

APPENDIX: 36 ARGUMENTS FOR THE EXISTENCE OF GOD

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1. The Cosmological Argument

1. Everything that exists must have a cause.
2. The universe must have a cause (from 1).
3. Nothing can be the cause of itself.
4. The universe cannot be the cause of itself (from 3).
5. Something outside the universe must have caused the universe (from 2 and 4).
6. God is the only thing that is outside of the universe.
7. God caused the universe (from 5 and 6).
8. God exists.

FLAW I CAN BE CRUDELY PUT: Who caused God? The Cosmological Argument is a prime example of the Fallacy of Passing the Buck: invoking God to solve some problem, but then leaving unanswered that very same problem about God himself. The proponent of The Cosmological Argument must admit a contradiction to either his first premise—and say that, though God exists, he doesn't have a cause—or else a contradiction to

his third premise—and say that God is self-caused. Either way, the theist is saying that his premises have at least one exception, but is not explaining why *God* must be the unique exception, otherwise than asserting his unique mystery (the Fallacy of Using One Mystery to Explain Another). Once you admit of exceptions, you can ask why the universe itself, which is also unique, can't be the exception. The universe itself can either exist without a cause, or else can be self-caused. Since the buck has to stop somewhere, why not with the universe?

FLAW 2: The notion of “cause” is by no means clear, but our best definition is a relation that holds between events that are connected by physical laws. Knocking the vase off the table caused it to crash to the floor; smoking three packs a day caused his lung cancer. To apply this concept to the universe itself is to misuse the concept of cause, extending it into a realm in which we have no idea how to use it. This line of reasoning, based on the unjustified demands we make on the concept of cause, was developed by David Hume.

COMMENT: The Cosmological Argument, like The Argument from the Big Bang and The Argument from the Intelligibility of the Universe, is an expression of our cosmic befuddlement at the question, why is there something rather than nothing? The late philosopher Sidney Morgenbesser had a classic response to this question: “And if there were nothing? You'd still be complaining!”

2. The Ontological Argument

1. Nothing greater than God can be conceived (this is stipulated as part of the definition of “God”).
2. It is greater to exist than not to exist.
3. If we conceive of God as not existing, then we can conceive of something greater than God (from 2).
4. To conceive of God as not existing is not to conceive of God (from 1 and 3).

5. It is inconceivable that God not exist (from 4).
6. God exists.

This argument, first articulated by Saint Anselm (1033–1109), the Archbishop of Canterbury, is unlike any other, proceeding purely on the conceptual level. Everyone agrees that the mere existence of a concept does not entail that there are examples of that concept; after all, we can know what a unicorn is and at the same time say, “Unicorns don’t exist.” The claim of The Ontological Argument is that the concept of God is the one exception to this generalization. The very concept of God, when defined correctly, entails that there is something that satisfies that concept. Although most people suspect that there is something wrong with this argument, it’s not so easy to figure out what it is.

FLAW: It was Immanuel Kant who pinpointed the fallacy in The Ontological Argument—it is to treat “existence” as a property, like “being fat” or “having ten fingers.” The Ontological Argument relies on a bit of wordplay, assuming that “existence” is just another property, but logically it is completely different. If you really could treat “existence” as just part of the definition of the concept of God, then you could just as easily build it into the definition of any other concept. We could, with the wave of our verbal magic wand, define a *trunicorn* as “a horse that (a) has a single horn on its head, and (b) exists.” So, if you think about a trunicorn, you’re thinking about something that must, by definition, exist; therefore, trunicorns exist. This is clearly absurd: we could use this line of reasoning to prove that any figment of our imagination exists.

COMMENT: Once again, Sidney Morgenbesser offered a pertinent remark, in the form of The Ontological Argument for God’s Non-Existence: Existence is such a lousy thing, how could God go and do it?

3. The Argument from Design

A. *The Classical Teleological Argument*

1. Whenever there are things that cohere only because of a purpose or function (for example, all the complicated parts of a watch that allow it to keep time), we know that they had a designer who designed them with the function in mind; they are too improbable to have arisen by random physical processes. (A hurricane blowing through a hardware store could not assemble a watch.)
2. Organs of living things, such as the eye and the heart, cohere only because they have a function (for example, the eye has a cornea, lens, retina, iris, eyelids, and so on, which are found in the same organ only because together they make it possible for the animal to see).
3. These organs must have a designer who designed them with their function in mind: just as a watch implies a watchmaker, an eye implies an eye-maker (from 1 and 2).
4. These things have not had a human designer.
5. Therefore, these things must have had a non-human designer (from 3 and 4).
6. God is the non-human designer (from 5).
7. God exists.

FLAW: Darwin showed how the process of replication could give rise to the *illusion* of design without the foresight of an actual designer. Replicators make copies of themselves, which make copies of themselves, and so on, giving rise to an exponential number of descendants. In any finite environment, the replicators must compete for the energy and materials necessary for replication. Since no copying process is perfect, errors will eventually crop up, and any error that causes a replicator to reproduce more efficiently than its competitors will result in the predominance of that line of replicators in the population. After many generations, the dominant replicators will *appear* to have been designed for effective replication, whereas all they have done is accumulate the copying errors,

which in the past *did* lead to effective replication. The fallacy in the argument, then, is Premise 1 (and, as a consequence, Premise 3, which depends on it): parts of a complex object serving a complex function do not, in fact, require a designer.

In the twenty-first century, creationists have tried to revive the Teleological Argument in three forms:

B. The Argument from Irreducible Complexity

1. Evolution has no foresight, and every incremental step must be an improvement over the preceding one, allowing the organism to survive and reproduce better than its competitors.
2. In many complex organs, the removal or modification of any part would destroy the functional whole. Examples are the lens and retina of the eye, the molecular components of blood clotting, and the molecular motor powering the cell's flagellum. Call these organs "irreducibly complex."
3. These organs could not have been useful to the organisms that possessed them in any simpler forms (from 2).
4. The theory of natural selection cannot explain these irreducibly complex systems (from 1 and 3).
5. Natural selection is the only way out of the conclusions of The Classical Teleological Argument.
6. God exists (from 4 and 5 and The Classical Teleological Argument).

This argument has been around since the time of Charles Darwin, and his replies to it still hold.

FLAW 1: For many organs, Premise 2 is false. An eye without a lens can still see, just not as well as an eye with a lens.

FLAW 2: For many other organs, removal of a part, or other alterations, may render it useless for its current function, but the organ could have been useful to the organism for some other function. Insect wings, before they were large enough to be effective for flight, were used as heat-exchange panels. This is also true for most of the molecular mechanisms,

such as the flagellum motor, invoked in The New Argument from Irreducible Complexity.

FLAW 3 (the Fallacy of Arguing from Ignorance): There may be biological systems for which we don't yet know how they may have been useful in simpler versions. But there are obviously many things we don't yet understand in molecular biology, and, given the huge success that biologists have achieved in explaining so many examples of incremental evolution in other biological systems, it is more reasonable to infer that these gaps will eventually be filled by the day-to-day progress of biology than to invoke a supernatural designer just to explain these temporary puzzles.

COMMENT: This last flaw can be seen as one particular instance of the more general, fallacious Argument from Ignorance:

1. There are things that we cannot explain yet.
2. Those things must be attributed to God.

FLAW: Premise 1 is obviously true. If there weren't things that we could not explain yet, then science would be complete, laboratories and observatories would unplug their computers and convert to condominiums, and all departments of science would be converted to departments of the history of science. Science is only in business because there are things we have not explained yet. So we cannot infer from the existence of genuine, ongoing science that there must be a God. In other words, Premise 2 does not follow from Premise 1.

C. The Argument from the Paucity of Benign Mutations

1. Evolution is powered by random mutations and natural selection.
2. Organisms are complex, improbable systems, and by the laws of probability any change is astronomically more likely to be for the worse than for the better.
3. The majority of mutations would be deadly for the organism (from 2).

4. The amount of time it would take for all the benign mutations needed for the assembly of an organ to appear by chance is preposterously long (from 3).
5. In order for evolution to work, something outside of evolution had to bias the process of mutation, increasing the number of benign ones (from 4).
6. Something outside of the mechanism of biological change—the Prime Mutator—must bias the process of mutations for evolution to work (from 5).
7. The only entity that is both powerful enough and purposeful enough to be the Prime Mutator is God.
8. God exists.

FLAW: Evolution does not require infinitesimally improbable mutations, such as a fully formed eye appearing out of the blue in a single generation, because (a) mutations can have small effects (tissue that is slightly more transparent, or cells that are slightly more sensitive to light), and mutations contributing to these effects can accumulate over time; (b) for any sexually reproducing organism, the necessary mutations do not have to have occurred one after another in a single line of descendants, but could have appeared independently in thousands of separate organisms, each mutating at random, and the necessary combinations could come together as the organisms have mated and exchanged genes; (c) life on Earth has had a vast amount of time to accumulate the necessary mutations (almost four billion years).

D. The Argument from the Original Replicator

1. Evolution is the process by which an organism evolves from simpler ancestors.
2. Evolution by itself cannot explain how the original ancestor—the first living thing—came into existence (from 1).
3. The theory of natural selection can deal with this problem only by saying that the first living thing evolved out of non-living matter (from 2).
4. That original non-living matter (call it the Original Replicator) must be capable of (a) self-replication, (b) generating a functioning mech-

anism out of surrounding matter to protect itself against falling apart, and (c) surviving slight mutations to itself that will then result in slightly different replicators.

5. The Original Replicator is complex (from 4).
6. The Original Replicator is too complex to have arisen from purely physical processes (from 5 and The Classical Teleological Argument). For example, DNA, which currently carries the replicated design of organisms, cannot be the Original Replicator, because DNA molecules require a complex system of proteins to remain stable and to replicate, and could not have arisen from natural processes before complex life existed.
7. Natural selection cannot explain the complexity of the Original Replicator (from 3 and 6).
8. The Original Replicator must have been created rather than have evolved (from 7 and The Classical Teleological Argument).
9. Anything that was created requires a Creator.
10. God exists.

FLAW 1: Premise 6 states that a replicator, because of its complexity, cannot have arisen from natural processes, i.e., by way of natural selection. But the mathematician John von Neumann proved in the 1950s that it is theoretically possible for a simple physical system to make exact copies of itself from surrounding materials. Since then, biologists and chemists have identified a number of naturally occurring molecules and crystals that can replicate in ways that could lead to natural selection (in particular, that allow random variations to be preserved in the copies). Once a molecule replicates, the process of natural selection can kick in, and the replicator can accumulate matter and become more complex, eventually leading to precursors of the replication system used by living organisms today.

FLAW 2: Even without von Neumann's work (which not everyone accepts as conclusive), to conclude the existence of God from our not yet knowing how to explain the Original Replicator is to rely on The Argument from Ignorance.

4. The Argument from the Big Bang

1. The Big Bang, according to the best scientific opinion of our day, was the beginning of the physical universe, including not only matter and energy, but space and time and the laws of physics.
2. The universe came to be *ex nihilo* (from 1).
3. Something outside the universe, including outside its physical laws, must have brought the universe into existence (from 2).
4. Only God could exist outside the universe.
5. God must have caused the universe to exist (from 3 and 4).
6. God exists.

The Big Bang is based on the observed expansion of the universe, with galaxies rushing away from one another. The implication is that, if we run the film of the universe backward from the present, the universe must continuously contract, all the way back to a single point. The theory of the Big Bang is that the universe exploded into existence about fourteen billion years ago.

FLAW 1: Cosmologists themselves do not all agree that the Big Bang is a “singularity”—the sudden appearance of space, time, and physical laws from inexplicable nothingness. The Big Bang may represent the lawful emergence of a new universe from a previously existing one. In that case, it would be superfluous to invoke God to explain the emergence of something from nothing.

FLAW 2: The Argument from the Big Bang has all the flaws of The Cosmological Argument—it passes the buck from the mystery of the origin of the universe to the mystery of the origin of God, and it extends the notion of “cause” outside the domain of events covered by natural laws (also known as “the universe”), where it no longer makes sense.

5. The Argument from the Fine-Tuning of Physical Constants

1. There are a vast number of physically possible universes.
2. A universe that would be hospitable to the appearance of life must conform to some very strict conditions. Everything from the mass ratios of atomic particles and the number of dimensions of space to the cosmological parameters that rule the expansion of the universe must be just right for stable galaxies, solar systems, planets, and complex life to evolve.
3. The percentage of possible universes that would support life is infinitesimally small (from 2).
4. Our universe is one of those infinitesimally improbable universes.
5. Our universe has been fine-tuned to support life (from 3 and 4).
6. There is a Fine-Tuner (from 5).
7. Only God could have the power and the purpose to be the Fine-Tuner.
8. God exists.

Philosophers and physicists often speak of “the Anthropic Principle,” which comes in several versions, labeled “weak,” “strong,” and “very strong.” They all argue that any explanation of the universe must account for the fact that we humans (or any complex organism that could observe its condition) exist in it. The Argument from the Fine-Tuning of Physical Constants corresponds to the Very Strong Anthropic Principle. Its upshot is that the upshot of the universe is . . . us. The universe must have been designed with us in mind.

FLAW 1: The first premise may be false. Many physicists and cosmologists, following Einstein, hope for a unified “theory of everything,” which would deduce from as-yet unknown physical laws that the physical constants of our universe had to be what they are. In that case, ours would be the only possible universe. (See also The Argument from the Intelligibility of the Universe, #35 below.)

FLAW 2: Even were we to accept the first premise, the transition from 4 to 5 is invalid. Perhaps we are living in a “multiverse” (a term coined by William James), a vast plurality (perhaps infinite) of parallel universes with different physical constants, all of them composing one reality. We find ourselves, unsurprisingly (since we are here doing the observing), in one of the rare universes that does support the appearance of stable matter and complex life, but nothing had to have been fine-tuned. Or perhaps we are living in an “oscillatory universe,” a succession of universes with differing physical constants, each one collapsing into a point and then exploding with a new big bang into a new universe with different physical constants, one succeeding another over an infinite time span. Again, we find ourselves, not surprisingly, in one of those time slices in which the universe does have physical constants that support stable matter and complex life. These hypotheses, which are receiving much attention from contemporary cosmologists, are sufficient to invalidate the leap from 4 to 5.

6. The Argument from the Beauty of Physical Laws

1. Scientists use aesthetic principles (simplicity, symmetry, elegance) to discover the laws of nature.
2. Scientists could only use aesthetic principles successfully if the laws of nature were intrinsically and objectively beautiful.
3. The laws of nature are intrinsically and objectively beautiful (from 1 and 2).
4. Only a mindful being with an appreciation of beauty could have designed the laws of nature.
5. God is the only being with the power and purpose to design beautiful laws of nature.
6. God exists.

FLAW 1: Do we decide an explanation is good because it's beautiful, or do we find an explanation beautiful because it provides a good explanation?

When we say that the laws of nature are beautiful, what we are really saying is that the laws of nature are the laws of nature, and thus unify into elegant explanation a vast host of seemingly unrelated and random phenomena. We would find the laws of nature of any lawful universe beautiful. So what this argument boils down to is the observation that we live in a lawful universe. And of course any universe that could support the likes of us would *have* to be lawful. So this argument is another version of the Anthropic Principle—we live in the kind of universe that is the only kind of universe in which observers like us could live—and thus is subject to the flaws of Argument #5.

FLAW 2: If the laws of the universe are intrinsically beautiful, then positing a God who loves beauty, and who is mysteriously capable of creating an elegant universe (and presumably a messy one as well, though his aesthetic tastes led him not to), makes the universe complex and incomprehensible all over again. This negates the intuition behind Premise 3, that the universe is *intrinsically* elegant and intelligible. (See The Argument from the Intelligibility of the Universe, #35 below.)

7. The Argument from Cosmic Coincidences

1. The universe contains many uncanny coincidences, such as that the diameter of the moon as seen from the earth is the same as the diameter of the sun as seen from the earth, which is why we can have spectacular eclipses when the corona of the sun is revealed.
2. Coincidences are, by definition, overwhelmingly improbable.
3. The overwhelmingly improbable defies all statistical explanation.
4. These coincidences are such as to enhance our awed appreciation for the beauty of the natural world.
5. These coincidences must have been designed in order to enhance our awed appreciation of the beauty of the natural world (from 3 and 4).
6. Only a being with the power to effect such uncanny coincidences

and the purpose of enhancing our awed appreciation of the beauty of the natural world could have arranged these uncanny cosmic coincidences.

7. Only God could be the being with such power and such purpose.
8. God exists.

FLAW 1. Premise 3 does not follow from Premise 2. The occurrence of the highly improbable can be statistically explained in two ways. One is when we have a very large sample: a one-in-a-million event is not improbable at all if there are a million opportunities for it to occur. The other is that there are a huge number of occurrences that could be counted as coincidences, if we don't specify them beforehand but just notice them after the fact. (There could have been a constellation that forms a square around the moon; there could have been a comet that appeared on January 1, 2000; there could have been a constellation in the shape of a Star of David, etc., etc., etc.) When you consider how many coincidences are possible, the fact that we observe any one coincidence (which we notice after the fact) is not improbable but likely. And let's not forget the statistically improbable coincidences that cause havoc and suffering, rather than awe and wonder, in humans: the perfect storm, the perfect tsunami, the perfect plague, et cetera.

FLAW 2. The derivation of Premise 5 from 3 and 4 is invalid: an example of the Projection Fallacy, in which we project the workings of our mind onto the world, and assume that our own subjective reaction is the result of some cosmic plan to cause that reaction. The human brain sees patterns in all kinds of random configurations: cloud formations, constellations, tea leaves, inkblots. That is why we are so good at finding supposed coincidences. It is getting things backward to say that, in every case in which we see a pattern, someone deliberately put that pattern in the universe for us to see.

ASIDE: Prominent among the uncanny coincidences that figure into this argument are those having to do with numbers. Numbers are mysterious to us because they are not material objects like rocks and tables, but at the same time they seem to be real entities, ones that we can't conjure up

with any properties we fancy but that have their own necessary properties and relations, and hence must somehow exist outside us (see *The Argument from Human Knowledge of Infinity*, #29, and *The Argument from Mathematical Reality*, #30, below). We are therefore likely to attribute magical powers to them. And, given the infinity of numbers and the countless possible ways to apply them to the world, “uncanny coincidences” are bound to occur (see *Flaw 1*). In Hebrew, the letters are also numbers, which has given rise to the mystical art of gematria, often used to elucidate, speculate, and prophecy about the unknowable.

8. The Argument from Personal Coincidences

1. People experience uncanny coincidences in their lives (for example, an old friend calling out of the blue just when you’re thinking of him, or a dream about some event that turns out to have just happened, or missing a flight that then crashes).
2. Uncanny coincidences cannot be explained by the laws of probability (which is why we call them uncanny).
3. These uncanny coincidences, inexplicable by the laws of probability, reveal a significance to our lives.
4. Only a being who deems our lives significant and who has the power to effect these coincidences could arrange for them to happen.
5. Only God both deems our lives significant and has the power to effect these coincidences.
6. God exists.

FLAW 1: The second premise suffers from the major flaw of *The Argument from Cosmic Coincidences*: a large number of experiences, together with the large number of patterns that we would call “coincidences” after the fact, make uncanny coincidences probable, not improbable.

FLAW 2: Psychologists have shown that people are subject to an illusion called *Confirmation Bias*. When they have a hypothesis (such as that day-

dreams predict the future), they vividly notice all the instances that confirm it (the times when they think of a friend and he calls), and forget all the instances that don't (the times when they think of a friend and he doesn't call). Likewise, who among us remembers all the times when we miss a plane and it *doesn't* crash? The vast number of non-events we live through don't make an impression on us; the few coincidences do.

FLAW 3: There is an additional strong psychological bias at work here. Every one of us treats his or her own life with utmost seriousness. For all of us, there can be nothing more significant than the lives we are living. As David Hume pointed out, the self has an inclination to "spread itself on the world," projecting onto objective reality the psychological assumptions and attitudes that are too constant to be noticed, that play in the background like a noise you don't realize you are hearing until it stops. This form of the Projection Fallacy is especially powerful when it comes to the emotionally fraught questions about our own significance.

9. The Argument from Answered Prayers

1. Sometimes people pray to God for good fortune, and, against enormous odds, their calls are answered. (For example, a parent prays for the life of her dying child, and the child recovers.)
2. The odds that the beneficial event will happen are enormously slim (from 1).
3. The odds that the prayer would have been followed by recovery out of sheer chance are extremely small (from 2).
4. The prayer could only have been followed by the recovery if God listened to it and made it come true.
5. God exists.

This argument is similar to The Argument from Miracles, #11 below, except that, instead of the official miracles claimed by established religion, it refers to intimate and personal miracles.

FLAW 1: Premise 3 is indeed true. However, to use it to infer that a miracle has taken place (and an answered prayer is certainly a miracle) is to subvert it. There is nothing that is *less* probable than a miracle, since it constitutes a violation of a law of nature (see The Argument from Miracles). Therefore, it is more reasonable to conclude that the conjunction of the prayer and the recovery is a coincidence than that it is a miracle.

FLAW 2. The coincidence of a person's praying for the unlikely to happen and its then happening is, of course, improbable. But the flaws in The Argument from Cosmic Coincidences and The Argument from Personal Coincidences apply here: Given a large enough sample of prayers (the number of times people call out to God to help them and those they love is tragically large), the improbable is bound to happen occasionally. And, given the existence of Confirmation Bias, we will notice these coincidences, yet fail to notice and count up the vastly larger number of unanswered prayers.

FLAW 3: There is an inconsistency in the moral reasoning behind this argument. It asks us to believe in a compassionate God who would be moved to pity by the desperate pleas of some among us—but not by the equally desperate pleas of others among us. Together with The Argument from a Wonderful Life, The Argument from Perfect Justice, and The Argument from Suffering, it appears to be supported by a few cherry-picked examples, but in fact is refuted by the much larger number of counter-examples it ignores: the prayers that go unanswered, the people who do not live wonderful lives. When the life is our own, or that of someone we love, we are especially liable to the Projection Fallacy, and spread our personal sense of significance onto the world at large.

FLAW 4: Reliable cases of answered prayers always involve medical conditions that we know can spontaneously resolve themselves through the healing powers and immune system of the body, such as recovery from cancer, or a coma, or lameness. Prayers that a person can grow back a limb, or that a child can be resurrected from the dead, always go unan-

swered. This affirms that supposedly answered prayers are actually just the rarer cases of natural recovery.

10. The Argument from a Wonderful Life

1. Sometimes people who are lost in life find their way.
2. These people could not have known the right way on their own.
3. These people were shown the right way by something or someone other than themselves (from 2).
4. There was no person showing them the way.
5. God alone is a being who is not a person and who cares about each of us enough to show us the way.
6. Only God could have helped these lost souls (from 4 and 5).
7. God exists.

FLAW 1. Premise 2 ignores the psychological complexity of people. People have inner resources on which they draw, often without knowing *how* they are doing it or even *that* they are doing it. Psychologists have shown that events in our conscious lives—from linguistic intuitions of which sentences sound grammatical, to moral intuitions of what would be the right thing to do in a moral dilemma—are the end products of complicated mental manipulations of which we are unaware. So, too, decisions and resolutions can bubble into awareness without our being conscious of the processes that led to them. These epiphanies seem to *announce themselves* to us, as if they came from an external guide: another example of the Projection Fallacy.

FLAW 2: The same as Flaw 3 in The Argument from Answered Prayers #9 above.

11. The Argument from Miracles

1. Miracles are events that violate the laws of nature.
2. Miracles can be explained only by a force that has the power of suspending the laws of nature for the purpose of making its presence known or changing the course of human history (from 1).
3. Only God has the power and the purpose to carry out miracles (from 2).
4. We have a multitude of written and oral reports of miracles. (Indeed, every major religion is founded on a list of miracles.)
5. Human testimony would be useless if it were not, in the majority of cases, veridical.
6. The best explanation for why there are so many reports testifying to the same thing is that the reports are true (from 5).
7. The best explanation for the multitudinous reports of miracles is that miracles have indeed occurred (from 6).
8. God exists (from 3 and 7).

FLAW 1: It is certainly true, as Premise 4 asserts, that we have a multitude of reports of miracles, with each religion insisting on those that establish it alone as the true religion. But the reports are not testifying to the *same* events; each miracle list justifies one religion at the expense of the others. See Flaw 2 in The Argument from Holy Books, #23, below.

FLAW 2: The fatal flaw in The Argument from Miracles was masterfully exposed by David Hume in *An Inquiry Concerning Human Understanding*, chapter 10, "On Miracles." Human testimony may often be accurate, but it is very far from infallible. People are sometimes mistaken; people are sometimes dishonest; people are sometimes gullible—indeed, more than sometimes. Since, in order to believe that a miracle has occurred, we must believe a law of nature has been violated (something for which we otherwise have the maximum of empirical evidence), and we can only believe it on the basis of the truthfulness of human testimony (which we already know is often inaccurate), then even if we knew nothing

else about the event, and had no particular reason to distrust the witness, we would have to conclude that it is more likely that the miracle has not occurred, and that there is an error in the testimony, than that the miracle has occurred. (Hume strengthens his argument, already strong, by observing that religion creates situations in which there *are* particular reasons to distrust the reports of witnesses. “But if the spirit of religion join itself to the love of wonder, there is an end of common sense.”)

COMMENT: The Argument from Miracles covers more specific arguments, such as The Argument from Prophets, The Arguments from Messiahs, and The Argument from Individuals with Miraculous Powers.

12. The Argument from the Hard Problem of Consciousness

1. The Hard Problem of Consciousness consists in our difficulty in explaining why it subjectively *feels* like something to be a functioning brain. (This is to be distinguished from the so-called Easy Problem of Consciousness, which is to explain why some brain processes are unconscious and others are conscious.)
2. Consciousness (in the Hard-Problem sense) is not a complex phenomenon built out of simpler ones; it can consist of irreducible “raw feels” like seeing red or tasting salt.
3. Science explains complex phenomena by reducing them to simpler ones, and reducing them to still simpler ones, until the simplest ones are explained by the basic laws of physics.
4. The basic laws of physics describe the properties of the elementary constituents of matter and energy, like quarks and quanta, which are not conscious.
5. Science cannot derive consciousness by reducing it to basic physical laws about the elementary constituents of matter and energy (from 2, 3, and 4).
6. Science will never solve the Hard Problem of Consciousness (from 3 and 5).

7. The explanation for consciousness must lie beyond physical laws (from 6).
8. Consciousness, lying outside physical laws, must itself be immaterial (from 7).
9. God is immaterial.
10. Consciousness and God both consist of the same immaterial kind of being (from 8 and 9).
11. God has not only the means to impart consciousness to us, but also the motive—namely, to allow us to enjoy a good life, and to make it possible for our choices to cause or prevent suffering in others, thereby allowing for morality and meaning.
12. Consciousness can only be explained by positing that God inserted a spark of the divine into us (from 7, 10, and 11).
13. God exists.

FLAW 1. Premise 3 is dubious. Science often shows that properties can be *emergent*: they arise from complex interactions of simpler elements, even if they cannot be found in any of the elements themselves. (Water is wet, but that does not mean that every H₂O molecule it is made of is also wet.) Granted, we do not have a theory of neuroscience that explains how consciousness emerges from patterns of neural activity, but to draw theological conclusions from the currently incomplete state of scientific knowledge is to commit the Fallacy of Arguing from Ignorance.

FLAW 2: Alternatively, the theory of panpsychism posits that consciousness in a low-grade form, what is often called “proto-consciousness,” is inherent in matter. Our physical theories, with their mathematical methodology, have not yet been able to capture this aspect of matter, but that may just be a limitation on our mathematical physical theories. Some physicists have hypothesized that contemporary malaise about the foundations of quantum mechanics arises because physics is here confronting the intrinsic consciousness of matter, which has not yet been adequately formalized within physical theories.

FLAW 3: It has become clear that every measurable manifestation of consciousness, like our ability to describe what we feel, or let our feelings

guide our behavior (the “Easy Problem” of consciousness), has been, or will be, explained in terms of neural activity (that is, every thought, feeling, and intention has a neural correlate). Only the existence of consciousness itself (the “Hard Problem”) remains mysterious. But perhaps the hardness of the Hard Problem says more about what *we* find hard—the limitations of the brains of *Homo sapiens* when it tries to think scientifically—than about the hardness of the problem itself. Just as our brains do not allow us to visualize four-dimensional objects, perhaps our brains do not allow us to understand how subjective experience arises from complex neural activity.

FLAW 4: Premise 12 is entirely unclear. How does invoking the spark of the divine explain the existence of consciousness? It is the Fallacy of Using One Mystery to Explain Another.

COMMENT: Premise 11 is also dubious, because our capacity to suffer is far in excess of what it would take to make moral choices possible. This will be discussed in connection with The Argument from Suffering, #25, below.

13. The Argument from the Improbable Self

1. I exist in all my particularity and contingency: not as a generic example of personhood, not as any old member of *Homo sapiens*, but as that unique conscious entity that I know as *me*.
2. I can step outside myself and view my own contingent particularity with astonishment.
3. This astonishment reveals that there must be something that accounts for why, of all the particular things that I could have been, I am *just this*—namely, me (from 1 and 2).
4. Nothing within the world can account for why I am *just this*, since the laws of the world are generic: they can explain why certain *kinds* of things come to be, even (let’s assume) why human beings with

conscious brains come to be. But nothing in the world can explain why one of those human beings should be *me*.

5. Only something outside the world, who cares about me, can therefore account for why I am *just this* (from 4).
6. God is the only thing outside the world who cares about each and every one of us.
7. God exists.

FLAW: Premise 5 is a blatant example of the Fallacy of Using One Mystery to Explain Another. Granted that the problem boggles the mind, but waving one's hands in the direction of God is no solution. It gives us no sense of *how* God can account for why I am *this* thing and not another.

COMMENT: In one way, this argument is reminiscent of the Anthropic Principle. There are a vast number of people who could have been born. One's own parents alone could have given birth to a vast number of alternatives to oneself. Granted, one gropes for a reason for why it was, against these terrific odds, that oneself came to be born. But there may be no reason; it just happened. By the time you ask this question, you already are existing in a world in which you were born. Another analogy: The odds that the phone company would have given you your exact number (if you could have wished for exactly that number beforehand) are minuscule. But it had to give you *some* number, so asking after the fact why it should be *that* number is silly. Likewise, the child your parents conceived had to be *someone*. Now that you're born, it's no mystery why it should be you; you're the one asking the question.

14. The Argument from Survival After Death

1. There is empirical evidence that people survive after death: patients who flat-line during medical emergencies report an experience of floating over their bodies and seeing glimpses of a passage to an-

other world, and can accurately report what happened around their bodies while they were dead to the world.

2. A person's consciousness can survive after the death of his or her body (from 1).
3. Survival after death entails the existence of an immaterial soul.
4. The immaterial soul exists (from 2 and 3).
5. If an immaterial soul exists, then God must exist (from Premise 12 in The Argument from the Hard Problem of Consciousness).
6. God exists.

FLAW: Premise 5 is vulnerable to the same criticisms that were leveled against Premise 12 in The Argument from the Hard Problem of Consciousness. Existence after death no more implies God's existence than our existence before death does.

COMMENT: Many, of course, would dispute Premise 1. The experiences of people near death, such as auras and out-of-body experiences, could be hallucinations resulting from oxygen deprivation in the brain. In addition, miraculous resurrections after total brain death, and accurate reports of conversations and events that took place while the brain was not functioning, have never been scientifically documented, and are informal, secondhand examples of testimony of miracles. They are thus vulnerable to the same flaws pointed out in The Argument from Miracles. But the argument is fatally flawed even if Premise 1 is granted.

15. The Argument from the Inconceivability of Personal Annihilation

1. I cannot conceive of my own annihilation: as soon as I start to think about what it would be like not to exist, I am thinking, which implies that I would exist (as in Descartes's *Cogito ergo sum*), which implies that I would not be thinking about what it is like not to exist.
2. My annihilation is inconceivable (from 1).
3. What cannot be conceived, cannot be.

4. I cannot be annihilated (from 2 and 3).
5. I survive after my death (from 4).

The argument now proceeds as in The Argument from Survival After Death, only substituting “I” for “people,” until we get to:

6. God exists.

FLAW 1: Premise 2 confuses *psychological* inconceivability with *logical* inconceivability. The sense in which I can’t conceive of my own annihilation is like the sense in which I can’t conceive that those whom I love may betray me—a failure of the imagination, not an impossible state of affairs. Thus Premise 2 ought to read “My annihilation is inconceivable *to me*,” which is a fact about what my brain can conceive, not a fact about what exists.

FLAW 2: Same as Flaw 3 from The Argument from the Survival of Death.

COMMENT: Though logically unsound, this is among the most powerful *psychological* impulses to believe in a soul, and an afterlife, and God. It genuinely is difficult—not to speak of disheartening—to conceive of oneself not existing!

16. The Argument from Moral Truth

1. There exist objective moral truths. (Slavery and torture and genocide are not just distasteful to us, but are actually wrong.)
2. These objective moral truths are not grounded in the way the world *is* but, rather, in the way the world *ought to be*. (Consider: should white supremacists succeed, taking over the world and eliminating all who don’t meet their criteria for being existence-worthy, their ideology still would be morally wrong. It would be true, in this hideous counterfactual, that the world ought not to be the way that they have made it.)

3. The world itself—the way it is, the laws of science that explain why it is that way—cannot account for the way the world ought to be.
4. The only way to account for morality is that God established morality (from 2 and 3).
5. God exists.

FLAW 1: The major flaw of this argument is revealed in a powerful argument that Plato made famous in the *Euthyphro*. Reference to God does not help in the least to ground the objective truth of morality. The question is, why did God choose the moral rules he did? Did he have a reason justifying his choice that, say, giving alms to the poor is good, whereas genocide is wrong? Either he had a good reason or he didn't. If he did, then *his* reasons, whatever they are, can provide the grounding for moral truths for *us*, and God himself is redundant. And if he didn't have a good reason, then his choices are arbitrary—he could just as easily have gone the other way, making charity bad and genocide good—and we would have no reason to take his choices seriously. According to the *Euthyphro* argument, then, The Argument from Moral Truth is another example of the Fallacy of Passing the Buck. The hard work of moral philosophy consists in grounding morality in some version of the Golden Rule: that I cannot be committed to my own interests' mattering in a way that yours do not just because I am me and you are not.

FLAW 2: Premise 4 is belied by the history of religion, which shows that the God from which people draw their morality (for example, the God of the Bible and the Koran) did not establish what we now recognize to be morality at all. The God of the Old Testament commanded people to keep slaves, slay their enemies, execute blasphemers and homosexuals, and commit many other heinous acts. Of course, our interpretation of which aspects of biblical morality to take seriously has grown more sophisticated over time, and we read the Bible selectively and often metaphorically. But that is just the point: we must be consulting some standards of morality that do *not* come from God in order to judge which aspects of God's word to take literally and which aspects to ignore.

COMMENT: Some would question the first premise, and regard its assertion as a flaw of this argument. Slavery and torture and genocide are wrong by *our* lights, they would argue, and conflict with certain values we hold dear, such as freedom and happiness. But those are just subjective values, and it is obscure to say that statements that are consistent with those values are objectively true in the same way that mathematical or scientific statements can be true. But the argument is fatally flawed even if Premise 1 is granted.

17. The Argument from Altruism

1. People often act altruistically—namely, against their interests. They help others, at a cost to themselves, out of empathy, fairness, decency, and integrity.
2. Natural selection can never favor true altruism, because genes for selfishness will always out-compete genes for altruism (recall that altruism, by definition, exacts a cost to the actor).
3. Only a force acting outside of natural selection and intending for us to be moral could account for our ability to act altruistically (from 2).
4. God is the only force outside of natural selection that could intend us to be moral.
5. God must have implanted the moral instinct within us (from 3 and 4).
6. God exists.

FLAW 1: Theories of the evolution of altruism by natural selection have been around for decades and are now widely supported by many kinds of evidence. A gene for being kind to one's kin, even if it hurts the person doing the favor, can be favored by evolution, because that gene would be helping a copy of *itself* that is shared by the kin. And a gene for conferring a large benefit to a non-relative at a cost to oneself can evolve if the favor-doer is the beneficiary of a return favor at a later time. Both parties are better off, in the long run, from the exchange of favors.

Some defenders of religion do not consider these theories to be legitimate explanations of altruism, because a tendency to favor one's kin, or to trade favors, is ultimately just a form of selfishness for one's genes, rather than true altruism. But this is a confusion of the original phenomenon. We are trying to explain why people are sometimes altruistic, not why genes are altruistic. (We have no reason to believe that genes are ever altruistic in the first place!) Also, in a species with language—namely, humans—committed altruists develop a reputation for being altruistic, and thereby win more friends, allies, and trading partners. This can give rise to selection for true, committed, altruism, not just the tit-for-tat exchange of favors.

FLAW 2: We have evolved higher mental faculties, such as self-reflection and logic, that allow us to reason about the world, to persuade other people to form alliances with us, to learn from our mistakes, and to achieve other feats of reason. Those same faculties, when they are honed through debate, reason, and knowledge, can allow us to step outside ourselves, learn about other people's points of view, and act in a way that we can justify as maximizing everyone's well-being. We are capable of moral reasoning because we are capable of reasoning in general.

FLAW 3: In some versions of The Argument from Altruism, God succeeds in getting people to act altruistically because he promises them a divine reward and threatens them with divine retribution. People behave altruistically to gain a reward or avoid a punishment in the life to come. This argument is self-contradictory. It aims to explain how people act without regard to their self-interest, but then assumes that there could be no motive for acting altruistically other than self-interest.

18. The Argument from Free Will

1. Having *free will* means having the freedom to choose our actions, rather than having them determined by some prior cause.
2. If we don't have free will, then we are not agents, for then we are not

really *acting*, but, rather, we're being acted *upon*. (That's why we don't punish people for involuntary actions—such as a teller who hands money to a bank robber at gunpoint, or a driver who injures a pedestrian after a defective tire blows out.)

3. To be a moral agent means to be held morally responsible for what one does.
4. If we can't be held morally responsible for anything we do, then the very idea of morality is meaningless.
5. Morality is not meaningless.
6. We have free will (from 2–5).
7. We, as moral agents, are not subject to the laws of nature—in particular, the neural events in a genetically and environmentally determined brain (from 1 and 6).
8. Only a being who is apart from the laws of nature and partakes of the moral sphere could explain our being moral agents (from 7).
9. Only God is a being who is apart from the laws of nature and partakes of the moral sphere.
10. Only God can explain our moral agency (from 8 and 9).
11. God exists.

FLAW 1: This argument, in order to lead to God, must ignore the paradoxical Fork of Free Will. Either my actions are predictable (from my genes, my upbringing, my brain state, my current situation, and so on), or they are not. If they are predictable, then there is no reason to deny that they are caused, and we would not have free will. So, if we are to be free, our actions must be unpredictable—in other words, random. But if our behavior is random, then in what sense can it be attributable to us at all? If it really is a random event when I give the infirm man my seat in the subway, then in what sense is it *me* to whom this good deed should be attributed? If the action isn't caused by my psychological states, which are themselves caused by other states, then in what way is it really *my* action? And what good would it do to insist on moral responsibility if our choices are random, and cannot be predicted from prior events (such as growing up in a society that holds people responsible)? This leads us back to the conclusion that we, as moral agents, *must* be parts of the natural world—the very negation of Premise 7.

FLAW 2: Premise 10 is an example of the Fallacy of Using One Mystery to Explain Another. It expresses, rather than dispels, the confusion we feel when faced with the Fork of Free Will. The paradox has not been clarified in the least by introducing God into the analysis.

COMMENT: Free will is yet another quandary that takes us to the edge of our human capacity for understanding. The concept is baffling, because our moral agency seems to demand both that our actions be determined, and also that they not be determined.

19. The Argument from Personal Purpose

1. If there is no purpose to a person's life, then that person's life is pointless.
2. Human life cannot be pointless.
3. Each human life has a purpose (from 1 and 2).
4. The purpose of each individual person's life must derive from the overall purpose of existence.
5. There is an overall purpose of existence (from 3 and 4).
6. Only a being who understands the overall purpose of existence could create each person according to the purpose that person is meant to fulfill.
7. Only God could understand the overall purpose of creation.
8. There can be a point to human existence only if God exists (from 6 and 7).
9. God exists.

FLAW 1: The first premise rests on a confusion between the purpose of an action and the purpose of a life. It is human activities that have purposes—or don't. We study for the purpose of educating and supporting ourselves. We eat right and exercise for the purpose of being healthy. We warn children not to accept rides with strangers for the purpose of keeping them safe. We donate to charity for the purpose of helping the poor (just as we would want someone to help us if we were poor). The

notion of a person's entire *life* serving a purpose, above and beyond the purpose of all the person's choices, is obscure. Might it mean the purpose for which the person was born? That implies that some goal-seeking agent decided to bring our lives into being to serve some purpose. Then who is that goal-seeking agent? Parents often purposively have children, but we wouldn't want to see a parent's wishes as the purpose of the child's life. If the goal-seeking agent is God, the argument becomes circular: we make sense of the notion of "the purpose of a life" by stipulating that the purpose is whatever God had in mind when he created us, but then argue for the existence of God because he is the only one who could have designed us with a purpose in mind.

FLAW 2: Premise 2 states that human life cannot be pointless. But of course it could be pointless in the sense meant by this argument: lacking a purpose in the grand scheme of things. It could very well be that there is no grand scheme of things because there is no Grand Schemer. By assuming that there is a grand scheme of things, it assumes that there is a schemer whose scheme it is, which circularly assumes the conclusion.

COMMENT: It's important not to confuse the notion of "pointless" in Premise 2 with notions like "not worth living" or "expendable." Confusions of this sort probably give Premise 2 its appeal. But we can very well maintain that each human life is precious—is worth living, is not expendable—*without* maintaining that each human life has a purpose in the overall scheme of things.

20. The Argument from the Intolerability of Insignificance

1. In a million years, nothing that happens now will matter.
2. By the same token, anything that happens at any point in time will not matter from the point of view of a time a million years distant from it in the future.
3. No point in time can confer mattering on any other point, for each suffers from the same problem of not mattering itself (from 2).

4. It is intolerable (or inconceivable, or unacceptable) that in a million years nothing that happens now will matter.
5. What happens now will matter in a million years (from 4).
6. It is only from the point of view of eternity that what happens now will matter even in a million years (from 3).
7. Only God can inhabit the point of view of eternity.
8. God exists.

FLAW: Premise 4 is illicit: it is of the form “This argument must be correct because it is intolerable that this argument is not correct.” The argument is either circular, or an example of the Fallacy of Wishful Thinking. Maybe we *won't* matter in a million years, and there's just nothing we can do about it. If that is the case, we shouldn't declare that it is intolerable—we just have to live with it. Another way of putting it is: we should take ourselves seriously (being mindful of what we do, and the world we leave our children and grandchildren), but we shouldn't take ourselves *that* seriously, arrogantly demanding that we must matter in a million years.

21. The Argument from the Consensus of Humanity

1. Every culture in every epoch has had theistic beliefs.
2. When peoples, widely separated by both space and time, hold similar beliefs, the best explanation is that those beliefs are true.
3. The best explanation for why every culture has had theistic beliefs is that those beliefs are true.
4. God exists.

FLAW: Premise 2 is false. Widely separated people could very well come up with the same *false* beliefs. Human nature is universal, and thus prone to universal illusions and shortcomings of perception, memory, reasoning, and objectivity. Also, many of the needs and terrors and dependencies of the human condition (such as the knowledge of our own mortality, and the attendant desire not to die) are universal. Our beliefs arise not

only from well-evaluated reasoning, but from wishful thinking, self-deception, self-aggrandizement, gullibility, false memories, visual illusions, and other mental glitches. Well-grounded beliefs may be the exception rather than the rule when it comes to psychologically fraught beliefs, which tend to bypass rational grounding and spring instead from unexamined emotions. The fallacy of arguing that if an idea is universally held then it must be true was labeled by the ancient logicians *consensus gentium*.

22. The Argument from the Consensus of Mystics

1. Mystics go into a special state in which they seem to see aspects of reality that elude everyday experience.
2. We cannot evaluate the truth of their experiences from the viewpoint of everyday experience (from 1).
3. There is a unanimity among mystics as to what they experience.
4. When there is unanimity among observers as to what they experience, then, unless they are all deluded in the same way, the best explanation for their unanimity is that their experiences are true.
5. There is no reason to think that mystics are all deluded in the same way.
6. The best explanation for the unanimity of mystical experience is that what mystics perceive is true (from 4 and 5).
7. Mystical experiences unanimously testify to the transcendent presence of God.
8. God exists.

FLAW 1: Premise 5 is disputable. There is indeed reason to think mystics might be deluded in similar ways. The universal human nature that refuted The Argument from the Consensus of Humanity entails that the human brain can be stimulated in unusual ways that give rise to widespread (but not objectively correct) experiences. The fact that we can stimulate the temporal lobes of non-mystics and induce mystical experiences in them is evidence that mystics might be deluded in similar ways. Cer-

tain drugs can also induce feelings of transcendence, such as an enlargement of perception beyond the bounds of effability, a melting of the boundaries of the self, a joyful expansion out into an existence that seems to be all One, with all that Oneness pronouncing *Yes* upon us. Such experiences, which, as William James points out, are most easily attained by getting drunk, are of the same kind as the mystical: “The drunken consciousness is one bit of the mystic consciousness.” Of course, we do not exalt the stupor and delusions of drunkenness, because we *know* what caused them. The fact that the same effects can overcome a person when we know what caused them (and hence don’t call the experience “mystical”) is reason to suspect that the causes of mystical experiences also lie within the brain.

FLAW 2: The struggle to put the ineffable contents of abnormal experiences into language inclines the struggler toward pre-existing religious language, which is the only language that most of us have been exposed to that overlaps with the unusual content of an altered state of consciousness. This observation casts doubt on Premise 7. See also The Argument from Sublimity, #34, below.

23. The Argument from Holy Books

1. There are holy books that reveal the word of God.
2. The word of God is necessarily true.
3. The word of God reveals the existence of God.
4. God exists.

FLAW 1: This is a circular argument if ever there was one. The first three premises cannot be maintained unless one independently knows the very conclusion to be proved—namely, that God exists.

FLAW 2: A glance at the world’s religions shows that there are numerous books and scrolls and doctrines and revelations that all claim to reveal

the word of God. But they are mutually incompatible. Should I believe that Jesus is my personal saviour? Or should I believe that God made a covenant with the Jews requiring every Jew to keep the commandments of the Torah? Should I believe that Muhammad was Allah's last prophet and that Ali, the prophet's cousin and husband of his daughter Fatima, ought to have been the first caliph, or that Muhammad was Allah's last prophet and that Ali was the fourth and last caliph? Should I believe that the resurrected prophet Moroni dictated the Book of Mormon to Joseph Smith? Or that Ahura Mazda, the benevolent Creator, is at cosmic war with the malevolent Angra Mainyu? And on and on it goes. Only the most arrogant provincialism could allow someone to believe that the holy documents that happen to be held sacred by the clan he was born into are true, whereas all the documents held sacred by the clans he wasn't born into are false.

24. The Argument from Perfect Justice

1. This world provides numerous instances of imperfect justice—bad things happening to good people, and good things happening to bad people.
2. It violates our sense of justice that imperfect justice may prevail.
3. There must be a transcendent realm in which perfect justice prevails (from 1 and 2).
4. A transcendent realm in which perfect justice prevails requires the Perfect Judge.
5. The Perfect Judge is God.
6. God exists.

FLAW: This is a good example of the Fallacy of Wishful Thinking. Our wishes for how the universe should be need not be true; just because we want there to be some realm in which perfect justice applies does not mean that there is such a realm. In other words, there is no way to pass from Premise 2 to Premise 3 without the Fallacy of Wishful Thinking.

25. The Argument from Suffering

1. There is much suffering in this world.
2. Suffering must have some purpose, or existence would be intolerable.
3. Some suffering (or at least its possibility) is demanded by human moral agency: if people could not choose evil acts that cause suffering, moral choice would not exist.
4. Whatever suffering cannot be explained as the result of human moral agency must also have some purpose (from 2 and 3).
5. There are virtues—forbearance, courage, compassion, and so on—that can only develop in the presence of suffering. We may call them “the virtues of suffering.”
6. Some suffering has the purpose of inducing the virtues of suffering (from 5).
7. Even taking premises 3 and 6 into account, the amount of suffering in the world is still enormous—far more than what is required for us to benefit from suffering.
8. Moreover, some who suffer can never develop the virtues of suffering—children, animals, those who perish in their agony.
9. There is more suffering than we can explain by reference to the purposes that we can discern (from 7 and 8).
10. There are purposes for suffering that we cannot discern (from 2 and 9).
11. Only a being who has a sense of purpose beyond ours could provide the purpose of all suffering (from 10).
12. Only God could have a sense of purpose beyond ours.
13. God exists.

FLAW: This argument is a sorrowful one, since it highlights the most intolerable feature of our world, the excess of suffering. The suffering in this world is excessive in both its intensity and its prevalence, often undergone by those who can never gain anything from it. This is a powerful argument *against* the existence of a compassionate and powerful deity.

It is only the Fallacy of Wishful Thinking, embodied in Premise 2, that could make us presume that what is psychologically intolerable cannot be the case.

26. The Argument from the Survival of the Jews

1. The Jews introduced the world to the idea of the one God, with his universal moral code.
2. The survival of the Jews, living for millennia without a country of their own, and facing a multitude of enemies that sought to destroy not only their religion but all remnants of the race, is a historical unlikelihood.
3. The Jews have survived against vast odds (from 2).
4. There is no natural explanation for so unlikely an event as the survival of the Jews (from 3).
5. The best explanation is that they have some transcendent purpose to play in human destiny (from 1 and 4).
6. Only God could have assigned a transcendent destiny to the Jews.
7. God exists.

FLAW: The fact that Jews, after the destruction of the Second Temple by the Romans, had no country of their own, made it *more* likely, rather than less likely, that they would survive as a people. If they had been concentrated in one country, they would surely have been conquered by one of history's great empires, as happened to other vanished tribes. But a people dispersed across a vast diaspora is more resilient, which is why other stateless peoples, like the Parsis and Roma (Gypsies), have also survived for millennia, often against harrowing odds. Moreover, the Jews encouraged cultural traits—such as literacy, urban living, specialization in middleman occupations, and an extensive legal code to govern their internal affairs—that gave them further resilience against the vicissitudes of historical change. The survival of the Jews, therefore, is not a miraculous improbability.

COMMENT: The persecution of the Jews need not be seen as part of a cosmic moral drama. The unique role that Judaism played in disseminating monotheism, mostly through the organs of its two far more popular monotheistic offshoots, Christianity and Islam, has bequeathed to its adherents an unusual amount of attention, mostly negative, from adherents of those other monotheistic religions.

27. The Argument from the Upward Curve of History

1. There is an upward moral curve to human history (tyrannies fall; the evil side loses in major wars; democracy, freedom, and civil rights spread).
2. Natural selection's favoring of those who are fittest to compete for resources and mates has bequeathed humankind selfish and aggressive traits.
3. Left to their own devices, a selfish and aggressive species could not have ascended up a moral curve over the course of history (from 2).
4. Only God has the power and the concern for us to curve history upward.
5. God exists.

FLAW: Though our species has inherited traits of selfishness and aggression, we have inherited capacities for empathy, reasoning, and learning from experience as well. We have also developed language, and with it a means to pass on the lessons we have learned from history. And so humankind has slowly reasoned its way toward a broader and more sophisticated understanding of morality, and more effective institutions for keeping peace. We make moral progress as we do scientific progress, through reasoning, experimentation, and the rejection of failed alternatives.

28. The Argument from Prodigious Genius

1. Genius is the highest level of creative capacity, the level that, by definition, defies explanation.
2. Genius does not happen by way of natural psychological processes (from 1).
3. The cause of genius must lie outside of natural psychological processes (from 2).
4. The insights of genius have helped in the cumulative progress of humankind—scientific, technological, philosophical, moral, artistic, societal, political, spiritual.
5. The cause of genius must both lie outside of natural psychological processes and be such as to care about the progress of humankind (from 3 and 4).
6. Only God could work outside of natural psychological processes and create geniuses to light the path of humankind.
7. God exists.

FLAW 1: The psychological traits that go into human accomplishment, such as intelligence and perseverance, are heritable. By the laws of probability, rare individuals will inherit a concentrated dose of those genes. Given a nurturing cultural context, these individuals will, some of the time, exercise their powers to accomplish great feats. Those are the individuals we call geniuses. We may not know enough about genetics, neuroscience, and cognition to explain exactly what makes for a Mozart or an Einstein, but exploiting this gap to argue for supernatural provenance is an example of the Fallacy of Arguing from Ignorance.

FLAW 2: Human genius is not consistently applied to human betterment. Consider weapons of mass destruction, computer viruses, Hitler's brilliantly effective rhetoric, or those criminal geniuses (for example, electronic thieves) who are so cunning that they elude detection.

29. The Argument from Human Knowledge of Infinity

1. We are finite, and everything with which we come into physical contact is finite.
2. We have a knowledge of the infinite, demonstrably so in mathematics.
3. We could not have derived this knowledge of the infinite from the finite, from anything that we are and come in contact with (from 1).
4. Only something itself infinite could have implanted knowledge of the infinite in us (from 2 and 3).
5. God would want us to have a knowledge of the infinite, both for the cognitive pleasure it affords us and because it allows us to come to know him, who is himself infinite.
6. God is the only entity that both is infinite and could have an intention of implanting the knowledge of the infinite within us (from 4 and 5).
7. God exists.

FLAW: There are certain computational procedures governed by what logicians call recursive rules. A recursive rule is one that refers to itself, and hence it can be applied to its own output ad infinitum. For example, we can define a natural number recursively: 1 is a natural number, and if you add 1 to a natural number, the result is a natural number. We can apply this rule an indefinite number of times and thereby generate an infinite series of natural numbers. Recursive rules allow a finite system (a set of rules, a computer, a brain) to reason about an infinity of objects, refuting Premise 3.

COMMENT: In 1931 the young logician Kurt Gödel published a paper proving The Incompleteness Theorem (actually there are two). Basically, what Gödel demonstrated is that recursive rules cannot capture all of mathematics. For any mathematical system rich enough to express arithmetic, we can produce a true proposition that is expressible in that system but not provable within it. So even though the flaw discussed above

is sufficient to invalidate Premise 3, it should not be understood as suggesting that all of our mathematical knowledge is reducible to recursive rules.

30. The Argument from Mathematical Reality

1. Mathematical truths are necessarily true (there is no possible world in which 2 plus 2 does not equal 4).
2. The truths that describe our physical world are empirical, requiring observational evidence.
3. Truths that require empirical evidence are not necessary truths. (We require empirical evidence because there are possible worlds in which these are not truths, and we have to test that ours is not such a world.)
4. The truths of our physical world are not necessary truths (from 2 and 3).
5. The truths of our physical world cannot explain mathematical truths (from 1 and 3).
6. Mathematical truths exist on a different plane of existence from physical truths (from 5).
7. Only something which itself exists on a different plane of existence from the physical can explain mathematical truths (from 6).
8. Only God can explain the necessary truths of mathematics (from 7).
9. God exists.

Mathematics is derived through pure reason—what the philosophers call a priori reason—which means that it cannot be refuted by any empirical observations. The fundamental question in the philosophy of mathematics is, how can mathematics be true but not empirical? Is it because mathematics describes some trans-empirical reality—as mathematical realists believe—or is it because mathematics has no content at all and is a purely formal game consisting of stipulated rules and their consequences? The Argument from Mathematical Reality assumes, in its third premise, the position of mathematical realism, which isn't a fallacy in it-

self; many mathematicians believe it, some of them arguing that it follows from Gödel's incompleteness theorems (see the Comment in *The Argument from Human Knowledge of Infinity*, #29, above). This argument, however, goes further and tries to deduce God's existence from the trans-empirical existence of mathematical reality.

FLAW 1: Premise 5 presumes that something outside of mathematical reality must explain the existence of mathematical reality, but this presumption is non-obvious. Lurking within Premise 5 is the hidden premise: mathematics must be explained by reference to non-mathematical truths. But this hidden premise, when exposed, appears murky. If God can be self-explanatory, why, then, can't mathematical reality be self-explanatory—especially since the truths of mathematics are, as this argument asserts, necessarily true?

FLAW 2: Mathematical reality—if indeed it exists—is, admittedly, mysterious. Many people have trouble conceiving of where mathematical truths live, or exactly what they pertain to. But invoking God does not dispel this puzzlement; it is an instance of the Fallacy of Using One Mystery to Explain Another.

31. The Argument from Decision Theory (Pascal's Wager)

1. Either God exists or God doesn't exist.
2. A person can either believe that God exists or believe that God doesn't exist (from 1).
3. If God exists and you believe, you receive eternal salvation.
4. If God exists and you don't believe, you receive eternal damnation.
5. If God doesn't exist and you believe, you've been duped, have wasted time in religious observance, and have missed out on decadent enjoyments.
6. If God doesn't exist and you don't believe, then you have avoided a false belief.
7. You have much more to gain by believing in God than by not be-

believing in him, and much more to lose by not believing in God than by believing in him (from, 3, 4, 5, and 6).

8. It is more rational to believe that God exists than to believe that he doesn't exist (from 7).

	God exists	God doesn't exist
Believe	Eternal salvation	You've been duped, missed out on some sins
Don't believe	Eternal damnation	You got it right

This unusual argument does not justify the conclusion that "God exists." Rather, it argues that it is rational to believe that God exists, given that we don't know whether he exists.

FLAW 1: The "believe" option in Pascal's Wager can be interpreted in two ways.

One is that the wagerer genuinely has to believe, deep down, that God exists; in other words, it is not enough to mouth a creed, or merely act *as if* God exists. According to this interpretation, God, if he exists, can peer into a person's soul and discern the person's actual convictions. If so, the kind of "belief" that Pascal's Wager advises—a purely pragmatic strategy, chosen because the expected benefits exceed the expected costs—would not be enough. Indeed, it's not even clear that this option is coherent: if one *chooses* to believe something because of the consequences of holding that belief, rather than being genuinely convinced of it, is it really a belief, or just an empty vow?

The other interpretation is that it is enough to *act* in the way that traditional believers act: say prayers, go to services, recite the appropriate creed, and go through the other motions of religion.

The problem is that Pascal's Wager offers no guidance as to *which* prayers, *which* services, *which* creed to live by. Say I chose to believe in the Zoroas-

trian cosmic war between Ahura Mazda and Angra Mainyu to avoid the wrath of the former, but the real fact of the matter is that God gave the Torah to the Jews, and I am thereby inviting the wrath of Yahweh (or vice versa). Given all the things I could “believe” in, I am in constant danger of incurring the negative consequences of disbelief even though I choose the “belief” option. The fact that Blaise Pascal stated his wager as two stark choices, putting the outcomes in blatantly Christian terms—eternal salvation and eternal damnation—reveals more about his own upbringing than it does about the logic of belief. The wager simply codifies his particular “live options,” to use William James’s term for the only choices that seem possible to a given believer.

FLAW 2: Pascal’s Wager assumes a petty, egotistical, and vindictive God who punishes anyone who does not believe in him. But the great monotheistic religions all declare that “mercy” is one of God’s essential traits. A merciful God would surely have some understanding of why a person may not believe in him (if the evidence for God were obvious, the fancy reasoning of Pascal’s Wager would not be necessary), and so would extend compassion to a non-believer. (Bertrand Russell, when asked what he would have to say to God, if, despite his reasoned atheism, he were to die and face his Creator, responded, “O Lord, why did you not provide more evidence?”) The non-believer therefore should have nothing to worry about—falsifying the negative payoff in the lower-left-hand cell of the matrix.

FLAW 3: The calculations of expected value in Pascal’s Wager omit a crucial part of the mathematics: the probabilities of each of the two columns, which have to be multiplied with the payoff in each cell to determine the expected value of each cell. If the probability of God’s existence (ascertained by other means) is infinitesimal, then even if the cost of not believing in him is high, the overall expectation may not make it worthwhile to choose the “believe” row (after all, we take many other risks in life with severe possible costs but low probabilities, such as boarding an airplane). One can see how this invalidates Pascal’s Wager by considering similar wagers. Say I told you that a fire-breathing dragon has moved into the next apartment, and that unless you set out a bowl of marshmallows for

him every night he will force his way into your apartment and roast you to a crisp. According to Pascal's Wager, you should leave out the marshmallows. Of course you don't, even though you are taking a terrible risk in choosing not to believe in the dragon, because you don't assign a high enough probability to the dragon's existence to justify even the small inconvenience.

32. The Argument from Pragmatism (William James's Leap of Faith)

1. The consequences for the believer's life of believing should be considered as part of the evidence for the truth of the belief (just as the effectiveness of a scientific theory in its practical applications is considered evidence for the truth of the theory). Call this the pragmatic evidence for the belief.
2. Certain beliefs effect a change for the better in the believer's life—the necessary condition being that they are believed.
3. The belief in God is a belief that effects a change for the better in a person's life.
4. If one tries to decide whether or not to believe in God based on the evidence available, one will never get the chance to evaluate the pragmatic evidence for the beneficial consequences of believing in God (from 2 and 3).
5. One ought to make "the leap of faith" (the term is James's) and believe in God, and only *then* evaluate the evidence (from 1 and 4).

This argument can be read out of William James's classic essay "The Will to Believe." The first premise, as presented here, is a little less radical than James's pragmatic definition of truth according to which a proposition is true if believing that it is true has a cumulative beneficial effect on the believer's life. The pragmatic definition of truth has severe problems, including possible incoherence: in evaluating the effects of the belief on the believer, we have to know the truth about what those effects are, which forces us to fall back on the old-fashioned notion of truth. To make the

best case for The Argument from Pragmatism, therefore, the first premise is to be interpreted as claiming only that the pragmatic consequences of belief are a relevant *source of evidence* in ascertaining the truth, not that they can actually be *equated* with the truth.

FLAW 1: What exactly does effecting “a change for the better in the believer’s life” mean? For an antebellum Southerner, there was more to be gained in believing that slavery was morally permissible than in believing it heinous. It often doesn’t pay to be an iconoclast or a revolutionary thinker, no matter how much truer your ideas are than the ideas opposing you. It didn’t improve Galileo’s life to believe that the earth moved around the sun rather than that the sun and the heavens revolve around the earth. (Of course, you could say that it’s always intrinsically better to believe something true rather than something false, but then you’re just using the language of pragmatism to mask a non-pragmatic notion of truth.

FLAW 2: The Argument from Pragmatism implies an extreme relativism regarding the truth, because the effects of belief differ for different believers. A profligate, impulsive drunkard may have to believe in a primitive retributive God who will send him to hell if he doesn’t stay out of barroom fights, whereas a contemplative mensch may be better off with an abstract deistic presence who completes his deepest existential worldview. But either there is a vengeful God who sends sinners to hell or there isn’t. If one allows pragmatic consequences to determine truth, then truth becomes relative to the believer, which is incoherent.

FLAW 3: Why should we only consider the pragmatic effects on the *believer’s* life? What about the effects on everyone else? The history of religious intolerance, such as inquisitions, fatwas, and suicide bombers, suggests that the effects on one person’s life of another person’s believing in God can be pretty grim.

FLAW 4: The Argument from Pragmatism suffers from the first flaw of The Argument from Decision Theory (#31, above)—namely, the assumption that the belief in God is like a faucet that one can turn on

and off as the need arises. If I make the leap of faith in order to evaluate the pragmatic consequences of belief, then, if those consequences are not so good, can I leap back to disbelief? Isn't a leap of faith a one-way maneuver? "The will to believe" is an oxymoron: beliefs are forced on a person (ideally, by logic and evidence); they are not chosen for their consequences.

33. The Argument from the Unreasonableness of Reason

1. Our belief in reason cannot be justified by reason, since that would be circular.
2. Our belief in reason must be accepted on faith (from 1).
3. Every time we exercise reason, we are exercising faith (from 2).
4. Faith provides good rational grounds for beliefs (since it is, in the final analysis, necessary even for the belief in reason—from 3).
5. We are justified in using faith for any belief that is so important to our lives that not believing it would render us incoherent (from 4).
6. We cannot avoid faith in God if we are to live coherent moral and purposeful lives.
7. We are justified in believing that God exists (from 5 and 6).
8. God exists.

Reason is a faculty of thinking, the very faculty of giving grounds for our beliefs. To justify reason would be to try to give grounds for the belief: "We ought to accept the conclusions of sound arguments." Let's say we produce a sound argument for the conclusion that "we ought to accept the conclusions of sound arguments." How could we legitimately accept the conclusion of that sound argument without independently knowing the conclusion? Any attempt to justify the very propositions that we must use in order to justify propositions is going to land us in circularity.

FLAW 1: This argument tries to generalize the inability of reason to justify itself to an abdication of reason when it comes to justifying God's ex-

istence. But the inability of reason to justify reason is a unique case in epistemology, not an illustration of a flaw of reason that can be generalized to some other kind of belief—and certainly not a belief in the existence of some entity with specific properties such as creating the world or defining morality.

Indeed, one could argue that the attempt to justify reason with reason is not circular, but, rather, unnecessary. One already is, and always will be, committed to reason by the very process one is already engaged in—namely, reasoning. Reason is non-negotiable; all sides concede it. It needs no justification, because it *is* justification. A belief in God is not like that at all.

FLAW 2: If one really took the unreasonability of reason as a license to believe things on faith, then which things should one believe in? If it is a license to believe in a single God who gave his son for our sins, why isn't it just as much a license to believe in Zeus and all the other Greek gods, or the three major gods of Hinduism, or the Angel Moroni? For that matter, why not Santa Claus and the Tooth Fairy? If one says that there are good reasons to accept some entities on faith, while rejecting others, then one is saying that it is ultimately reason, not faith, that must be invoked to justify a belief.

FLAW 3: Premise 6, which claims that a belief in God is necessary in order to have a purpose in one's life, or to be moral, has already been challenged in the discussions of The Argument from Moral Truth (#16, above) and The Argument from Personal Purpose (#19, above).

34. The Argument from Sublimity

1. There are experiences that are windows into the wholeness of existence—its grandeur, beauty, symmetry, harmony, unity, even its goodness.
2. We glimpse a benign transcendence in these moments.

3. Only God could provide us with a glimpse of benign transcendence.
4. God exists.

FLAW: An experience of sublimity is an aesthetic experience. Aesthetic experience can indeed be intense and blissful, absorbing our attention so completely, while exciting our pleasure, as to seem to lift us right out of our surroundings. Aesthetic experiences vary in their strength, and when they are overwhelming, we grope for terms like “transcendence” to describe the overwhelmingness. Yet, for all that, aesthetic experiences are still responses of the brain, as we see from the fact that ingesting recreational drugs can bring on even more intense experiences of transcendence. And the particular triggers for natural aesthetic experiences are readily explicable from the evolutionary pressures that have shaped the perceptual systems of human beings. An eye for sweeping vistas, dramatic skies, bodies of water, large animals, flowering and fruiting plants, and strong geometric patterns with repetition and symmetry was necessary to orient attention to aspects of the environment that were matters of life and death to the species as it evolved in its natural environment. The identification of a blissfully aesthetic experience with a glimpse into benign transcendence is an example of the Projection Fallacy, dramatic demonstrations of our spreading ourselves onto the world. This is most obvious when the experience gets fleshed out into the religious terms that come most naturally to the particular believer, such as a frozen waterfall being seen by a Christian as evidence for the Christian Trinity.

35. The Argument from the Intelligibility of the Universe (Spinoza’s God)

1. All facts must have explanations.
2. The fact that there is a universe at all—and that it is *this* universe, with just these laws of nature—has an explanation (from 1).
3. There must, in principle, be a Theory of Everything that explains why just this universe, with these laws of nature, exists. (From 2. Note that this should not be interpreted as requiring that *we* have the

capacity to come up with a Theory of Everything; it may elude the cognitive abilities we have.)

4. If the Theory of Everything explains everything, it explains why it is the Theory of Everything.
5. The only way that the Theory of Everything could explain why it is the Theory of Everything is if it is itself necessarily true (i.e., true in all possible worlds).
6. The Theory of Everything is necessarily true (from 4 and 5).
7. The universe, understood in terms of the Theory of Everything, exists necessarily and explains itself (from 6).
8. That which exists necessarily and explains itself is God (a definition of “God”).
9. The universe is God (from 7 and 8).
10. God exists.

Whenever Einstein was asked whether he believed in God, he responded that he believed in “Spinoza’s God.” This argument presents Spinoza’s God. It is one of the most elegant and subtle arguments for God’s existence, demonstrating where one ends up if one rigorously eschews the Fallacy of Invoking One Mystery to Explain Another: one ends up with the universe and nothing but the universe, which itself provides all the answers to all the questions one can pose about it. A major problem with the argument, however, in addition to the flaws discussed below, is that it is not at all clear that it is *God* whose existence is being proved. Spinoza’s conclusion is that the universe that itself provides all the answers about itself simply *is* God. Perhaps the conclusion should, rather, be that the universe is different from what it appears to be—no matter how arbitrary and chaotic it may appear, it is in fact perfectly lawful and necessary, and therefore worthy of our awe. But is its awe-inspiring lawfulness reason enough to regard it as God? Spinoza’s God is sharply at variance with all other divine conceptions.

The argument has only one substantive premise, its first one, which, though unprovable, is not unreasonable; it is, in fact, the claim that the universe itself is thoroughly reasonable. Though this first premise can’t be proved, it is the guiding faith of many physicists (including Einstein).

It is the claim that everything must have an explanation; even the laws of nature, in terms of which processes are explained, must have an explanation. In other words, there has to be an explanation for why it is *these* laws of nature rather than some other, which is another way of asking for why it is *this* world rather than some other.

FLAW: The first premise cannot be proved. Our world could conceivably be one in which randomness and contingency have free reign, no matter what the intuitions of some scientists are. Maybe some things just *are* (“stuff happens”), including the fundamental laws of nature. Philosophers sometimes call this just-is-ness “contingency,” and if the fundamental laws of nature are contingent, then, even if everything that happens in the world is explainable by those laws, the laws themselves couldn’t be explained. There is a sense in which this argument recalls The Argument from the Improbable Self. Both demand explanations for *just this-ness*, whether of *just this* universe or *just this* me.

The Argument from the Intelligibility of the Universe fleshes out the consequences of the powerful first premise, but some might regard the argument as a *reductio ad absurdum* of that premise.

COMMENT: Spinoza’s argument, if sound, invalidates all the other arguments, the ones that try to establish the existence of a more traditional God—that is, a God who stands *distinct* from the world described by the laws of nature, as well as distinct from the world of human meaning, purpose, and morality. Spinoza’s argument claims that any transcendent God, standing *outside* of that for which he is invoked as explanation, is invalidated by the first powerful premise, that all things are part of the same explanatory fabric. The mere coherence of The Argument from the Intelligibility of the Universe, therefore, is sufficient to reveal the invalidity of the other theistic arguments. This is why Spinoza, although he offered a proof of what he called “God,” is often regarded as the most effective of all atheists.

36. The Argument from the Abundance of Arguments

1. The more arguments there are for a proposition, the more confidence we should have in it, even if every argument is imperfect. (Science itself proceeds by accumulating evidence, each piece by itself being inconclusive.)
2. There is not just one argument for the existence of God, but many—thirty-five (with additional variations) so far, in this list alone.
3. The arguments, though not flawless, are persuasive enough that they have convinced billions of people, and for millennia have been taken seriously by history's greatest minds.
4. The probability that each one is true must be significantly greater than zero (from 3).
5. For God *not* to exist, every one of the arguments for his existence must be false, which is extremely unlikely (from 4). Imagine, for the sake of argument, that each argument has an average probability of only .2 of being true. Then the probability that all thirty-five are false is $(1 - 0.2)^{35} = .004$, an extremely low probability.
6. It is extremely probable that God exists (from 5).

FLAW 1: Premise 3 is vulnerable to the same criticisms as The Argument from the Consensus of Humanity. The flaws that accompany each argument may be extremely damaging, even fatal, notwithstanding the fact that they have been taken seriously by many people throughout history. In other words, the average probability of any of the arguments' being true may be far less than .2, in which case the probability that all of them are false could be high.

FLAW 2: This argument treats all the other arguments as being on an equal footing, distributing equal probabilities to them all, and rewarding all of them, too, with the commendation of being taken seriously by history's greatest minds. Many of the arguments on this list have been com-

pletely demolished by such minds as David Hume and Baruch Spinoza: their probability is zero.

COMMENT: The Argument from the Abundance of Arguments may be the most psychologically important of the thirty-six. Few people rest their belief in God on a single, decisive logical argument. Instead, people are swept away by the sheer number of reasons that make God's existence seem plausible—holding out an explanation as to why the universe went to the bother of existing, and why it is this particular universe, with its sublime improbabilities, including us humans; and, even more particularly, explaining the existence of each one of us who know ourselves as unique conscious individuals, who make free and moral choices that grant meaning and purpose to our lives; and, even more personally, giving hope that desperate prayers may not go unheard and unanswered, and that the terrors of death can be subdued in immortality. Religions, too, do not justify themselves with a single logical argument, but minister to all of these spiritual needs and provide a space in our lives where the largest questions with which we grapple all come together, which is a space that can become among the most expansive and loving of which we are capable, or the most constricted and hating of which we are capable—in other words, a space as contradictory as human nature itself.