisses them as wishful thinking.
6. Religion is not aimed at explaining processes or predicting events in the empirical world. It provides different kinds of benefits: it adds a unique kind of meaning to the observable universe; it changes how people live their lives; it opens up a broader perception of reality; it cultivates ideals and motivations that would not arise from exclusively within-science considerations; it provides hints of something truly worth worshipping and adapting to.

# Doubting the "versus"

Religion is concerned with something other than the scientific explanation of the empirical universe. So religion is not scientific, but neither is it necessarily anti-science: surely we can relate to reality in more than one way? This is expressed, for example, in Gould's well-known non-overlapping magisteria approach, or NOMA. Attempts at criticism of NOMA are aimed mostly at demanding to know the precise limits of the domains, which of course is a very weak counterargument: perhaps the domains should be defined by family resemblance, perhaps the line may be blurred, and perhaps the characteristic of empirical falsification provides sufficient delineation. These are details to be worked out, and perhaps to let evolve over time, not fatal flaws of the approach. A more fundamental criticism of NOMA is that the relationship between science and religion, depending on what kind of religion we're talking about, can be far more interesting than separation. From a metaphysical perspective, the scientific world is conceptually permeated by, grounded in and dependent on a deeper divine reality; from the relational perspective of e.g. Martin Buber, the doing of science has the potential to be a recreation of the I-Thou meeting in a certain aspect of daily life.

However, if a claim is made about the scientific part of reality, it should of course be supported by purely scientific evidence. Such claims include physical effects of prayer, the emergence of biological life, predictive powers of astrology or the beneficial effects of free markets.

A scientific opinion of religion would involve [unbiased scholarly research](#) and a serious attempt to understand the nature of religion as a psychological and cultural phenomenon. For instance, suicide bombings are associated with communal rather than personal aspects of religious faith (Ginges and Hansen, 2009). Cognitive research of religion also needs to be evaluated more logically than is sometimes the case. The neuroscience of religious experiences reveals the *mechanisms* by which we can have such experiences, and how these experiences can be understood in neurocognitive terms. The fact that our brain allows these experiences does not mean these experiences say nothing about reality. For instance, if we see a dog, this will be reflected in brain activity; this obviously doesn't mean the dog doesn't exist.

## Reason and revelation

Science tells us about the empirically observable universe. That's extremely important, and needs to be fully understood as a prerequisite to any further understanding. Nevertheless, science is silent about whatever lies beyond that part of reality that lends itself to scientific study. Why shouldn't we wonder what's going on beyond those limits? How could one claim to be intellectually honest and deny that an "Other", a reality beyond science, could exist, if [nothing about science logically implies anything about that](#)? How could one claim to be intellectually curious and still accept arbitrary boundaries to rational thought? Why should we assume nothing can be important if we cannot capture it in science, no matter how many important things science *does* cover?

In a sense, scientific research is a way of talking to reality. We "ask" an experiment, and reality "answers" data (essentially: it answers independent observers the same way). Simple perception is an example of a non-scientific kind of communication: empirical reality talks to us via our perceptual systems. Philosophical reflection lets us probe the logical relations and possibilities of reality, using intellectual tools to build on existing scientific knowledge. Religions, of course, accept a special kind of communication: revelation. If non-empirical reality exists, it by definition has to talk to us via a route "around" science. As argued above, the existence and success of science don't imply that such communication cannot exist. It only means we have a difficult, or at least a different, job: we don't have objective demonstrability to help us evaluate revelations in a scientific sense.

So are we necessarily flying blind if we dare to leave the boundaries of science? Are we condemned to fallacies and charlatans? Of course not. Scientific research isn't the only rational human activity or intellectual context, as mathematics, philosophy (e.g. philosophy of science) and hopefully normal daily life show. For thousands of years, reason has been applied to find ways to evaluate and interpret what might be revelation. For instance, the 10th century Jewish philosopher Saadia Gaon - who of course knew nothing of evolution or the age of the Earth and indeed accepted that creation was an event only a few thousand years past, but *nevertheless (!)* rejected a literal reading of the creation stories - formulated seven criteria for evaluating claims, and stated these must also be applied to Scripture.

"So, then, if we seek to establish the truth in the domain of knowledge obtained by logical inference, we must guard it against the above-mentioned five types of vitiating factors. We must, namely, make certain (a) that there is no other means than the theory in question of sustaining the truth of what is perceived with the senses, not (b) any other method of upholding what is intuitively apprehended by reason. Furthermore (c) it must not invalidate any other accepted fact, nor (d) must one part of it contradict another, let alone (e) that a theory be adopted that is worse than the one rejected.

All the precautions are to be taken in addition to exercising, in the determination of the sense percepts and the rational concepts, such expert care as we have outlined before. Add to these the quality of perseverance until the process of reasoning has been completed, and we have a total of seven points that must be observed to make possible for us the accurate emergence of the truth. Should, therefore, someone come to us with an allegation in the realm of inferential knowledge, we would test his thesis by means of these seven criteria. If, upon being rubbed by their touchstone and weighed by their balance, it turns out to be correct as well as acceptable, we shall make use of it. Similarly also must we proceed with the subject matters of authentic tradition - I mean the books of prophecy."

We might or might not agree with Saadia Gaon's specific approach or assumptions - we have the benefit of ten centuries of development after all - but the point is this: religious thinkers have always been aware of the difficulties of beliefs about the non-empirical world. There have always been those who applied reason to religion. They attempted to construct rational models of full reality - the physical and the non-physical - in the face of uncertainty, but not total uncertainty. At the very least, we know that reality is such that it allows things like life, [choice](#) and religious experience to exist. So we have clues we can use to build [models](#) of the full reality, which can be tested in their own way, against things like coherence, elegance, our own responses to the models and consistence with our - maybe subjective - experiences.

The religious method underlying this process is no more or less iterative than the scientific method. Religious beliefs influence interpretations of experience and Scripture, but also influence one's behaviour, cognition, emotion; one's point of view in the broadest sense. These effects, the experience of what it means to have faith, are interpreted as best possible within the current belief system and used to modify it. In other words, religious beliefs are also modified iteratively: they are "belief acts" based on the current set of beliefs, to be critically evaluated and adjusted in a search for convergence. In Marrett's terms, religion has to be danced to be understood. The question is what your religion, as you dance it, shows you and does to you - in particular in terms of the next step of the dance. In more traditional terms, arguably the central belief of Christianity is the existence of a Kingdom of God: a spiritual state defined by a synchronization with the Word of God. This state is described extensively but metaphorically in the Gospels. The religious method is the experience and the matching of, or the reduction in deviations from, that state. Note that this process involves nothing supernatural in a science-violating sense: the process simply uses a broader range of modalities and sources of evidence than permissible, or necessary, in science. In consequence, non-Fundamentalist religious understanding knows that it always reflects uncertainty, subjectivity and limitation, while still keeping open the possibility that an objective limit exists. Nevertheless, the claims of Fundamentalism to objectively know absolute metaphysical truth have

no justification whatsoever from the point of view of this kind of religion.

So non-Fundamentalist theistic belief is driven by subjective *reasons* to believe, together with objective tests that the content of beliefs do not violate science or reason. There is thus no slippery slope from theistic belief that *interprets* scientific knowledge to superstition that *violates* scientific knowledge. This is an essential and testable distinction.

In conclusion, science is a tool we use, subjected to our will and our goals. Why limit ourselves to one tool in dealing with reality? Why act as if all such dealings can or should be reduced to scientific research? Why not be subjectively experimental and see what happens when we attempt to be receptive to the Other? What if there's something there, waiting to be found using a different set of tools? What if religion - done correctly - could be a valuable, maybe unique "tool for living", to be used *in the full understanding of uncertainty*? Could considering [the religious question](#) be of use simply as a reminder of the potential of deeper realities, a warning away from hubris?

These are all, in a way, choices; paths you can either take or not. None of them requires one to lose what science offers. Science doesn't require one to lose what these choices offer.

## Theism

**To believe "God exists" means to believe that what the existence of empirical reality itself depends on is that which is experienced in specific subjective experiences**

The arguments and presentation of non-Fundamentalist theism so far have hopefully cleared the ground for seriously considering theistic answers to the religious question. Such answers, made explicit, always take the form of models of reality.

### Conceptual basics: models and uncertainty

First, it's worth considering what models are; this is also helpful in evaluating claims about what probability can be assigned to propositions. This is a basic epistemological question, not specific to religious models. Quantitative models specify a set of mathematical relationships with a finite number of parameters, while reality is considered to have infinite parameters, or at least far more than any useful model. The numerical values of such models are mapped to reality: the distance between objects might be described, or the speed with which something falls, and so on. Every such model is an approximation that "fits the data", or more generally "explains the evidence".

Qualitative models are a little harder to define: other relationships than (explicitly) mathematical ones are involved, and no numerical values are produced. Such models might involve, for instance, expectations in social settings: you expect someone to respond to something you say in a certain way; you might relate that response to an empathic sequence of cognitive, emotional and motivational steps. If the response you get is unexpected, you'd change some aspects of the model - maybe the person has a different motivation after all - until the responses become predictable.

Metaphysical models might be compared based on logical and conceptual relationships, or more subjectively on satisfaction and elegance, producing ranked world views. Religious models might produce subjective experience and subjectively evaluated states as predictions, together with metaphysical aspects. Engaging in religious modelling would be the "danced out" religion of Marett: one evaluates the dance. But the characteristic of fitting the evidence remains in all cases; the nature of the evidence just changes.

It's important to note a few things. First, it's possible for a set of models to fit the data just as well as each other. This can be very informative despite there not being one single clear top-model. The result tells you what *classes* of models do and don't work. Second, the evaluation of models

depends on what evidence you use. If you refuse to use a certain source of evidence for a model, or are ignorant of evidence, or only select evidence that already fits a certain model, the outcome of your evaluation will reflect a bias. Finally, to seriously determine the likelihood of different models, you need reliable information about relevant probability distributions. Assigning probabilities requires as much empirical justification as outright yes - no decisions.

In other words: models always exist relative to a background of uncertainty. Uncertainty isn't a bad thing, it's the nature of what models are: you pay the cost of approximation, but gain elegance, reliability and usefulness.

The likelihood of a model given the data is logically related to two component likelihoods. Formally, this uses Bayes' theorem: for every possible model in a set under consideration, the likelihood is a function of the prior probability and the probability of the evidence given that model. The prior probability is the likelihood you assign to the model in the absence of evidence. As evidence accumulates, the prior probability you assigned to the model becomes less and less important, but note that if you consider the prior probability *zero* then you're saying that no evidence will ever matter: the likelihood will always remain zero.

So the closer you set the prior to zero, the more evidence you demand for a model. In the religious context, demanding empirical evidence for a God that is not predicted to provide such evidence is effectively setting the prior to zero. Note also that making justified statements about the probability of God existing requires probability distributions. What's your prior? How did you relate the evidence to the likelihood, what assumptions were involved there (e.g., did you simply assume with no evidence that principles that explain biological life forms must apply to a God that by construction is totally different)? Were you selective in which evidence you used? Are you really testing the model you're claiming to test?

The problem of statistical power is closely related to critically relating presented evidence to adjustments of a model's likelihood. The lack of finding evidence for a hypothesis can always reflect two possibilities: the hypothesis was false, and the test correctly reflected that, or the hypothesis is true, but the test failed to detect it. The question again is: what does your evidence really say about the likelihood of the model? In science, the problem is typically quantitative: how much has been invested in gathering independent observations? With enough data, the statistical power will become sufficient for the necessary inferences for guiding theory and research. In religious questions, the problem is more likely to be qualitative: is the kind of evidence you're looking at really telling you anything about the question at hand?

## **Implicit definitions of God**

So if a model is to contain God, what do we mean by the term "God"? Do we need to have a precise, concrete definition? Well, compare a primitive model of disease, in which the existence of viruses and bacteria are yet unknown, but certain effects of those unknown causes can already be taken advantage of. "Disease" is then defined abstractly as "that which makes us sick and spreads via close contact or bodily fluids." Or a driver could model the mechanisms of his or her car as "whatever makes it work so that it goes faster when I press the accelerator," and the essential component of the model would be to recognize when things stop working and the car should be taken to a garage. These are "such that" or "that which" definitions, which I call abstract definitions. You have something observed, and you define something as that which caused it; or that which is such that the experience was what it was. Once you have that implicit target, you can try to learn more about it, but even knowing nothing about what the cause is doesn't prevent you from inferring it exists from what it does. Questions tend to become "what is it?", rather than "does it exist?"

An example of an implicit definition of a theist God is:

1. that on which the existence of objective, empirical reality ultimately depends
  - such that it is the reason for our universe being physically lawful, mathematically

- describable, having such organizational properties that life arises, and containing the phenomenon of consciousness;
  - such that it transcends the empirical universe; that is, such that it is expressed by, but not identifiable with, the essence of Nature;
2. that which is felt (perhaps indirectly) as a loving Presence during subjective religious experiences
    - such that it explains the personal transformations and subjective states associated with certain religious beliefs or experiences.

"God exists" means that these components refer to or describe the same thing, which we label "God". Note the two sides to this definition of God: first an objective [Ultimate Principle](#) underlying lawfulness and consciousness; and second the subjective, personal side that makes faith in such a God meaningful.

The components of the implicit definition pose interesting questions separately, but parsimony comes into play especially in their combination. For instance, subjective religious experience involve feeling a Presence: but what is it that is felt? Is there something more than random firings of temporal lobe neurons? Obviously such neurons must fire, since our brains work that way, but do we know what it means? What's the most elegant model? Can we collapse the question of what we felt with the question of why reality is such that we can feel at all? Are there relationships between transformation and experience that can be explained because of how reality is ordered?

The theistic argument is that the best model is that the cause of the empirical universe allowing religious experiences is also what those experiences are ultimately of; that the fact that the experiences result via empirical neurocognitive relationships with a certain kind of changing behaviour fits with how the Presence is experienced; that the transformation itself is a way in which the cause continues to affect empirical reality. That is, the argument is that there is a parsimonious model in which all the components refer to one thing.

For this to be the case, the relationship between the elements shouldn't be arbitrary. Well, isn't the experience that believers assign to God - the experience described in terms of pure love and beauty, ultimate meaning, and so on - precisely the way you'd expect us to respond to the Ground of Being, or at least a limited reflection of it? When we recognize, say, the beauty of a mathematical truth or the elegance and awesomeness of the universe, we feel a certain kind of emotion. The religious experience and the theistic Creator would be a logical progression from such analogous experience - experienced pairs.

### **Crayoning the sketch: elegance versus complexity**

So we have an implicit definition that allows us to think and argue about God. People might then attempt to ascribe explicit characteristics to God such that they fit with their subjective experience, the effects on their life or the question of creation. Misunderstandings can arise because these speculations don't seek to prove God, they seek to "color in the sketch" of an implicit definition. That is, arguments are reversed: the consequences must be such that the definition is satisfied, rather than premises being given so that unknown conclusions can be drawn.

Notoriously, concrete characteristics such as omnipotence and goodness are invoked as definitional, leading for instance to the problem of evil, which will be dealt with below. Such concrete claims about God are very likely to be wrong, and arguably can never add anything reliable to the implicit definition.

With that caveat, we can consider some characteristics if only to determine whether there are problems with the model. For instance, one claim is that "God" is *too complex* an entity to explain existence: something had to precede any kind of complex Intelligent Designer that allowed it to evolve. This makes three implicit assumptions.

1. The first assumption is that the theistic Creator is well-described as any kind of "Designer", with its suggestion of, for instance, human-like cognitive processes. That's just as much a Straw God as the man-in-the-sky-with-a-beard: if the theistic Creator does exist, it's almost certain that it won't think, plan, design and so on in the way we do.
2. The second assumption is that since the ultimate reason for being must be elegant it cannot be "God-like". But God is defined only as, first, the ultimate cause of being, and second as that which is reflected by transcendent religious experience. Why wouldn't something best approximated in objective terms as a supremely elegant principle by which reality unfolds be associated with the experience of beauty, awe, worship and so on by which we define their perceived common object - God?

Note that we can argue from analogy here: we experience beauty and awe in e.g. the context of mathematics and cosmology, which do not contain emotions like awe themselves; so even if God is non-anthropomorphic and above emotions Himself, the human response to God could consistently and meaningfully involve similar experiences and emotional translations. We just need to remember that we're unavoidably experiencing God from a human perspective, and not the "pure" God.

3. The final assumption is that principles of biology apply to God. That is, the assumption is that because complex organisms must evolve from simpler ancestors, that must also be true for a complex God - despite God not being a biological organism. If this were valid, "God" would be dependent on whatever rules guide that process, and hence not the theistic God at all. In the above point I argue that God doesn't have to be complex to deserve the label "God" in the first place, but there is a further point to be made.

In Christian theology, humans never experience God directly: both Christ and the Spirit, and arguably the Father, provide the "persona" or expressions of God that render Him relevant to us. If God in a sense implies e.g. a Christ persona, the simplicity of God could be instantly translated into such a more complex expression of divinity; similar to how a set of mathematical axioms can generate an infinite "universe" of theorems.

Another argument is that of infinite backwards causality: what good is a Creator as an explanation, since then we have to explain the Creator? The counterargument here is two-fold. First, the theistic model gets its parsimony from being a common explanation to multiple objective and subjective "data points": it's not only an explanation for the universe. Second, to end an infinite regression, we need to break out of the causality of the empirical universe: we need any First Cause to be transcendent in some way, to no longer follow the rules of the physical universe. That is, we already knew we need something that doesn't need a cause in the way physical phenomena do. Since a transcendent God fulfills that requirement, the First Cause problem supports rather than contradicts a theistic model.

### **The problem of evil: cybernetics, infinity and mercy**

The subjective experience of a loving God, and, once assumed, the power to create the universe can be contrasted with the suffering we can observe in the world. Why would a powerful, loving God allow suffering?

There are many responses to the question, and the question itself hides two forms, an emotional and an intellectual demand, which need to be exposed. To the emotional demand, the answer is simply the comfort and hope of belief; this is a psychological, not a philosophical answer. The intellectual demand is met by the response: is it so unthinkable that allowing suffering is necessary? Do we really not have empirical examples of that? At this point, disingenuous questioners will shift to the emotional form.

But we can think more about the "why?" The free will defense I consider obsolete since Wiener's Cybernetics. There is no conflict between human goal-directed behaviour - i.e. choice - and

deterministic processes. Control systems exist *by virtue of* causal processes! It doesn't take away their emergent property of control, or ability to work towards an equilibrium, endogenous behaviour, or, in other words, choice; and that doesn't take away the determinism of the component processes. So this is simply the Free Will versus causality fallacy: there is no "versus". Free Will is built by causality.

There are however two concepts that do possibly provide us with some more comprehension of the relationship of evil and suffering to God: infinity and mercy. First - and this is obviously purely an answer to the intellectual form of the question of evil - if God is infinite, and if the Christian belief in an everlasting life beyond death is assumed, all temporary suffering, no matter how bad, will become infinitely trivial when viewed relative to infinity. Future convergence is infinitely more important in terms of a Divine perspective. The importance of evil is a matter of our limited perception. For us, as mortal, evolved, altruistic creatures, suffering and evil are terrible, but it's somewhat confused to take that mortal perspective and apply it to questions in which the infinite perspective is relevant. In daily life, suffering is not a theological question and must be met with compassion. The infinity response in an emotional context is only the provision of hope.

Related to that is the mercy concept. Imagine, slightly anthropomorphically, a God who would not tolerate suffering hovering above a multiverse. That God would instantly prune every universe with suffering: we wouldn't even have had the chance to suffer. The cost is that we wouldn't exist at all. The mercy answer to the problem of suffering is that God allows a suffering universe to exist precisely because He loves us. It's an act of mercy we aren't snuffed out to remove the evil and suffering in which we're bound up. Less anthropomorphically, we could infer that Creation - not the creationist "artificer" creation, but the theist metaphysical creation - by the uncaused, eternal, self-sufficient, necessary God *couldn't happen any other way*. It was Big Bang + evolution, or nothing. In either case, the theistic answer to the problem of evil is that whether our creation is justified will be determined by where it ends, not where it is.

This leads to the relationship between God and goodness. Our intuitive as well as scientific understanding of goodness leads us to a kind of social symmetry, or a game theoretical kernel: if we treat each other as equals, we should be able to find a set of behavioural rules that lead to a fair balance. And because the balance is fair, it will tend to be stable: if one player acts unfairly, the other players will acquire a motivation to collaborate against him. If, as above, we consider where creation is headed, it will have to be towards such a stable state: unstable states will eventually fall and be replaced, until a supremely stable social state is achieved. This must be balanced, must involve mutual respect: players will "love their neighbour as themselves". If we judge the Creator by the end-point of His creation, this end-state is what matters: and it's what we'd already intuitively call "good". Therefore, God is good is a true proposition, and doesn't suffer from the classical circularity argument. Note that it's an understanding of evolutionary processes that allows that.

## Conclusions

### Dealing with false assumptions

In summary:

1. Theism is a *metaphysical interpretation* rather than a *pseudoscientific violation* of science. As science progresses, there's simply more to interpret. There is no "God of the gaps" if you conceive of God as that which is expressed by the essence of Nature, or that which is its ultimate reason. Note that this conception doesn't necessarily imply a "cold" or only abstract God: the essence may be believed to be inherently related to love for example, as in Christianity.
2. Religion is not inherently dogmatic; uncertainty is at the core of theology. Significant

traditional strands of theology do not define God in terms of concrete attributes, but as an abstract, for instance as whatever the answer is to the question "what is the ultimate reason for Being". Simplistic definitions of God do exist of course, but note the variation even in [dictionary definitions](#).

3. Biblical literalism and a belief in absolute Biblical inerrancy are not normal theological approaches to the Bible. Again, Fundamentalist Biblicism does exist, but the mainstream assumption is that Scripture is *not* literally God's Word, but contains, among a huge variety of texts, inspired human narratives about the relationship between God and mankind. Christians believe that Scripture as a whole can be used to bring us closer to God, but it must be read in its historical context and in, as C. S. Lewis wrote, "the right spirit".

Note that this implies that the Bible should never be used as some sort of absolute, objective authority: it's a spiritual tool, and therefore - see below - essentially bound up with subjectivity.

4. Reason plays an essential role in religion. The motivation to have faith is subjective, and spiritual states experienced via the religious process can, except for behavioural components, only be subjectively evaluated. However, this motivation and evaluation can be assessed rationally. Even if no objective proof for beliefs can be given, beliefs can be critically evaluated to determine whether they *violate* science or reason.

This protective role of objective arguments in religion is sufficient to reject at least the unsupported assertion that there's a slippery slope from theism to any arbitrary unscientific belief. If a belief violates science or reason, e.g. if a supernatural cause is posited for a natural phenomenon, nothing about theism prevents it from being rejected. The role of subjectivity in religious belief is solely to go from "it does not violate science or reason" to "it has personal, subjective meaning for me".

5. A lot of misunderstanding in "science versus religion" debates seems to be due to conflating the ability to produce objective proof with *any* form of relationship that could be had at all. God can't be analyzed, but that doesn't mean He can't reveal Himself in some other way. Christians believe that that revelation occurs via spiritual states, providing indirect, subjective experiences to be explored and interpreted in metaphysical terms - we ask the question, why is reality such that it contains this experience? - rather than objective proofs to be presented.

Again, this doesn't imply that we can't rationally and objectively analyze beliefs about the structure of reality that are relevant to what we believe about God. It means that if you want to properly list the possibilities of what one could believe about God, it's essential to separate the conflated "God exists but cannot be discovered *in any way*" into "God exists, but He cannot be demonstrated objectively" and "God exists, and can be experienced subjectively". These two propositions are logically independent. Christianity requires belief in the second, but not necessarily the first proposition. Further, even in separated form, the propositions are simplistic. Perhaps convincing inferences can be drawn, but the question of assumptions will always to a certain extent prevent complete claims of objective truth. Perhaps we shouldn't suggest God can be experienced directly, but only indirectly, e.g. through the Logos central to Christianity. And so on. In any case, as argued above, beliefs developed partly from subjective experience are necessarily subjective but can still be rationally evaluated and thereby distinguished from superstition or delusion.

My aim has been to give a realistic presentation of [theism](#) as such, as contrasted with Fundamentalism. I hope to have at least convinced you that it's worth being critical of claims and assumptions about theism and religion, whoever makes them.