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Sagan, Carl. Carl Sagan (d. 1996) was a popular television personality, author of science and science fiction and an agnostic astronomer who strongly defended naturalistic evolution (*see* EVOLUTION, BIOLOGICAL). He wrote numerous books, including *Cosmos* , *Cosmic Connection* , *Life in the Universe* , and *Broca's Brain* .

Although a confessed agnostic (*see* AGNOSTICISM), Sagan made a surrogate religious experience of celebrating the cosmos. The universe, in his system of belief, functioned like a god. The cosmos is ultimate, eternal, creator, and object of worship. The set for his popular-level Public Broadcasting Service series, "Cosmos," was consciously decorated to give the feeling of both a space ship and a cathedral. The theme statement of those programs, Sagan's books, and much of his life's work was " *THE COSMOS IS ALL THAT IS OR EVER WAS OR EVER WILL BE* " (*Cosmos* , 4). The cosmos is supreme and all-encompassing. It is COSMOS, with all capitals.

In the Image of the COSMOS. Sagan believed that human beings are "created" in the image of the cosmos. He writes: "The ocean calls. Some part of our being knows this is from where we came. We long to return. These aspirations are not, I think, irreverent, although they may trouble whatever gods may be" (*ibid.*, 5). Everything in the universe employs the same patterns over and over. Conservatively and ingenuously. This is true of plants and animals, oak trees and humans. Humanity is the product of a long series of biological accidents (*Cosmic Connection* , 52). As to human origins, Sagan states plainly, "Evolution is a fact, not a theory" (*Cosmos* , 27). Humans emerged by a powerful but random process (*ibid.*, 282).

A Moral Duty to the COSMOS. Since humankind is created in the image of the cosmos, people have a moral obligation to their creator. "Our obligation to survive is owed, not just to ourselves but also to the COSMOS, ancient and vast, from which we spring" (*ibid.*, 345). Since we have received our existence, we have a duty to perpetuate its existence. Indeed, "the very key to our survival is the cosmos, on which we float like a speck of dust in a beam of light" (*ibid.*, 4). In such a universe, present and future well-being depends upon scientific knowledge (*UFO's—A Scientific Debate* , xv).

Salvation from the COSMOS. An openness to the cosmos is necessary to advance our knowledge (*Broca's Brain* , 58). Since humans evolved on earth, Sagan reasoned that life evolved elsewhere as well. Every star may be a sun to someone (*Cosmos* , 5). Contact with these

extraterrestrials could be the salvation of the human race. So we must tune in to outer space by way of radio telescopes to receive possible messages. "Receipt of a single message from space would show that it is possible to live through such technological adolescence" (*Broca's Brain* , 275). After all, the transmitting civilization survived. Sagan believed such knowledge might be worth a great deal. Such a message might strengthen the bonds that join all beings on this planet. Since the cosmos is our creator and may be our savior, we have a moral duty to it. Scientists, and particularly astronomers, are priests who remind us of our ethical obligations and show us the way of cosmic salvation.

Evaluation. While Sagan presented his views as scientific, they really are religious. He goes way beyond science into the realm of speculative philosophy and religion. He deifies the cosmos (notice the capital letters, "COSMOS"). It replaces God as Creator and Object of moral duty and religious worship. Sagan even looks to it as the source of our salvation as a race.

Sagan either overlooks or downplays the vast scientific evidence for the existence of God and the creation of life (*see* GOD, EVIDENCE FOR). He admitted that the second law of thermodynamics (*see* THERMODYNAMICS, LAWS OF) would imply a Creator but countered that the first law of thermodynamics shows that the cosmos is eternal and needs no creator. This, however, misunderstands the first law, which does not in its scientific form say anything about whether energy can or cannot be created, but merely that the existing amount of actual energy in the universe remains constant.

By contrast with Sagan, another agnostic astronomer is more fair with the scientific evidence from which one can infer a Creator. Robert Jastrow, founder and director of the Goddard Institute for Space Research, notes that the evidence for a beginning of the universe has mounted. "For the scientist who has lived by his faith in the power of reason, the story sounds like a bad dream. He has scaled the mountains of ignorance; he is about to conquer the highest peak; as he pulls himself over the final rock, he is greeted by a band of theologians who have been sitting there for centuries" (Jastrow, 15).

Inconsistent References to Design. Sagan is inconsistent in his inferences from complex design (specified complexity). He admits that one short message from outer space implies an intelligent being(s) as its source (*see* EVOLUTION, CHEMICAL). Yet he denies the human brain, with some 20 million volumes of the same kind of specified complexity needs an intelligent Creator (*see* TELEOLOGICAL ARGUMENT ; ANTHROPIC PRINCIPLE). Sagan wrote that "the neurochemistry of the brain is astonishingly busy, the circuitry of a machine more wonderful than any devised by humans" (*Cosmos* 278).

If a single message from space requires an intelligent creator, how about 20 million volumes of information? If ordinary machines need an intelligent cause, how about one more wonderful than any devised by humans? Another unbelieving astronomer, Fred Hoyle, was converted to theism when he discovered that the chances of a one-celled organism emerging by purely natural process was 1 in 10 40,000 (*see* Hoyle).

Sources

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Salvation of Infants. See INFANTS, SALVATION OF .

Sartre, Jean Paul. Jean Paul Sartre (1905–1980), a popular French atheist (see ATHEISM) of the mid twentieth century, approached philosophy from an existential perspective. He, along with Albert Camus, stressed the absurdity of life. Sartre was born in Paris to nominal Christians (Catholic-Protestant mix), educated in Germany, and taught philosophy in France. His first work of note was *La Nausea* (*Nausea*). In 1938, Sartre was captured by Germany (1940), returned to France, and taught philosophy until 1944. He attempted an abortive leftist political movement (1951), and later cooperated with French Communists, trying to reconcile Existentialism and *Marxism.

Becoming an Atheist. In his autobiography, *Words* , Sartre wrote of his training, “I was taught . . . the Gospel, and catechism without being given the means for believing” (*Words* , 249). He added, “My family had been affected by the slow movement of dechristianization that started among the Voltairian upper bourgeoisie and took a century to spread to all levels. . . . Good Society believed in God in order to speak of Him. How tolerant religion seemed! How comfortable it was” (*ibid.*, 97, 98).

Sartre said he was sickened by the mysticism and indifference of his grandparents. Outwardly he continued to believe, but he thought of God less and less (*ibid.*, 100–101). As for the origin of his atheism, Sartre wrote: “Only once did I have the feeling that He existed. I had been playing with the matches and burned a small rug. I was in the process of covering up my crime when suddenly God saw me. I felt his gaze inside my head and on my hand. . . . I flew into a rage against so crude an indiscretion, I blasphemed. . . . He never looked at me again” (*ibid.*, 102).

His conversion was confirmed one day, at age 12, when he tried to think about God and could not. From that moment he thought the matter settled, but it wasn't entirely. “Never have I had the slightest temptation to bring Him back to life. But the other One remained, the Invisible One, the Holy Ghost. . . . I had all the more difficulty getting rid of Him in that he had installed himself at the back of my head. . . . I collared the Holy Ghost in the cellar and threw him out; atheism is a cruel and long-range affair: I think I've carried it through. I see clearly, I've lost my illusions” (*ibid.*, 252–53).

There were many philosophical influences on Sartre. From German philosopher Edmund Husserl (1859–1938) he learned the *phenomenological*. *Dialectical* negations (freedom is negativity) came from G. W. F. Hegel (1770–1831). *Atheism* he learned from Friedrich Nietzsche (1844–1900). His *metaphysics* was influenced by Martin Heidegger (1889–1976), though Heidegger disowned Sartre's “Existentialism.”

Important Writings. Sartre's majors works follow the development of his thought. The early period of his career was dominated by phenomenological psychology under the influence of Husserl. Here he produces *Transcendence of the Ego* (1936 French, 1937 English), *The Emotions: Outline of a Theory* (1939, 1948), and *The Psychology of Imaginations* (1940, 1948). The middle period focused on ontology of human existence from Heidegger. Here he produced *Being and Nothingness* (1943, 1956) and *Existentialism and Humanism* (1946, 1948). In a latter period his concerns turned toward Marxism. He wrote *Questions de methode* (1960) and *Critique de la raison dialectique* (1960).

The Atheism of Sartre. View of God. Like other atheists Sartre believed God's existence was impossible because God is by his very nature a self-caused being (see GOD, ALLEGED DISPROOFS OF). But one would have to be ontologically prior to himself in order to cause himself, which is impossible. In Sartre's terms, the “being-for-itself” can never become the “being-in-itself” (*Being and Nothingness* , 755–68). That is, the contingent cannot become the necessary. Nothing cannot become something. So God, a self-caused being, cannot exist.

View of Human Beings. Sartre viewed humanity as an empty bubble on the sea of nothingness. The basic human project is to become God. But it is impossible for the contingent to become a necessary being, for the subjective to become objective, or for freedom to become determined. The individual is, in fact, condemned to freedom (see FREE WILL). If one were to attempt to escape his destiny he would still be freely fleeing it. Even suicide is an act of freedom by which one would vainly attempt to avoid his freedom. So the human “essence” is absolute freedom, but absolute freedom has no objective or definable nature. The “I” (subject) always transcends the “me” or “it” (object).

View of Ethics. There are no absolute or objective moral prescriptions. For “no sooner had you [Zeus] created me than I ceased to be yours,” wrote Sartre. “I was like a man who's lost his shadow. And there was nothing left in heaven, no right or wrong, nor anyone to give me orders. . . . For I, Zeus, am a man, and every man must find out his own way” (*No Exit* , 121–23).

Not only are there no divine imperatives or moral prescriptions, but there are no objective values. In the last lines of *Being and Nothingness* , Sartre wrote, “it amounts to the same thing whether one gets drunk alone or is a leader of nations.” For all human activities are equivalent. We must, in fact, repudiate this “spirit of seriousness” which assumes there are absolute or objective values and accept the basic absurdity and subjectivity of life (see de Beauvoir, 10, 16–18, 156).

What then should one do? Literally, “his own thing.” Since there are no ultimate and objective values, we must create them. A person can act for personal good or for the good of all

humanity. But there is no ethical obligation to think about others. In the final analysis, each is responsible only for the use of personal, unavoidable freedom.

View of the World and Destiny. The world for Sartre is real but contingent. It is simply there. It, like human life, is a given. Philosophically, it is uncaused. It is the field in which subjective choices are performed. It has no objective meaning. Each person creates personal meaning. The fact that several people may choose the same subjective projects (like Marxism for Sartre) makes no difference. Each person still is objectively the result only of the personal choices he or she has made. For example, Sartre said, "I am my books." Yet each transcends the world that has been personally created. The author is more than the words. He or she is the "Nothing" (freedom) out of which it was created.

Evaluation. Beside the general case for theism (*see* APOLOGETICS, ARGUMENT FOR ; COSMOLOGICAL ARGUMENT ; MORAL ARGUMENT FOR GOD ; TELEOLOGICAL ARGUMENT) and the answers to atheists' objections (*see* GOD, OBJECTIONS TO PROOF FOR), there are things that can be said of Sartre's form of atheism.

First, God is not a *self-caused* Being, which is impossible; he is an *uncaused* Being. By creating a false definition of God, Sartre was able to dismiss God too easily. But this was only a straw man, not the real God.

Second, God is not a contradiction to human freedom and creativity. God is the supreme creator and man is sub- and co-creator of good and value. God is the primary cause, and human freedom is the secondary cause. Free will and determinism are not logically contradictory, for God can predetermine that a person is free.

Third, Sartre makes an unjustified, radical disjunction between subject and object, fact and value. But in an individual human being this is a distinction without a real difference. I am me. An attack upon my objectivity (say, my body) is an attack upon me. When one kills a body the person leaves too. Someone cannot cut off my arm in anger without attacking me. My objectivity and subjectivity are not separable in this life.

Fourth, if there are no objective values and each is fully responsible only for self, then there is no meaningfully ethical sense in which one ought to choose responsibly for others. Indeed, there is no moral obligation to do anything. Atheistic existentialists do what they do only because they choose to do it. Atheistic existentialism reduces to antinomianism (*see* MORALITY, ABSOLUTE NATURE OF).

Fifth, despite his autobiographical comments, Sartre was unable to dismiss God so easily. Before he died, he turned back to the God who created him. As reported in a French magazine, Sartre embraced Christian theism before he died. In his own words (Spring 1980): "I do not feel that I am the product of chance, a speck of dust in the universe, but someone who was expected, prepared, prefigured. In short, a being whom only a Creator could put here; and this idea of a creating hand refers to God." Sartre's mistress, Simone de Beauvoir, reacted to Sartre's apparent recantation, complaining, "How should one explain this senile act of a turncoat?" She adds: "All

my friends, all the Sartrians, and the editorial team of *Les Temps Modernes* supported me in my consternation" (cited in *National Review* , 677).

If view of this conversion, it was little wonder that his existential colleagues reacted as they did, for it is a tacit self-condemnation of Sartrean Humanism by Sartre himself. Two men, Alain Larrey and Michael Viguier, who lived in Paris in 1980, report that two months before his death, Sartre complained to his Catholic doctor that he "regretted the impact his writings had on youth," that so many had "taken them so seriously."

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Satan, Reality of. A good deal of skepticism has been expressed about Satan. Those who take the Bible seriously are obliged to believe in Satan's existence, since the Bible unmistakably refers to the demonic. Nonetheless, it is objected by skeptics and atheists (*see* ATHEISM) that belief in a sinister evil power in the universe is outmoded and superstitious.

In Defense of Satanic. A real personal Devil is given distinctive traits of personality, including intellect (2 Cor. 11:3 ; Luke 4:1f.). Ascribed to him are the emotions of desire (1 Tim. 3:6 ; cf. Isa. 14:12f.), jealousy (Job 1:8 , 9), hatred (1 Peter 4:8), anger (Rev. 12:12), and will. The Devil commands (Luke 4:3 , 9) and leads rebellions (Rev. 12:1–3).

Some evidence for the personality and reality of Satan is direct. In total, it is sufficient to establish existence of a personal Devil.

The Authority of Bible. Once the authenticity and Divine origin of the Bible are established (*see* BIBLE, EVIDENCE FOR ; NEW TESTAMENT, HISTORICITY OF), the existence of Satan follows.

Genesis 3:1 describes Satan as a personal enemy of God and humans who deceives: “Indeed, has God said, ‘You shall not eat from any tree of the garden?’ ” The historicity of this passage is confirmed by New Testament references to the historicity of Adam and Eve (see ADAM, HISTORICITY OF ; EDEN, GARDEN OF) and their fall (cf. Rom. 5:12 ; 1 Tim. 2:13–14).

First Chronicles 21:1 and Psalm 109:6 describe Satan as standing against God’s people. Job 1–2 records that Satan has access to God’s presence and accuses people: “Now there was a day when the sons of God came to present themselves before the Lord, and Satan also came among them” (1:6). Satan is the real cause of Job’s otherwise unexplainable suffering.

Nineteen of the twenty-seven New Testament books refer to Satan (and four more to demons). We gain a lot more informed understanding of this sphere of rebellion against God. The personal encounters and conversations of Christ with Satan and demons made it evident that Jesus believed in a real, personal Satan. Jesus made twenty-five of the twenty-nine references to Satan found in the Gospels. Indeed, Jesus carried on an extended conversation with Satan during his temptation. Matthew 4 and Luke 4 describe a personal encounter between Satan and Jesus. Mark 1:12 and Hebrews 4:13 refer to this confrontation. To deny the reality of a personal Satan in this passages is to impugn the integrity or sanity of Christ (*see* CHRIST, DEITY OF). In Revelation 12:9 several names describing Satan are mentioned in one passage: “And the great dragon was thrown down, the serpent of old who is called the devil and Satan, who deceives the whole world; he was thrown down to the earth, and his angels were thrown down with him.” Rev. 20:2 speaks of an angel of God who “laid hold of the dragon, the serpent of old, who is the devil and Satan, and bound him for a thousand years.”

The events surrounding the temptation are all historical—the ministry of John the Baptist and baptism of Jesus (cf. Matthew 3). The nature and reality of the account is too vivid to be merely symbolic. The Gospels accord considerable significance to the event as a watershed point in the life of Christ and salvation history. He declared himself to be the Son of God; he conquered temptation. He passed the test the first Adam had failed.

The Enemy of God’s People. The history of both Israel and the church are difficult to understand apart from a personal Satan who seeks to thwart God’s plan for history. At the fall it was announced that human salvation would come through the promised seed of the woman (Gen. 3:15). This covenant promise was eventually narrowed to the offspring of Abraham through Isaac and Jacob (Gen. 12:1–3 ; 36 ; 46). The covenant came to be centered in twelve tribes of Israel (Genesis 49). Satan relentlessly attacked that bloodline (cf. Num. 24:10 ; Zech 3:1).

Considering the relative insignificance of Israel in the history of the world, they have been the continual, repeated victims of programs of genocide, starting with the Persians (cf. Esther). The Greek conquest of Palestine was a studied attempt to destroy the Jewish culture with few parallels. From Haman through medieval pogroms to Hitler, Stalinization, and Sadam Hussain, this tiny people have been targeted. This conspiracy of hatred against the Jews is best explained as emanating from one sinister evil mind. This is to say nothing of the two millennia of attacks on Christian identity, purity, and community. On numerous occasions these attacks have seemed perilously close to demolishing God’s new covenant people.

The Reality of Demons. Another argument in support of the reality of the Devil is that of demons who express a unified conspiracy against God, his plan, and his people. Without a leader the demonic forces would not manifest such an organized show of force against God. Indeed, the Bible describes Satan as their “prince” (Luke 11:15) and “king” (Rev. 9:11). The increasing evidence for true demonic possession is an extrabiblical source of support for the reality of demons.

The Universality of Temptation and Evil. Another evidence of the reality of a personal Devil is the universal, powerful and persistent nature of the temptation to do evil. What else accounts for heinous crimes committed by seemingly decent people, from David to the present. Even law-abiding people (who pass for what we call “good”) show that they are not good by feeling the urge to do things totally out of keeping with their character. And this includes Christians. The universal temptation to sin, even by godly people, is best explained by a sustained, personal attack. Evil does not fit the impersonal force category under which it is often placed. Gravity and magnetism are impersonal forces, but they do not personally allure. Evil by its very nature interacts with intellect and will.

The Proliferation of Deception. The existence of thousands of false religions and cults testifies to the existence of a great Deceiver. Paul wrote: “The Spirit clearly says that in latter times some will abandon the faith and follow deceiving spirits and things taught by demons. Such teachings come through hypocritical liars, whose consciences have been seared as with a hot iron” (1 Tim. 4:1–2).

Considered as a whole the direct and indirect evidence for the existence of a personal evil power behind this world is substantial. It is based both in history and in personal experience.

Objections to the Devil. A common objection to the existence of the demonic is that there are natural explanations for what is sometimes called “demonic” or evil. A common argument is that sicknesses once attributed to the demonic, even by the Bible, are now known to have natural causes. This objection overlooks that the Bible distinguishes between sickness and demonic possession. Jesus differentiated between them when he listed them as separate miracles the apostles were given power to do: “Heal the sick, raise the dead, cleanse those who have leprosy, drive out demons” (Matt. 10:8). The Bible does not claim that all sickness is demonically caused. The Bible recommends the use of medicine in treating natural sickness (cf. 1 Tim. 5:23).

Similar symptoms may be present in sicknesses and some demon possessions, but that does not prove there is a natural explanation for both. The young man from whom a demon was cast in Matthew 17:14–17 had symptoms similar to those of an epileptic seizure, but that doesn’t mean he had epilepsy. Similar effects do not prove identical causes (*see* MIRACLES, FALSE). Both God and the magicians of Egypt turned water blood-red. Even a demon-caused illness might respond to medicine. Many induced sicknesses can be treated. Because a mind caused it (whether human or demonic) does not mean medicine cannot relieve symptoms.

At least some demonic activity manifests distinctive spiritual characteristics not present with natural sickness. These symptoms could include such things as opposition to God, violent

reaction to Christ, and the manifestation of supernormal strength (cf. Mark 5:1–4). These do not respond to any purely natural treatment.

Another argument is that belief in satanic activity is characteristic among the uneducated. These beliefs diminish as a society moves to a modern culture. However, this may partly be due to different strategies Satan uses among different peoples. He can adapt to the culture he is deceiving. What better way to deceive the sophisticated anti-supernaturalists than to lead them to believe he does not exist. The Bible declares that Satan disguises himself as an angel of light (2 Cor. 11:14). But it is not true that demonic manifestations occur only among “primitive” people. With the “post-Christian age” the Western world has seen far more occultic activity and reports of demonic manifestations.

Some of the greatest Western minds have believed in Satan and the demons. This includes Augustine, Anselm, Thomas Aquinas, Blaise Pascal, Søren Kierkegaard, and C. S. Lewis. It is not the degree of intelligence or education that determines whether one believes in a personal Satan. Rather, it depends on whether one has rejected the supernatural revelation of Scripture (see BIBLE, EVIDENCE FOR).

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Schaeffer, Francis. Francis Schaeffer (1912–1984) was born in Germantown, Pennsylvania. After being graduated from Hampden-Sydney College, he came under the teaching of Cornelius Van Til at Westminster Seminary and the biblical/historical evidence focus of Allan MacRae at Faith Seminary. After ten years in the pastorate in the United States, he and his wife Edith went to Switzerland as child evangelism missionaries in 1948. After a personal spiritual and ecclesiastical crisis in 1955, during which he was abandoned by his mission board, he began L’Abri Fellowship there as an outreach primarily to U.K. and American college students wandering Europe. L’Abri became an intellectual center that critiqued culture and challenged those influenced by existentialism and modernist European theologies.

Many of Schaeffer’s works are related to apologetics, but three in particular spell out his views: *The God Who Is There* (written first but published 1968), *Escape from Reason* (1968), and *He Is There and He Is Not Silent* (1972). *Genesis in Space and Time* (1972) and *No Final Conflict* (1975) engage in biblical apologetics. While *How Shall We Then Live?* (1976), *Whatever Happened to the Human Race?* (1979), and *A Christian Manifesto* (1981) can be viewed as cultural apologetics. *Back to Freedom and Dignity* (1972) defended human free choice

(see FREE WILL) and the image of God against the determinism of B. F. Skinner. Schaeffer also wrote many books on the spiritual life including *The Mark of a Christian* (1970) and *True Spirituality* (1971).

Schaeffer’s Apologetic Approach. Schaeffer was neither a professional philosopher nor an apologist. He considered himself an evangelist, though more properly he was a pre-evangelist or popular apologist. As such, he did not employ terms in a precise or technical sense. Nor did he write systematically. His early apologetic works first were given as lectures (Duriez, 252). The result is that his precise apologetic method is difficult to reconstruct; elements in his approach, however can be distinguished.

Presuppositional Starting Point. Thomas V. Morris points to presuppositional elements in Schaeffer’s approach (see PRESUPPOSITIONAL APOLOGETICS). Schaeffer refused to be pigeonholed as either a presuppositionalist or an evidentialist (cited by Rueggsegger, 64). Nonetheless, he was influenced by Van Til and considered presuppositions “crucial” (Duriez, 256). He went so far as to say that presuppositional apologetics would have stopped the decay of modern culture. “So now for us, more than ever before, a presuppositional apologetic is imperative” (*The God Who Is There* , 15). Schaeffer even speaks of “necessity” for his arguments (Morris, 31), though Gordon Lewis insists that this is a “descriptive necessity” (Lewis, 88) of a popular evangelist, not a philosophical necessity of a technical apologist. Schaeffer biographer Colin Duriez describes Schaeffer’s theme of the “ ‘necessity’ of historic Christianity,” that “without God’s existence and communication there are no answers to the fundamental human questions” (Duriez, 256). This is a transcendental argument. Schaeffer, like other presuppositionalists, begins with the Christian starting point of the triune God revealed in Scripture.

Schaeffer’s presuppositional starting point, like Van Til’s, was the “infinite-personal God” of the Bible (Schaeffer, *The God Who Is There* , 94). Schaeffer noted that “every person we speak to, whether the shop girl or university student, has a set of presuppositions, whether they have analyzed them or not” (ibid., 109). Presuppositions provide a starting point for spiritual journey (ibid., 126). One must go on to provide a rational verification of beliefs. In this context, Kenneth Harper views Schaeffer as an “inconsistent presuppositionalist,” for, unlike Van Til, Schaeffer believed in common ground with unbelievers (Harper, 138). However, even Van Til recognized common ground in a formal sense as well as verification by means of a transcendental argument.

Logical Coherence. Over against the radical existentialism, irrationalism, and growing mysticism of culture, Schaeffer stressed the principle of noncontradiction (*The God Who Is There* , 109). He believed that modern people were engaged in an “escape from reason.” All non-Christian views are inconsistent. Christianity by contrast, “constitutes a non-self-contradictory answer” (ibid., 156). Logic is part of God’s image in man by which truth claims are to be tested. Without logical coherence there is no truth. Schaeffer refers often to this theme.

Pragmatic Element. Since the thrust of Schaeffer’s apologetic strategy was to show that the non-Christian view was *unlivable* , there is a pragmatic dimension to it (see Geisler, *Christian Apologetics* , chap. 6). Only Christian presuppositions can be lived out consistently, according to Schaeffer. He insists that “ we must be able to live consistently with our theory” if it is true (*The*

God Who Is There , 109). The materialistic (*see* MATERIALISM) view is false because “man simply cannot live as though he were a machine.” The Christian view “can be lived with, both in life and in scholarly pursuits.” Furthermore, the Christian “has years of experimental evidence” in support of his belief. Thus, livability is a test for the truth of a view and unlivability is a test for its falsity (ibid., 109–11).

Verification Aspect. Gordon Lewis sees his own form of presuppositionalism in Schaeffer, which is patterned after that of John Carnell . He prefers to call it a verification apologetic that is neither deductive nor inductive but an abductive approach (Lewis, “Schaeffer’s Apologetic Method”). Indeed, Schaeffer does say rationality is gained “on the basis of what is open to verification and discussion” (*Escape from Reason* , 82). He even defines *verification* as “the procedure required for the establishment of the truth or falsity of a statement” (*The God Who Is There* , 180). He lists a two-fold form of verification, though the first one contains two elements:

1. The theory must be non-contradictory, and it must give an answer to the phenomenon in question.
2. We must be able to live it out consistently (ibid., 109).

So Schaeffer’s definition of *verification* is more broad than that of science. As noted above, at times he seem to engage in a kind of transcendental argument, setting forth the necessity of God’s being there and not being silent in order for us to make sense out of the world.

Evaluation. Positive Contributions. There are many commendable things about Francis Schaeffer’s approach to apologetics. Among these the following should be noted.

The propositional authority of Scripture. Schaeffer, like other presuppositionalists, began with the triune God (*see* TRINITY) who has revealed himself in Scripture. He stressed the need for propositional revelation (ibid., 109; *see* BIBLE, EVIDENCE FOR). Schaeffer never wavered on his belief that the inerrancy of Scripture is a “watershed” issue. It is God’s objective, propositional revelation to mankind. He encouraged the formation of the International Council of Biblical Inerrancy (ICBI), 1978–1988, which produced the “Chicago Statement” on inerrancy and the book *Inerrancy* . Schaeffer attended one of its early formation meetings of the ICBI. His book *No Final Conflict* drew a line in the sand for evangelicals on this issue.

The rational character of belief. He constantly stressed the objective, rational character of belief. In *Escape from Reason* he critiques the irrationalism, subjectivism, and existentialism that had permeated so much of the twentieth century. In this context, Schaeffer had a greater appreciation for human reason than did Van Til.

Schaeffer was adamant about the objective nature of truth (*see* TRUTH, NATURE OF). Truth “open to verification [and] can also be communicated verbally in writing” (ibid., 141). There are no special tests for religious truth, for “scientific proof, philosophical proof and religious proof follow the same rules” (ibid., 109). Truth is truth. Although since the term has been diluted to mean subjective truth, Schaeffer sometimes refers to objective truth by the deliberately redundant phrase, “true truth.”

The need for common ground. Another positive dimension of Schaeffer’s approach was his stress on the need for common ground in discussions with unbelievers. This he believed was rooted in the fact that “we are made in the image of God” (*Escape from Reason* , 83). The fall does not mean we cease to be human or rational (*The God Who Is There* , 178). Nonbelievers share with believers both moral and rational absolutes. Both a moral framework and moral guilt is experienced by unbelievers (ibid., 102). Further, humans have the “power to reason consistently” (ibid., 179). The law of noncontradiction is not from Aristotle but is part of being created in the image of God (*see* FIRST PRINCIPLES). While these factors are shared with unbelievers, they deny the adequate ground for them in God (*He Is There and He Is Not Silent* , 65).

Negative Aspects of Schaeffer’s Apologetic. Much of the negative reaction to Schaeffer’s approach is generated by his imprecise use of terms. Most of this can be explained by his lack of scholarly background in philosophy or apologetics. By his own confession he was an evangelist who developed a practical method for doing evangelism, or better, pre-evangelism. Nonetheless, Schaeffer must take responsibility for the inaccuracies and insufficiencies in his system.

Misunderstanding of modern thinkers. While Schaeffer generally intuited correctly the major flow of modern thought, nonetheless, he often misunderstood the actual sources. Most experts on Søren Kierkegaard believe that Schaeffer wrongly understood him to be an irrationalist. Schaeffer also misunderstood Thomas Aquinas, characterizing him as someone who separated faith and reason, thus giving rise to modern Humanism (*see* FAITH AND REASON). In an unmistakable distortion of Aquinas, Schaeffer contended that, as a result of Aquinas, philosophers “were making the particulars autonomous and thus losing the universal that gave rise to the particulars meaning.” Thus, “if nature or the particulars are autonomous from God, then nature begins to eat up grace. Or, we could put it this way: all we are left with are particulars, and universals are lost, not only in the area of morals, which would be bad enough, but in the area of knowing” (Schaeffer, *He Is There and He Is Not Silent* , 41–42). As detailed analysis of the writings of Aquinas reveal (see Geisler, *Inerrancy* , all), nothing could be farther from the truth. Aquinas was one of the greatest defenders of universals in knowledge and moral absolutes of all time.

Duriez attempts in vain to exonerate Schaeffer of this charge by citing obscure references and secondary sources but fails to produce any text from Aquinas to support his misunderstanding (Duriez, 252–54). His effort to show indirect causal relations only manifests misuse (not proper use) of Aquinas (see Geisler, *Inerrancy* , chaps. 1, 5).

Lack of appreciation for classical apologetics. Although some of his own reasoning can be construed in the form of a teleological argument or cosmological argument for God’s existence, Schaeffer makes these no formal part of his apologetic system. In fact, he explicitly rejects classical apologetics (*The God Who Is There* , 15). He does not seem to appreciate the need expressed by the great Christian apologists from earliest times to offer theistic arguments to establish the existence of God—the linchpin of theistic apologetics.

Ironically, while Schaeffer rejects classical apologetics, he nonetheless at times emulates what would be arguments for the existence of God. For example, employing a transcendental

form of argument, he concludes that “everyone has to explain the fact that the universe and he, the individual exist; thus, something has ‘been there!’” (*He Is There and He Is Not Silent*, 92, emphasis added). He even uses the basic premises of the cosmological argument, namely, that 1) something exists, and 2) nothing cannot produce something. For he rejects the view that “everything that exists has come out of absolutely nothing” (ibid., 7).

Invalid reasoning processes. From a philosophical or apologetic standpoint Schaeffer’s logic is often loose and lacking. As Lewis notes, “Schaeffer would have done well to define the law of noncontradiction more carefully. His popular purposes actually led him to inaccuracy, since not every ‘opposite’ is a contradictory” (“Schaeffer’s Apologetic Method,” 81).

Others have seen a logical fallacy of affirming the consequent in his presuppositional approach. It argues if “P” is true, then “Q” is true. “Q” is true. Therefore, “P” is true. This is the same difficulty faced by scientific forms of reasoning. Some contend that it can be overcome by divergent lines of evidence (ibid., 99). Others conclude that this is why the scientific method can falsify views but not verify any. Of course this can be overcome if one’s argument is put in a valid transcendental form. But there seems to be no valid way to do this—at least not with all that Schaeffer and other presuppositionalists wish to pack into their presuppositions, namely, the Trinity and inspiration of the Bible (see Van Til).

Insufficient pragmatic element. While Schaeffer has more than a pragmatic dimension to his apologetic (there being rational and evidential elements as well), nonetheless, he places great emphasis on the “unlivability” of the non-Christian views. This no doubt arose out of his use of apologetics as a practical aid to evangelism. However, even “practical” approaches should involve valid thinking. And it is not sufficient to test a view on the basis of its “livability” or “unlivability.” First, it is a pragmatic test subject to all the criticism of that test for truth (see TRUTH, NATURE OF ; PRAGMATISM). Second, “livability” will be defined differently by different worldviews. And it begs the question to use a Christian view to test whether a Hindu or some other view is livable.

Third, of course, if a view is true it should be livable. But this does not mean that if something is livable then it must be true. In fact, simply because some people find Christianity unlivable does not mean it is false. They may not be living it correctly, namely, by the power of God.

Insufficient systematic coherence. If Schaeffer’s view is considered substantially the same as that of John Carnell’s, as Lewis suggests, then it is subject to the same criticism discussed in the articles on Carnell and Presuppositionalism. More than one worldview may be systematically consistent with the facts as they are interpreted. However, each worldview interprets the facts differently. By systematic coherence alone one cannot properly adjudicate between conflicting worldviews. Hinduism and Zen Buddhism are internally consistent and account for all the data of experience as they understand it (though they fall on other grounds). So the Christian worldview cannot be proven unique by this method.

Overstating his conclusions. Even some defenders of Schaeffer’s method admit that he overdraws his conclusions. Lewis observes that “Schaeffer often thinks he has examined all

possible hypothesis when he has examined few” (ibid., 100). One cannot know that all non-Christian views are incoherent and/or unlivable unless he has carefully examined all of them. Schaeffer nowhere even attempts to do this in his writings.

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Schleiermacher, Friedrich. Friedrich Schleiermacher (1768–1834) was a German theologian educated in Moravian pietism. He was ordained and preached in Berlin (1796) before teaching theology at Halle (1804) and Berlin (1810). His two major works are *On Religion* (1799), which is experiential in its orientation, and *The Christian Faith* (1821–22), which is doctrinal in approach. He also wrote a *Brief Outline on the Study of Theology* and a posthumously published book *Hermeneutics*.

Schleiermacher was influenced by pietism, which stressed the devotional over the doctrinal; romanticism, which included a belief in pantheism in contrast to theism, and agnosticism, following Immanuel Kant that emphasized the practical over the theoretical.

Schleiermacher himself exerted a tremendous influence on his followers. As the father of modern liberalism, he influenced most major liberals after him, among them Albrecht Ritschl (1822- 1889), *Critical History of the Christian Doctrine of Justification and Reconciliation* ; Adolf von Harnack (1851–1930), *What is Christianity?* , and Julius Wellhausen (1844–1918), who wrote *Introduction to the History of Israel* in which he defended the J-E-P-D hypothesis of authorship/ redaction of the Pentateuch (*see* PENTATEUCH, MOSAIC AUTHORSHIP OF).

Elements of Religion. For Schleiermacher, the basis of religion is human experience, rather than divine existence. We must *have* it before we can *utter* it. The locus of religion is in the self. The inner is key to the outer. The object of religion is the “All,” which many call “God.” And the nature of religion is found in a feeling (sense) of absolute dependence, which is described as a sense of creaturehood, an awareness that one is dependent on the All, or a sense of existential contingency.

Schleiermacher distinguished religion from ethics and science in the following manner:

Ethics	Science	Religion
way of living	way of thinking	way of feeling
way of acting	way of knowing	way of being (sensing)
practical	contemplative rationalization	attitudinal intuition
self-control		self-surrender

The relation of religion to doctrine is that of a sound to its echo or experience to an expression of that experience. Religion is found in feeling, and doctrine is only a form of the feeling. Religion is the “stuff” and doctrine the structure. Doctrine is not essential to religious experience and is scarcely necessary to expressing it, since it can be expressed in symbol as well.

As to the universality of religion, Schleiermacher believed that all have a religious feeling of dependence on the All. In this sense there are no atheists (*see* ATHEISM). In this he foreshadowed Paul *Tillich.

Being primarily a feeling, religion is best communicated by personal example. It is better caught than taught. Religion can also be communicated through symbols and doctrines. But doctrines are accounts of religious feeling. They are statements about our feeling, not about God, his attributes, or his nature. So there is an endless variety of religious expression, due largely to personality differences. The pantheistic expression results from those who delight in the obscure. Theists (*see* THEISM) by propensity are those who delight in the definite.

The aim of religion is the love of the All, the World-Spirit. This is achieved through loving other human beings. The result of religion is unity of life. And its influence is manifest in morals. Religion produces a wholeness of life, but it has no specific influence on individual acts. We act *with* religion, not *from* it.

Likewise, the influence of religion on science is not direct. One cannot be scientific without piety. For the feeling of dependence on the All removes presumption to knowledge, which is ignorance. The true goal of science cannot be realized without a vision arising from religion.

The Test for Truth. Religions are neither true nor false, as such. Truth categories do not apply to a feeling of absolute dependence. Truth and falsity relate to ideas (*see* TRUTH, NATURE OF). And the truth of an idea is determined by two sets of criteria, scientific and ecclesiastical. Scientific criteria include clarity, consistency, coherence, and fit with other doctrines into a system. The ecclesiastical criteria apply to the life of the church. Indeed the knowledge of God is mediated through the corporate experience of redemption, rather than in a body of doctrine. It is for this reason that Schleiermacher relegated his treatment of the Trinity to an appendix. He believed it a speculation divorced from piety.

For example, Schleiermacher’s evaluation of the doctrine of God’s timelessness (*see* GOD, NATURE OF) yielded these results:

1. Timelessness does not fit well with the incarnation. How can the eternal become temporal?
2. Timelessness conflicts with the doctrine of creation. How can the eternal act in time?
3. Timelessness conflicts with foreknowledge, or even with knowledge. Why does the Bible speak of God as foreknowing? How could a timeless God know anything in time?
4. Timelessness conflicts with God’s personality. How can God plot his purpose and respond to happenings in time if eternal?
5. Timelessness conflicts with God’s worship-appropriateness. It necessitates God’s immutability. Who can worship a God who cannot be moved to change in an way?

Hence, timelessness is rejected as a true doctrine.

Schleiermacher’s concept of salvation was not orthodox. He understood redemption to be the impression made by Jesus. This unclouded God-consciousness transformed the Christian community when an impoverished God-consciousness was replaced with that of Jesus. His view of miracles and providence was ambivalent. And his almost complete stress on God’s immanence made him liable to the charge of pantheism .

Evaluation. Christian apologists take note of a number of Schleiermacher’s views, particularly his views of God, religion, truth, and biblical criticism .

Schleiermacher offered insight into religion with his stress on the contingent and dependent nature of all creatures; his emphasis on the importance of religious experience; his distinctions between religion, science, and ethics; his belief that truth needs to be tested; his stress on community; and his belief in systematic theology.

But this doesn't mitigate some serious problems: his experimental form of pantheism; his acceptance of Kantian epistemology (*see* KANT ; AGNOSTICISM); his disjunction of experience and doctrine; his contention that truth does not apply to religion (*see* TRUTH, NATURE OF); his reduction of theology to anthropology (*see* Barth); and his acceptance of negative higher criticism of the Bible (*see* BIBLE CRITICISM).

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Schopenhauer, Arthur. Arthur Schopenhauer (1788–1860) was born in Danzig, Germany. He was educated in France, England, and India. He came from a mentally unstable family. His father probably committed suicide. He became completely estranged from his mother and had unfortunate relationships with women in general. His academic career was cut short for lack of students; he deliberately scheduled classes to compete with W. F. G. Hegel at the peak of Hegel's career. After years of solitude and resentment in which his work was never widely accepted, he died in 1860.

Schopenhauer's books include his published dissertation, *On the Fourfold Root of the Principle of Sufficient Reason* (1813) and *The World as Will and Representation [or Idea]* (1818/1819). In 1844 the latter volume was enlarged by fifty chapters. He also produced *On the Will in Nature* (1836) and *The Basis of Morality* (1841).

Philosophy. Although he studied under Friedrich Schleiermacher (1768–1834) and Johann Fichte (1762–1814), they disappointed him. Plato (428–348 B.C.) and Immanuel Kant impressed him. He also acknowledged Hindu influences and the idealism of George Berkeley . Through his mother, a novelist, he learned the ideas of poet and dramatist Johann Goethe (1749–1832).

Epistemology. Schopenhauer was an archenemy of both rationalism and empiricism (*see* HUME, DAVID). The senses offer us only impressions of the phenomenal world (appearance), as David Hume informed us. And the mind cannot know reality as Kant demonstrated.

He severely criticized the principle of sufficient reason used by Gottfried Leibniz and the rationalists. He noted their confusion between real cause and a sufficient reason. Sufficient reason is an *a priori* structure of consciousness; it can't be proven. It applies only to objects of thought, that is, to phenomena and not to the noumena or real world. The four roots of sufficient reason are being, becoming, acting, and knowing.

There is disagreement over whether Schopenhauer was a true atheist (*see* ATHEISM), or perhaps adopted some kind of pantheism . He was clearly opposed to theism. He contended that the ontological argument is based on a confusion by René Descartes between cause and reason. A cause demands something beyond it *ad infinitum* . But reason needs no cause beyond it; reason can be itself (*see* CAUSALITY, PRINCIPLE OF). So, the principle of sufficient reason does not lead to a First Cause (God).

The ontological argument is a “charming joke,” a sleight of hand, according to Schopenhauer. It assumes existence of God by definition, and then pretends to arrive at the proof for God in the conclusion (*see* GOD, EVIDENCE FOR). Aristotle showed that defining (*what* it is) differs from existing (*that* it is). Hence, existence can never belong to the essence of a thing, as the ontological argument affirms.

World as Representation (or Idea). Central to Schopenhauer's system is the premise of the world as representation, that is, that which directly confronts the one who perceives it.

The world is the individual's presentation (or Idea). It appears phenomenally as a mental presentation, and noumenally (really) as thing-in-itself or will. He cites Berkeley that “to be is to be perceived” in support of this. He rejects Fichte's reduction of object to subject and Friedrich Schelling's subject to object. He reduces Kant's forms and categories to space, time, and cause. Reason is the tool of will in opposition to Hegel's concept of the rule of reason.

There are distinctive elements in Schopenhauer's view of reality (metaphysics). Reality is not rational; it is volitional. The thing-in-itself is “cosmic will.” Appearance manifests reality (phenomena reveals the noumena). Humanity carries the answer to metaphysical puzzles in his own breast in the principle of freedom.

Cosmic Pessimism. Schopenhauer's cosmic pessimism stood against both the “enlightenment” and “mechanism” of his day. He viewed reality as a universal will, that is, a single whole, omnipresent in nature as opposed to many individual wills. Will is the nonrational and irrational ground of every sufficient reason. It is a blind cosmic force, incessantly striving to embody itself in space and time. Its operations are without ultimate purpose of design. Nature is a vast phenomenological field for the multitudinous projects of will.

This cosmic dynamism is essentially a will-to-live. The subjective will-to-live is manifest in various degrees of objectification. In fact, these function like Platonic forms (*see* PLATO).

There are higher and lower forms that are more or less adequate expressions for will. These forms are engaged in an incessant strife to provide a place in the world for will. This strife leads to optimism in Leibniz where God is needed to order them. But it leads to pessimism in Schopenhauer, since there is no such God and will is essentially at variance with itself.

Will has essential and internal hostilities so that moments of happiness (accord) are accidental. Pain is the positive essence of life. Will is based in need, deficiency, and pain. It is constantly striving because it hurts. Reason is only a byproduct of this vital force (will). And the human being is worse off with reason, since it anticipates future pain and meditates on the certainty of approaching death. It only enables man to outdo the animals in evil. Freedom is the strongest motive in man, and it alone provides a sufficient reason for action.

Human Nature. Human beings are the embodiment of will, a microcosm of the universe. Will and the body are the same thing, only under different aspects. The mind is the servant of will, not its master. "Schopenhauer utterly rejected such ideas as the inevitability of human progress and the perfectibility of man and replaced them with a picture of mankind in general as doomed to an eternal round of torment and misery," relates biographer Patrick Gardner (*Schopenhauer* , 329). He denied that even radical changes in the social order would solve anything, since "the evil condition of life as we find it is merely the reflection of the aggressive and libidinous urges rooted in our own natures" (ibid.).

Art and Morality. Schopenhauer's pessimism led him to contemplate suicide as the remedy for misery. But he rejected suicide and suggested art as a temporary release from the tensions of life. Suicide yields to irrational will which should be resisted.

Art provides a way of escape. A person should lose himself in quiet contemplation of ideal nature—looking for the perfect forms within the natural world. Art draws one out of self into a painless and timeless knowledge. It is a kind of knowledge vastly superior to that found in natural sciences, which provide only knowledge of the phenomenal world. Art, however, provides insight into the very archetypal (Platonic) forms of which this world is at best an inadequate expression. Creative genius possesses surplus energy of the will, enabling one to concentrate on these ideas.

Morality is an even better release than art. Its sympathy delivers us from egoism and its denunciation delivers us from suffering. The moral worth of an individual is found in his ability to liberate himself from the pressures and urges of irrational will. But ultimate salvation (from suffering) is found in nothingness (*see* HINDUISM, VEDANTA ; ZEN BUDDHISM).

Music , of all human expressions, stands closest to ultimate reality. It is not concerned with the representation of reality in ideas or with the fundamental ideas (forms) that underlie them. Rather, it speaks in "the universal imageless language of the heart" (ibid.). This idea was expressed by Richard Wagner in his opera *Tristan und Isolde* , though Schopenhauer actually disliked the opera.

Evaluation. Positive Dimensions. Realistic view of human nature. In stark contrast to the perfectibility of humankind held by so many of his contemporaries, Schopenhauer saw more

clearly the true human nature. Self-made progress and perfectibility are an illusion. Humankind of itself is doomed to a perpetual suffering and misery.

Emphasis on pessimism. Likewise, he correctly affirmed that pain is the essence of life. Apart from any transcendent hope, a legitimate pessimism emerges. Given the history of human terror, there is no realistic reason to believe that changing social structures will change human nature.

Insufficiency of sufficient reason . Schopenhauer accurately assessed the rationalistic principle of sufficient reason. If everything has a reason, so does God. This observation has been made by theists (*see* Gurr). If, on the other hand, God is his own reason (ground), then he is a self-caused Being. But this is impossible, since one cannot be ontologically prior to oneself.

Invalidity of the ontological argument . Like Kant and most philosophers since, Schopenhauer saw that the ontological argument is invalid. It does smuggle existence into its premises. For only *if* one assumes that a Necessary Being exists, does it follow that it must in reality exist necessarily. In like manner, only *if* a triangle really exists, does it in reality have to have three sides.

The volitional nature of reality. Although Schopenhauer carried it to an irrational extreme, he was certainly correct in observing that ultimate reality has a volitional element. This factor was largely neglected by the rationalists and idealists of this day.

Criticisms. Schopenhauer's atheism as such is subject to the same criticisms as other forms of atheism, which are described in the articles ATHEISM and GOD, ALLEGED DISPROOF OF . A few of his crucial premises are worthy of particular note.

Self-defeating nature. Like others who follow Kant, Schopenhauer's denial of knowledge of God was self-defeating. Indeed, his whole system is a description of ultimate reality as he sees it—the very thing that is not possible on Kantian premises. He is claiming to know with his mind that reality cannot be known with the mind.

Unjustified dismissal of the law of causality. He was correct in dismissing the principle of sufficient reason, but not the principle of causality (*see* CAUSALITY, PRINCIPLE OF). He chided Kant for applying causality to the real (noumenal) world, but he did the same implicitly. He believed that cosmic will was the *cause* of phenomena we observe. But how could he know this unless the principle of causality applied. It does not help to claim that there no Cosmic Mind out there. To argue from what we observe to a real Cause of any kind is to use the principle of causality.

Self-destructive nature of denying rationality. To claim that ultimate reality is not rational is self-defeating. The assertion that all reality is irrational is to deny the reality of the very mind asserting this (*see* REALISM ; FIRST PRINCIPLES). Further, how can the effect be greater than the cause. How can nonrational will be the cause of rational mind (*see* CAUSALITY, PRINCIPLE OF).

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Science and the Bible. The conflict between science and the Bible has been bitter, especially in the last 150 years. Most reasons for this hostility relate to what one perceives to be the nature and procedure of either domain. For many, the alleged conflict is resolved by separating the two spheres entirely. This is sometimes done by limiting the role of religion or the Bible to matters of faith and science to matters of fact. Specifically, some Christians in science argue that the Bible tells us "Who and Why" (God), and science deals with "How."

However, this neat separation of the domains of science and the Bible is unsatisfactory since the Bible does not so limit itself to questions of Who and Why. It often makes assertions of fact about the scientific world. Neither does science limit itself merely to questions of How. It also deals with origins (*see* ORIGINS, SCIENCE OF).

From a Christian perspective the relation between the Bible and Nature is the relation between two revelations of God, special revelation and general revelation (*see* REVELATION, GENERAL and REVELATION, SPECIAL). The first is found in God's revelation in Scripture (*see* BIBLE, EVIDENCE FOR) and the latter in his revelation in Nature. Between these two, when properly understood, there are no conflicts, since God is the Author of both, and he cannot contradict himself.

However, since scientific understanding is merely a fallible human understanding of Nature and since Bible scholars have only a fallible interpretation of infallible Scripture, it is understandable that there will be contradictions in these areas. The situation can be diagrammed as follows:

Scripture	no conflict	Nature
Theology	some conflict	Science

Biblical theology involves human understanding of the biblical text. As such, it is subject to misunderstanding and error. Likewise, science is fallible human attempts at understanding the universe. So conflict is inevitable. For example, most scientists believe the universe is billions of years old. Some Bible scholars hold that it is only thousands of years old. Obviously, both cannot be right.

Principles of Reconciliation. Before areas of specific conflicts are noticed, several guidelines are useful to the nature and procedure of both disciplines.

Either Group Is Subject to Error. Informed persons from both sides, both Bible interpreters and scientists, have made mistakes. Many Bible scholars once believed the sun revolved around the earth (as did many scientists); some believed the earth to be square. But they were wrong. Likewise, the model of an eternal cosmos has been discarded in favor of the big bang model. Evolutionary theories about inheriting acquired characteristics have been overthrown (*see* EVOLUTION, BIOLOGICAL ; EVOLUTION, CHEMICAL).

Either Group Is Subject to Correction. Another important principle is that both areas are subject to correction by the other. For example, scientific fact has refuted the flat-earth theory. Hence, any interpretation that takes verses about the "four corners of the earth" as literal depictions of geography are wrong. Science has proven them wrong.

Likewise, scientists who insist that the universe is eternal hold a theory that has been proven false, both by science and in critiques by Christians (*see* CREATION, VIEWS OF ; EVOLUTION, COSMIC ; BIG BANG THEORY).

Not all conflicts are so easily resolved. Very few things are proven with certainty in science. Some things are only probable or highly probable. For example, that the earth moves around the sun is not absolutely proven. This theory fits the facts as they are known and is a highly probable scientific interpretation of Nature that conflicts with a disputable interpretation of Scripture, then we should assume the latter is wrong. And vice versa. For example, macro-evolution is disputable and the creation of the universe, first life, and new life forms is highly probable. Hence, creation should be accepted as true and macro-evolution rejected (*see* EVOLUTION).

The Bible Is Not a Science Textbook. One principle that some overzealous Christian apologists sometimes forget is that, while the Bible makes no scientific mistakes (*see* BIBLE, ALLEGED ERRORS IN), neither is it a science textbook. It does not speak in technical scientific terms nor with precision. It uses round numbers. It employs observational, rather than astronomical, language (*see* BIBLE, ALLEGED ERRORS). The Bible only affirms partial truths in the various areas of science. It does not teach much geometry, any algebra, or trigonometry. One cannot assume conflicts without taking these factors into consideration.

Science Is Constantly Changing. Science understandings change continually. That means an apologist of years ago who succeeded in reconciling the Bible to some view of science might have been absolutely wrong since there wasn't a real conflict to reconcile. Perfect conformity may be wrong today as well, since science may change tomorrow. Given that science is a

tentative and progressive discipline, never reaching a final conclusion on everything, it behooves us not to assume that there are scientific errors in the Bible unless

1. something is known for certain to be a scientific fact, and
2. it conflicts with an interpretation of Scripture that is beyond all doubt.

For example, it is beyond any reasonable doubt that the Bible teaches that a theistic God exists (*see* THEISM). Hence, one would have to prove that it was a scientific fact beyond all uncertainty that God did not exist in order to show a real conflict. It is unlikely that *real* conflicts between science and the Bible will ever be demonstrated. Some apparent conflicts deserve note, along with some probable and even highly probable views of modern science that find an amazing parallel in the Bible. It is to these that we first turn.

Bible and Science Converge. Given that not much scientific information was known in Bible times, the Bible speaks with considerable scientific credibility, an evidence of its supernatural nature.

Origins. Universe had a beginning. The very first verse of the Bible proclaims that “in the beginning God created the heavens and the earth.” It was common in ancient views to consider the universe eternal, yet the Bible taught that it had a beginning. This is precisely what most scientists now believe in accepting the Big Bang theory. Agnostic astrophysicist Robert Jastrow wrote that “three lines of evidence—the motions of the galaxies, the laws of thermodynamics, and the life story of the stars—pointed to one conclusion: All indicated that the Universe had a beginning” (*God and the Astronomers* , 111).

Order of events. Genesis 1 also indicates a progressive creation, universe, followed by formless earth, followed by what happened to give form to the earth. This is a much more scientifically sophisticated conception than held by the common ancient creation story. The Bible affirms that God said in the beginning, “Let there be light. And there was light” (Gen. 1:3). Jastrow wrote of the parallel of this statement with modern science, “the details differ, but the essential elements in the astronomical and biblical accounts of Genesis are the same: the chain of events leading to man commence suddenly and sharply at a definite moment in time, in a flash of light and energy” (*ibid.*, 14).

No new matter is being created. The Bible declared from the beginning that creation is complete. God rested from his work (Gen. 2:2) and is still at rest (Heb. 4:4f). In short, no new matter (energy) is coming into existence. This is precisely what the First Law of Thermodynamics declares, namely, that the amount of actual energy in the universe remains constant (*see* THERMODYNAMICS, LAWS OF).

Universe is running down. According to the second law of thermodynamics, the universe is running out of useable energy. It is literally growing old. This is precisely what the Psalmist said: “In the beginning you laid the foundations of the earth, and the heavens are the work of your hands. They will perish, but you remain; like clothing you will change them and they will be discarded” (Ps. 102:25–27).

Genesis declares that life first appeared in the sea (Gen. 1:21), and only later on land (1:26–27). This accords with the view that multicellular life teemed in the Cambrian waters before it multiplied on land.

Life produces after its kind. In Genesis 1:24 God said, “Let the land produce living creatures according to their kinds: livestock, creatures that move along the ground, and wild animals, each according to its kind.” According to agnostic paleontologist Stephen Jay Gould, “Most species exhibit no directional change during their tenure on earth. They appear in the fossil record looking much the same as when they disappear; morphological change is usually limited and directionless” (Gould, “Evolution’s Erratic Pace,” 13–14). In that fossil record, as in Genesis, human beings were the last to appear.

Humans made from the earth. Unlike ancient myths or the Qur’an, which claims that humans were made from a “clot of congealed blood” (*see* Sura 23:14), the Bible states that “the LORD God formed the man from the dust of the ground and breathed into his nostrils the breath of life, and the man became a living being” (Gen. 2:7). Further, it adds, “By the sweat of your brow you will eat your food until you return to the ground, since from it you were taken; for dust you are and to dust you will return” (Gen. 3:19). According to science, the constituent elements of the human body are the same as those found in the earth.

Earth Sciences. Water returns to its source. Scripture affirms that “All streams flow into the sea, yet the sea is never full. To the place the streams come from, there they return again” (Eccles. 1:7 ; cf. Job 37:16). While the author may not have been aware of the exact process of evaporation, condensation, and precipitation, his description is in perfect harmony with these processes.

The earth is round. Isaiah spoke of God who “sits enthroned above the circle of the earth” (40:22). This is a remarkably accurate description for an eighth-century B.C. prophet (*see* ISAIAH, DEUTERO). And Solomon had given the same truth in the tenth-century B.C. (Prov. 8:27).

The earth hangs in space. In an era when it was common to believe the sky was a solid dome, the Bible accurately speaks of God spreading out the northern skies over empty space and suspending the earth over nothing (Job 26:7).

The Bible is not only compatible with true scientific findings, but it anticipated many of them. Scientific knowledge is compatible with the truths of Scripture.

Other scientific findings. Many other things discovered by modern science were stated in the Bible hundreds and even thousands of years in advance. These include the fact that: (1) the sea has paths and channels (2 Sam. 22:16 ; Ps. 8:8 ; Prov. 8:28); (2) the sea has boundaries (Prov. 8:29); (3) life is in the blood (Lev. 17:11); (4) disease can be spread by physical contact (Lev. 13).

Alleged Conflicts. Genesis 1–2. The most frequently cited example of conflict between science and the Bible is over the doctrine of creation. There is conflict over the origin of the

universe (*see* ORIGINS, SCIENCE OF); conflict over the origin of first life, and the conflict over human origins. A forceful attack against the Bible from the scientific standpoint is found in the book *The Bible, the Qur'an and Science* by Muslim author Maurice Bucaille. Some of the following specific examples of alleged conflict are cataloged by Bucaille. A strong Christian response to this work appeared in William Campbell, *The Qur'an and the Bible in the Light of History and Science* .

Days of Genesis. It is argued by critics that, since the “days” of Genesis are obviously twenty-four hours long, the Bible is in conflict with modern scientific dating which has proven that the origin of the world and life took a much longer period of time. But it has been shown in the article GENESIS, DAYS OF , that the Hebrew word for “day” can mean era or eon, and that if “solar days” are in view they need not have been successive twenty-four-hour periods. Also, scientific dating methods are built around two unprovable presuppositions: (1) that the original conditions were pure and uncontaminated and (2) that the rate of change has not fluctuated since the original conditions.

Genesis 1:2 . Genesis 1:2 has been called “a masterpiece of inaccuracy from a scientific point of view” (Bucaille, 40). Bucaille cites the fact that Genesis 1:2 mentions water in an early stage of the earth’s history, yet he insists, “to mention the existence of water at this period is however simply pure allegory” (Bucaille, 41).

This is a strange charge, for Bucaille himself admits that “there is every indication that at the initial stage of the formation of the universe a gaseous mass existed” (ibid.). Yet water itself has a gaseous state known as vapor. Further, scientific views change. The theories of today are often discarded tomorrow. So, even if there were some theory today that holds there was no water in the initial states of the universe, it remains highly theoretical. Further, there was water in the early stages of earth’s history, at least in the form of vapor. This is one reason life as we know it is possible on earth, but not on other planets in our solar system. So in his haste to find errors in the Bible Bucaille has made one of his own.

Genesis 1:3–5 . About Genesis 1:3–5 Muslim critic Bucaille affirms, “it is illogical, however, to mention the result (light) on the first day, when the cause of this light [the sun] was created three days later” (ibid., 41).

But the sun is not the only source of light in the universe. Further, it is not necessary to understand the text as saying the sun was created on the fourth day. It may have been only *made to appear* on the fourth day, after the mist of water vapor had cleared away so that its outline became visible. (The Hebrew word for *made* , *asah* , occurs about 1200 times in the Old Testament. It has a wide range of meanings, including: did, made, show, appear, reveal, and made to appear.) Before this its light may have been shining through, as on a misty day, without observers on earth being able to see the outline of the sun.

Genesis 1:14–19 . Many would agree with Bucaille that “to place the creation of the Sun and Moon after the creation of the Earth is contrary to the most firmly established ideas on the formation of the elements of the Solar System” (Bucaille, 42).

Again, there are two problems. One is to assume that even the most prevailing scientific ideas are to be taken as absolute fact. Indeed, it is strange that Muslims use this argument, since they too point to the mistake of theologians who once assumed that the almost universally prevailing scientific view of a geocentric (earth-centered) universe was a scientific fact. In like manner, prevailing scientific ideas about the origin of the sun and moon *could* be wrong.

But, as we have seen above in comments on Genesis 1:3–5 , it is not necessary to believe that the sun and moon were created on the fourth day. Rather, for whatever reason (perhaps as the original vapor disappeared), their form may have only become visible from the face of the earth on the fourth day.

Genesis 1:19–23 . Critical scholars find two things unacceptable in Gen. 1:19–23 : “the fact that continents emerged at the period in earth’s history, when it was still covered with water” and “that a highly organized vegetable kingdom with reproduction by seed could have appeared before the existence of the sun” (Bucaille, 42).

The first point is unsubstantiated, and the second one was answered under Genesis 1:3–5 . Who finds it acceptable that God created seed-bearing plants early in earth’s history? Nontheistic evolutionists who reject God and his special work of creation might find it difficult. It should not be unacceptable to a Muslim, such as Bucaille, who claims to believe the *Qur'an* . The *Qur'an* affirms that God created the world and all that is in it in a few days. The contradiction here is between the Bible and a prevalent scientific hypothesis (see Denton; Johnson; Geisler, chaps. 5–7).

Genesis 1:20–30 . Bucaille insists that this passage contains unacceptable assertions that the animal kingdom began with creatures of the sea and winged birds. However, birds did not appear until after reptiles and other land animals (ibid., 42–43).

The Bible does not actually say that God created feathered birds before reptiles. It refers to winged creatures (Gen. 1:21). This is often translated “birds” (i.e., flying animals) but is never rendered “*feathered* creatures.” And, according to science, winged creatures did exist before feathered birds. Their mention with the “great sea creatures” is an indication that the reference is to winged dinosaurs. Bucaille here assumes an evolutionary scenario. But evolution is an unsubstantiated hypothesis. To offer as scientific proof that “numerous biological characteristics common to both species makes this deduction possible” is to make a fallacious deduction. For common characteristics do not prove common ancestry; it may indicate a common Creator. After all, there is a progressive similarity in automobiles from the first ones to current ones. No one, however, believes that one evolved from another by natural processes.

Finally, some contemporary scientists are questioning the long-held assumption that all winged creatures appeared after reptiles. Some fossils of flying marine animals have been found in earlier strata that were commonly assigned to the origin of reptiles. In any event, there is no contradiction, except between theories of science and some misinterpretations of Genesis.

Genesis 2:1–3 . Commenting on the biblical teaching that God created in six days (Gen. 2:1–3), Bucaille contends that “today we are perfectly aware that the formation of the Universe and

the Earth took place in stages that lasted for very long periods.” This was shown above to be without grounds in the article Genesis, Days of.

Genesis 2:4–25 . Bucaille adopts the outdated view that Genesis 2 contradicts the account given in Genesis 1 . The charge here is that Genesis 1 declares that animals were created before humans, while Genesis 2:19 seems to reverse this, saying, “the LORD God had formed out of the ground all the beasts of the field . . . He brought them to the man to see what he would name them,” implying Adam was created before they were (*see* ADAM, HISTORICITY OF ; GARDEN OF EDEN).

The solution to this problem, however, becomes apparent when we take a closer look at the two texts. The differences appear from the fact that Genesis 1 gives the *order* of events; Genesis 2 provides more *content* about them. Genesis 2 does not contradict chapter 1 , since it does not affirm exactly when God created the animals. He simply says he brought the animals (which he had previously created) to Adam in order that he might name them. The focus in chapter 2 is on the naming of the animals, not on creating them. Thus, Genesis 2:19 , stressing the naming (not the creating) of animals, simply says: “Now the LORD God [who] had [previously] formed out of the ground all the beasts of the field . . . He brought them to the man to see what he would name them.”

Genesis 1 provides the outline of events, and chapter 2 gives details. Taken together, the two chaps. provide a harmonious and more complete picture of the creation events. The differences, then, can be summarized as follows:

Genesis 1	Genesis 2
chronological order	topical order
outline	details
creating animals	naming animals

Once this is understood, the two texts are perfectly complementary.

Genesis 2–3 . Many Bible critics have charged that there is no scientific evidence that the Garden of Eden ever existed, as the Bible maintains. But besides being an argument from silence which is a form of the fallacy of the argument from ignorance, this is not true. There is ample historical and geographical evidence for the existence of a literal Garden of Eden.

Genesis 4 . The problem here is that the Bible says Cain married when there was apparently no one to marry. Cain and Abel were the first children born to Adam: There were no women for Cain to marry. There was only Adam, Eve (Gen. 4:1), and his dead brother Abel (4:8). Yet the Bible says Cain married and had children.

Although this is a favorite of Bible critics, the solution is rather simple. Cain married his sister (or possibly a niece). The Bible says Adam “begot sons and daughters” (Gen. 5:4). In fact, since Adam lived 930 years (Gen. 5:5), he had plenty of time to produce plenty of

children. Cain could have married one of his many sisters, or even a niece, if he married after his brothers or sisters had grown daughters.

As to the subsidiary problem of forbidden and genetically dangerous incest (Levit. 18:6) if Cain married his sister, the solution is not difficult either. First of all, there were no genetic imperfections at the beginning of the human race. God created a genetically perfect Adam (Gen. 1:27). Genetic defects resulted from the Fall and only occurred gradually over long periods of time. Further, there was no command in Cain’s day not to marry a close relative. This command (Leviticus 18) came thousands of years later in Moses’ day (ca. 1500 B.C.). Finally, since the human race began with a single pair (Adam and Eve), Cain had no one else to marry except a close female relative (sister or niece).

Genesis 5 . The problem of the long lives of people before the flood is obvious: Adam lived 930 years (Gen. 5:5); Methuselah lived 969 years (Gen. 5:27), and the average age of those who lived out their normal life-span was over 900 years old. Yet even the Bible recognizes what scientific fact shows, namely, that most people live only seventy or eighty years before natural death (Ps. 90:10).

It is a fact that people do not live that long today. But this is merely a descriptive statement, not a prescriptive one. No scientist has shown that it is impossible for someone to live that long. In fact, biologically there is no reason humans could not live hundreds of years. Scientists are more baffled by aging and death than by longevity.

Second, the reference in Psalm 90 is to Moses’ time (1400s B.C.) and later, when longevity had decreased to seventy or eighty years for most, though Moses himself lived 120 years (Deut. 34:7).

Third, some have suggested that these “years” are really only months, which would reduce nine hundred years to the normal life span of eighty years. However, this is implausible. There is no precedent in the Hebrew Old Testament for taking the word *year* to mean “month.” And Mahalalel had children when he was “only” sixty-five (Gen. 5:15), and Cainan had children when he was seventy (Gen. 5:12); this would mean they were less than six years old—which is not biologically possible.

Fourth, others suggest that these names represent family lines or clans that went on for generations before they died out. However, this does not make sense. For one thing, some of these names (e.g., Adam, Seth, Enoch, Noah) are definitely individuals whose lives are narrated in the text (Gen. 1–9). For another, family lines do not “beget” family lines by different names. Neither do family lines “die,” as each of these individuals did (cf. 5:5 , 8 , 11). Furthermore, the reference to having “sons and daughters” (5:4) does not fit the clan theory.

Fifth, it seems best to take these as years (though they were lunar years of 12 x 30 = 360 days).

The Bible is not alone in speaking of hundreds of years life spans among ancients. There are also Greek and Egyptian records of humans living hundreds of years.

A related problem noted is that in Genesis (6:3) God decided just before the Flood to limit man's life span to 120 years. In Genesis 11:10–32 , however, the ten descendants of Noah had life spans from 148 to 600 years (Bucaille, 39–40).

Even on the assumption that 6:3 refers to the life span of Noah's descendants, it does not say that this shortening of life would take place *immediately* . It may refer only to the eventual life span of the postdiluvians. Indeed, Moses, who wrote these words, lived to exactly 120 years (Deut. 34:7).

Furthermore, there is no need to take it as a reference to the life span of individuals after the flood at all. It likely refers to the length of time humankind then had left before God would send his fatal judgment. This fits better with the immediate context that speaks of how long God would exhort humankind to repent before he sent a flood.

Genesis 5 , 11 . Critics claim that the Bible makes a scientific error when it dates humankind around 4000 B.C . But the Bible nowhere gives any such total of years. In fact, there are demonstrable gaps in the biblical genealogies. Hence, it is impossible to obtain a total of years from Adam to Abraham. The Bible has *accurate outline genealogies* in which there are demonstrable gaps (*see* GENEALOGIES, OPEN OR CLOSED).

Genesis 6–9 . The flood story has been charged with scientific improbabilities, including the fact that there is no geological evidence, and it would be impossible to get all the animal species in the world in such a small boat. But it has been shown (*see* FLOOD, NOAH'S) that there is evidence for a flood, and that the size of the ark was huge, sufficient to house the kinds of animals that could not survive the flood.

Genesis 30 . According to Genesis 30 , Jacob seemed to accept the unscientific view of his time that prenatal influence on a mother affects the physical characteristics of the unborn. For he got streaked, speckled, and spotted kids by placing stripped rods before the parent goats while they mated (Gen. 30:37).

While the spotted kids were not born because of Jacob's scheme with the rods, there is a scientific basis for his results. "[T]o the casual observer they were of solid color, for all the spotted goats had been removed; but their hereditary factors or genes for color were mixed, the condition which the geneticist calls heterozygous." For "breeding tests have shown that spotting is recessive to solid color in goats, making it possible for a goat to have spots that can be transmitted, although they do not appear to the eye" (ASA, 71).

God blessed Jacob, in spite of his scheme to get his crooked uncle's livestock. The Lord revealed to Jacob in a dream the real reason the kids were born that way: "Look up and see that all the male goats mating with the flock are streaked, speckled or spotted, *for I have seen all that Laban has been doing to you* " (Gen. 31:12 , emphasis added).

Exodus 14 . According to this account of the crossing of the Red Sea, the massive group of fleeing Israelites must have had no more than twenty-four hours to cross through the portion of the Red Sea which God had prepared. However, according to the numbers given, there were

some 2 million of them (see Num. 1:45–46). But, for a multitude of this size, a twenty-four-hour period is just not enough time to make such a crossing.

It should be noted that, although the passage may give the idea that the time that the nation of Israel had to make the crossing was short, this is not a necessary conclusion. The text states that God brought forth an east wind which drove back the waters "all that night" (Exod. 14:21). Verse 22 seems to indicate that it was the very next morning when the multitude of Israelites began their journey across the sea bed. Verse 24 then states, "Now it came to pass, in the morning watch, that the Lord looked down upon the army of the Egyptians." Finally, according to verse 26 God told Moses to "stretch out your hand over the sea, that the waters may come back upon the Egyptians." There is no time reference to this command, however, and it is not necessary to conclude that Israel had completed their crossing that very morning.

A twenty-four-hour crossing is not as impossible as it may seem. The passage never states that the people crossed in single file, or that they crossed over on a section of ground the width of a modern superhighway. In fact, it is much more likely that God prepared a section several miles wide. This would certainly fit the situation, since the camp of Israel on the bank of the Red Sea probably stretched out for three or four miles along the shoreline. When the time came for the people to cross on dry ground, they probably moved as one magnificent throng, moving as a great army advancing upon the enemy lines. The Red Sea stretches some 1450 miles, and averages 180 miles wide. If this great multitude crossed in such a manner as described, to cross a distance of 180 miles in a twenty-four-hour period they would have had to move at about eight miles an hour. This would have been a reasonable pace and sufficient time to cross over the long and narrow body of water.

Leviticus 11 . In Leviticus 11:5–6 , two animals, the rock hyrax and the rabbit, were designated as unclean by Leviticus because, although they chew the cud, they do not divide the hoof. But, modern science has discovered that these two animals do not chew the cud. Thus, the Bible would appear to be in error at this point.

It is unfair to impose a modern scientific understanding on the ancient phrase "chew the cud." Rabbits do not chew the cud in the technical sense, they engage in a chewing action called "refection," which looks the same to an observer. This is known as "observational language," and we use it all the time, especially when speaking with people who are unfamiliar with the technical aspects of a subject. For example, we use observational language to talk about the sun rising and setting. The description is not technically correct by modern scientific standards, but it is functionally useful for the level of understanding of the pre-scientific common person. The biblical phrase should be taken as a broad, practical observation that includes both the modern technical definition of cud chewing or *ruminatio* , as well as other animals, including rabbits, that appear to chew the cud. They are listed with animals that chew the cud so that the common person could make the distinction in everyday observation.

This is a good example of why the Bible has no factual errors, but it is not a scientific textbook in the modern sense. The distinctions being made in Leviticus were practical, not scientific. They were to help people select food. Animals which chew the cud are identified as ruminants from "to ruminate," which is the action of regurgitating food into the mouth to be

chewed again. Ruminants normally have four stomachs. They were normally “clean,” acceptable food for the Israelites. Neither the rock hyrax (translated “rock badger” in the NASB) nor the rabbit are ruminants and technically do not chew the cud. However, both move their jaws in such a manner as to appear to be chewing the cud. Even the Swedish scientist Linnaeus originally classified them as ruminants.

Refecation is a process in which indigestible vegetable matter absorbs certain bacteria and is passed as droppings and then eaten again. This process enables the rabbit to better digest it. The process is similar to rumination.

Leviticus 13 . Leviticus 13 lists “leprosy” as an infectious disease that can contaminate clothing. However, leprosy is a disease caused by a bacterium and does not affect inanimate objects such as garments.

Bible scholars have observed in response that this is simply a matter of the use of a word changing over time. What in modern times is called leprosy is known as Hansen’s Disease. This is not the same type of infection that is described as “leprosy” in the Old Testament. The bacterial disease now identified as leprosy does not produce the symptoms described in various Old Testament passages. The Hebrew term *tsarath* , translated “leprosy;” is a more general term for any serious skin disease or sign of infection or defilement on the surface of inanimate objects. The defilement on garments, or walls as in Leviticus 14:33–57 , was probably some type of fungus or mold. Garments found to be infected were burned (Lev. 13:52). Infected houses were cleansed. If the infection could not be eradicated, the houses were demolished and the ruins were taken outside the city (Lev. 14:45).

Numbers 5 . Here Moses allegedly commanded the practice of a superstition that has no basis in science. The accused wife was found guilty after drinking bitter water only if her stomach swelled. But, both the innocent and guilty wives drank the same bitter water, which shows that there was no chemical or biological basis for one swelling and the other not.

In response, several things are of importance. First, the text does not say that the difference in the guilty woman’s condition had a *chemical* or *physical* cause. In fact, it indicates that the cause was *spiritual* and *psychological* . “Guilt” is not a physical cause. The reason the belly of a guilty woman might swell can be easily explained by what is known scientifically about psychosomatic (mind over matter) conditions. Many women have experienced “false pregnancies” where their stomach and breasts enlarge without actually having any baby growing in their uterus. Some people have even experienced blindness from psychological causes. Experiments with placebo pills (sugar pills) indicate that many people with terminal illnesses get the same relief from them as from morphine. So, it is a scientific fact that the mind can have a great effect on bodily processes.

The text says the woman was placed under an “oath” before God and under the threat of a “curse” (vs. 21). If she was guilty, the bitter water would have worked like a psychosomatic lie

detector. A woman who really believed she would be cursed and knew she was guilty would be affected. But those who knew they were innocent would not.

Finally, the text does not say anyone actually drank the water and experienced an enlarged stomach. It simply says “if” (cf. vs. 14 , 28) she does, then this will result. No doubt just the *belief* that this would happen and that one would be found guilty would have convinced the woman who knew she was guilty not to subject herself to the process.

Joshua 6 . Joshua 6 records the conquest and destruction of the city of Jericho. If this account is accurate, it would seem that modern archaeological excavations would have turned up evidence of this monumental event. However, no such evidence from Joshua’s time has been unearthed.

For many years the prevailing view of critical scholars has been that there was no city of Jericho at the time Joshua was supposed to have entered Canaan. Although earlier investigations by the notable British archaeologist Kathleen Kenyon confirmed the existence of ancient Jericho and its sudden destruction, her findings led her to conclude that the city could have existed no later than ca. 1550 B.C . This date is much too early for Joshua and the children of Israel to have been party to its demise.

However, recent reexamination of these earlier findings, and a closer look at current evidence indicates that not only was there a city that fits the biblical chronology, but that it remains coincide with the biblical account of the destruction of this walled fortress. In a paper published in *Biblical Archaeology Review* (March/April 1990), Bryant G. Wood, visiting professor to the department of Near Eastern Studies at the University of Toronto, has presented evidence that the biblical report is accurate. His detailed investigation has yielded the following conclusions:

First, the city which once existed on this site was strongly fortified, corresponding to the biblical record in Joshua 2:5 , 7 , 15 ; 6:5 , 20 .

Second, the ruins give evidence that the city was attacked after harvest time in the spring, corresponding to Joshua 2:6 ; 3:15 ; 5:10 .

Third, the inhabitants did not have the opportunity to flee with their foodstuffs from the invading army, as reported in Joshua 6:1 .

Fourth, the siege was short, not allowing the inhabitants to consume the food which was stored in the city, as Joshua 6:15 indicates.

Fifth, the walls were leveled in such a way to provide access into the city for the invaders, as Joshua 6:20 records.

Sixth, the city was *not* plundered by the invaders, according to God’s instructions in Joshua 6:17–18 .

Seventh, the city was burned after the walls had been destroyed, just as Joshua 6:24 says.

Although some dispute that these are from the right time period, there is evidence that they are (see Wood). At any rate, the possibility that this is indeed the remains of Joshua's Jericho has not been disproved. Hence, no scientific disproof of the biblical story of Jericho has been made. What is more, even if there were no present or remaining evidence does not prove that it did not occur. It is possible that the evidence may have been destroyed or be in another place. The argument that "No evidence exists, therefore, there is none" is tenuous at best. It involves the argument from ignorance fallacy.

Joshua 10. During the battle with the kings of the land, God gave Israel the power to overcome their enemies. As the armies of the people of the land fled from before Israel, Joshua sought the Lord to cause the sun to stand still so that they might have sufficient daylight to complete the destruction of their enemies. But critics insist that there are at least two scientific errors here. First, Joshua is affirming wrongly a geocentric (earth-centered) view of the solar system. Second, even if one accepts that this occurred by the earth halting in its spin on its axis as it moves around the sun, this would only cause greater problems. For example, such slowing would cause things on earth to fly off into space.

This argument is based on the unproven assumption that miracles are not possible (*see* MIRACLE ; MIRACLES, ARGUMENTS AGAINST). The God who made the sun and the earth can certainly make the sun to shine on it longer in one day if he wishes to do so. Some orthodox scholars (e.g., Robert Dick Wilson of Princeton) held that the Hebrew word *dom* (trans. "stand still") can be translated "be silent," "cease," or "leave off." Thus, they take it to mean the sun ceased to pour down its intense heat so the troops were able to do the work of two days in one. This view would involve no slowing down of the earth on its axis. However, it is hard to reconcile with verse 13 which states that "the sun stopped in the middle of the sky and did not hasten to go down for about a whole day."

Further, even if the earth did slow down in its rotation, it is not necessary to conclude that the earth's rotation was completely halted. Verse 13 states that the sun "did not hasten to go down for about a whole day." This could indicate that the earth's rotation was not completely halted, but that it was retarded to such a degree that the sun did not set for about a whole day. Or, it is possible that God caused the light of the sun to refract through some cosmic "mirror" so that it could be seen a day longer. If the earth's rotation was completely stopped, we must remember that God is not only capable of halting the rotation of the earth for a whole day, but he is also able to prevent any possible catastrophic effects that might result from the cessation of the earth's rotation. Although we do not necessarily know *how* God brought about this miraculous event, this does not mean we cannot know *that* he did it.

The phrase "the sun stood still" is no more unscientific than the phrases "sun rise" and "sun set" used by scientists (meteorologist) every day as they report the weather. It is simply an observational statement from the vantage point of a person on the face of the earth which is, after all, where we are. In short, there is no scientific proof that Joshua did not get about an extra day of light to finish his battle.

1 Kings 7:23 . Some critics have alleged a scientific error in Scripture since according to *1 Kings 7:23* , Hiram constructed a "Sea of cast bronze ten cubits from one brim to the other; it

was completely round. Its height was five cubits, and a line of thirty cubits measured its circumference." From this report we learn that the ratio of the circumference to the diameter is three to one. However, this is an inaccurate value of *pi* which is actually 3.14158, etc.

Apologists have offered two possible solutions to this problem. Harold Lindsell writes that *1 Kings* did not error in the use of *pi* . For if the ten cubits width of the bronze container is measured from outside brim to brim and the circumference is only of the water which is the inside of the container, then *pi* would be 3.14. In this way the inside measurement of the container would be less than 10, thus accounting for how the circumference of the water (or the inside of the container) would be only 30 and still be 3.14 times the diameter of 9.58 (= 30.0).

There are two difficulties with this view. First, one has to assume a width of the bronze container of .21 cubits, which is not stated in the text. Second, one must assume that the diameter is measured from the outside but the circumference from the outside. But this seems unusual and is not mentioned in the text.

Round Number View. According to this view, it is characteristic of the Bible to speak in round numbers (*see* BIBLE, ALLEGED ERRORS IN), and 3 is the rounded number for 3.14. The biblical record of the various measurements of the different parts of the temple are not necessarily designed to provide precise scientific or mathematical calculations. Scripture simply provides an approximation. The evidence seems to support this view. The rounding of numbers or the reporting of approximate values or measurements was a common practice in ancient times when exact scientific calculations were not used. The Bible uses round numbers elsewhere (cf. *Josh. 3:4* ; cf. *4:13* ; *2 Chron. 9:25* ; *13:17*). Even 3.14 is not precise. Nor is 3.1415, since *pi* goes on indefinitely without coming out even. So even "scientific precision" is a relative term with *pi* . But 3 is relatively correct, since that is what *pi* is for all practical purposes. And that was sufficient to make a pool by the ancient temple. To get a man on the moon takes more precision. But it is anachronistic to superimpose this kind of mathematical precision on the Bible.

2 Kings 20 . In response to Hezekiah's prayer, God instructed Isaiah to prophesy to Hezekiah that God would add fifteen years to Hezekiah's life (*2 Kings 20:11*). When he heard this, Hezekiah asked for a sign to confirm God's promise. The sign was that the shadow would retreat ten degrees. This would involve making the shadow go backwards instead of forward as the sun set. But critics insist that it is not scientifically possible for shadows to retreat. In order to do so, the earth would have to suddenly reverse its spin.

This objection has the same problems as does critics' complaints about the sun standing still in Joshua's time. In a theistic (*see* THEISM) universe there is no reason that a miracle like this could not happen. It is credible to believe that some miraculous events have occurred (*see* MIRACLES, ARGUMENTS AGAINST), including creation out of nothing (*see* CREATION, VIEWS OF).

The retreat of Ahaz's sun dial was undoubtedly a miracle. Things like this do not occur naturally. Indeed, Hezekiah realized that it would not be a miraculous confirmation of God's promise if the sign involved some phenomenon that could be explained (*2 Kings 20:10*). It was the miraculous nature of the event that qualified it as a sign from God. Any attempt at an

explanation of how this was accomplished would be pure speculation. Although God can employ the forces of nature to accomplish his purposes, he can also accomplish his will in a way that transcends natural law. The Bible does not indicate precisely how God did this, but this is not uncommon for miracles which involve the direct intervention of God. As to whether God miraculously reversed the earth's spin on its axis or the shadow of the sun (say, by refraction) need not concern us. It is sufficient to note that God can perform miracles, and this was clearly a miracle.

Job 38:7. Many Bible critics believe that the Old Testament errs when it speaks of the firmament as a solid dome. Job speaks of God who "spread out the skies" like "a cast metal mirror" (37:18). Indeed, the Hebrew word for the "firmament" (*raqia*) which God created (cf. Gen. 1:6) is defined in the Hebrew lexicon as a solid object. But this is in clear conflict with the modern scientific understanding of space as nonsolid and largely empty.

It is true that the origin of the Hebrew word *raqia* meant a solid object. However, meaning is not determined by *origin* (etymology), but by *usage*. Originally, the English word "board" referred to a wooden plank. But when we speak of a board of directors, the word no longer has that meaning. When used of the atmosphere above the earth, "firmament" clearly does not mean something solid (see Newman).

The related word *raqa* ("beat out, spread out") is correctly rendered "expanse" by recent translations. Just as metal spreads out when beaten (cf. Exod. 39:3 ; Isa. 40:19), so the firmament is a thinned out area. The root meaning "spread out" can be used independently of "beat out," as it is in several passages (cf. Ps. 136:6 ; Isa. 42:5 ; 44:24). Isaiah wrote, "So says Jehovah God, he who created the heavens and *stretched them out*, spreading out the earth and its offspring" (Isa. 42:5 NKJV). This same verb is used of extending curtains or tents in which to dwell, which would make no sense if there was no empty space there in which to live. Isaiah, for example, spoke of the Lord "who sits on the circle of the earth, and its people are like grasshoppers; who *stretches out the heavens like a curtain, and spreads them out like a tent to dwell in*" (Isa. 40:22 NKJV).

The Bible speaks of rain falling through the sky (Job 36:27–28). But this makes no sense if the sky is a metal dome. Nowhere does the Bible refer to little holes in a metal dome through which the drops fall. It does speak figuratively of the "windows of heaven" opening for the Flood (Gen. 7:11). But this should probably not be taken any more literally than our idiom, "It is raining cats and dogs."

The creation account speaks of birds that "fly above the earth across the face of the firmament" (Gen. 1:20). But this would be impossible if the sky was solid. Thus, it is more appropriate to translate *raqia* by the word "expanse" (as the NASB and NIV). And in this sense there is no conflict with the concept of space in modern science.

nkjv New King James Version
niv New International Version

Even if taken literally, Job's statement (37:18) does not affirm that the "skies" *are* a "metal mirror," but simply that they are *as* [or like] a mirror. It is a poetic comparison that need not be taken literally, any more does the statement in Proverbs 18:10 that God is a "strong tower." Further, the point of comparison in Job is not the solidity of the "skies" and a mirror, but their respective durability (*strong* [*chazaq*]).

Jonah 1. Many people have difficulty believing that a person could live inside a whale for three days and nights. The problem of breathing, to say nothing of the gastronomical processes would surely have been fatal well before three days.

Again, the event is presented as a miracle (Jonah 1:17 ; cf. Matt. 12:40). The God who created Jonah and the whale could preserve Jonah's life in the whale. Second, Jonah and his prophetic ministry are mentioned in the historical book of 2 Kings (14:25). There is archaeological confirmation of a prophet named Jonah whose grave is found in northern Israel, from which Jonah comes. There are even credible stories from modern history of persons who have survived in whales without any special divine intervention.

A strong argument for the historical accuracy of Jonah is that it was attested by Jesus, the Son of God (*see* CHRIST, DEITY OF). In Matthew 12:40, Jesus predicts his own burial and resurrection as a sign to the doubting scribes and Pharisees on the order of the sign of Jonah. Jesus says, "For as Jonah was three days and three nights in the belly of the great fish, so will the Son of Man be three days and three nights in the heart of the earth." If the tale of Jonah's experience in the belly of the great fish was fiction, then this provided no prophetic support for Jesus' claim. As far as Jesus was concerned, the historical fact of his own death, burial, and resurrection was on the same historical ground as Jonah in the belly of the fish. To reject one is to cast doubt on the other (cf. John 3:12).

Jesus went on to mention the significant historical detail. His own death, burial, and resurrection was the supreme sign that verified his claims. When Jonah preached to the unbelieving Gentiles, they repented. But, here was Jesus in the presence of the very people of God, yet they refused to believe. Therefore, those of Nineveh would stand up to give testimony against them at the judgment, because the Ninevites repented at the preaching of Jonah (Matt. 12:41). If the events of the book of Jonah were merely parable or fiction, and not literal history, then the men of Nineveh did not really repent, and any judgment upon the unrepentant Pharisees would be unjust and unfair. Because of the testimony of Jesus, we can be sure that Jonah records literal history.

Conclusion. All attempts to convict the Bible of a scientific error fail. Both Nature and Scripture are revelations of God, and God cannot contradict himself (*see* GOD, NATURE OF ; TRUTH, NATURE OF). Conflicts that exist are not between Nature and Scripture but between fallible understandings of one or the other of them, or both.

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Science of Origins. See ORIGINS, SCIENCE OF .

Scientific Dating. *The Problem.* The generally accepted dating (GAD) in the scientific community poses several problems for Christian apologetics, since it posits 10 to 20 billion years for the universe and hundreds of thousands of years for human life. This is contrary to a widely assumed dating of 10,000 to 20,000 years for the universe and human life by many evangelical Christians.

Actually, there are four separate problem with GAD for the defense of historic Christianity: (1) Does GAD support evolution? (2) Does GAD contradict the biblical view of the age of the universe? (3) Does GAD conflict with the biblical view of the age of the human race? (4) Does GAD conflict with the biblical view of creation in "six days"? Since the last one is discussed in detail elsewhere (see GENESIS, DAYS OF), only the first three will be discussed here.

Scientific Dating and Evolution. Even assuming GAD's conclusion that the universe is billions of years old and that life is at least a half billion years old, macroevolution does not follow (see EVOLUTION, BIOLOGICAL). For billions of years are only a *necessary* condition for the truth of evolution but not a *sufficient* condition for it. A longer period of time is simply not sufficient to explain how gradual changes by natural processes could produce a man from a microbe. Multi-millions of years are a necessary condition for all living things to evolve. However, long periods of time are not sufficient to prove that macroevolution is true for two

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basic reasons: (1) long time periods do not produce specified complexity; and (2) a natural mechanism is needed to explain macroevolution.

Long Time Periods Do Not Produce Specified Complexity. There is no empirical or experimental evidence that long periods of time produce the kind of incredible specified complexity and irreducible complexity found in living things (see EVOLUTION, CHEMICAL). Simple observation reveals that if one drops bags of red, white, and blue confetti from an airplane a thousand feet above the ground it will not form an American flag on someone's lawn. The laws of nature, apart from intelligent intervention, will randomize the colors; they will not form fifty stars and thirteen stripes out of them. And both observation and experimentation demonstrate that dropping the colored paper fragments from ten thousand feet will not provide the necessary time for them to organize. There is only one cause known to human beings that can organize these tiny pieces of paper into an American flag, and that is intelligence. But intelligent intervention is not naturalistic evolution; it is creation.

The Need for a Natural Mechanism. If naturalistic evolution is to occur, there must be more than long periods of time. There must also be some natural causes that can account for the increased complexity in living things from the original one-celled organism all the way up to a human being. No such mechanism has ever been found. Natural selection does not do it. It is only a principle of survival of existing types of life, not the arrival of brand-new types (see DARWIN, CHARLES). Natural mutations do not do it either. They are generally not helpful and are often lethal. Variation with populations are only sufficient to account for small changes within specific types of life and not for the macroevolutionary changes needed between all the various forms of life from simpler to more complex. So, long time periods do not explain how macroevolution could occur. What is needed are natural causes that can be shown to produce increased specified complexity apart from any intelligent cause. But in fact the evidence is to the contrary (see TELEOLOGICAL ARGUMENT ; ANTHROPIC PRINCIPLE). Natural laws do not specify; they randomize. They do not cause greater specified order; they cause disorder. They do not create life; they cause decay.

Short Time Is Fatal to Macroevolution. One reason that naturalistic evolutionists are so vehemently opposed to dating schemes that posit a young universe (of 10,000 to 20,000 years of age) is that this is fatal to evolutionary theory. Evolution simply must have longer periods of time than just several thousand years. Thus, while long periods of time posited by the GAD scheme do not eliminate creation, short periods of time do eliminate evolution.

Scientific Dating and the Age of the Universe. The GAD view does not pose a problem for all orthodox Christians—only for those who hold to a young universe (of thousands of years). Young-universe apologists, such as Henry Morris (see Morris, all) and followers, must object to GAD. This they do in two ways.

Negative Scientific Arguments Against an Old Universe. The minimal essential element of a young-universe apologetic is to find loopholes in the currently accepted scientific dating scheme. This is attempted in several ways.

Unprovable Presuppositions. Young-universe proponents point out that there are unprovable presuppositions of old-universe dating methods. For example, radiometric dating methods assume an original condition of the substance that was “pure.” They also assume that there has been a constant rate of change since that time. For example, to argue from the amount of salt in the sea to an old earth one must assume there was no salt there to begin with and that salt has been deposited in it by rivers and streams at a relatively constant rate since the beginning. But both of these premises are questionable, especially if there was a universal flood (*see* NOAH, FLOOD OF). Likewise, to argue to an old-universe of billions of years from the lead isotopes in uranium one must assume that there were none there at the beginning and that the rate of decay has been constant ever since. This too has been challenged.

Furthermore, there is always the problem of a contaminated sample or some other factor to throw off the rate of decay or deposit. That is, to maintain the old-universe argument one must show that the sample used has not been contaminated with material from a later time. This is particularly true of carbon dating. Otherwise, the date one gets is not the original date of the material.

Positive Arguments for a Young Universe. Another tactic open to young-universe apologists is to provide scientific evidence that the universe is young. Many such arguments have been offered. The problem with this method is that it too must accept some unproven (or unprovable) presuppositions like an original condition and a constant process since then. But these are the very things they challenge in the old-universe view. For example, some young-universe proponents have argued from the shallow depth of moon dust that the moon is only thousands of years old. But to do this they must assume that the moon had no dust to begin with and that the rate of buildup since has been relatively constant per year. These too are unproven, if not practically unprovable. Nonetheless, young-universe proponents have every right to offer positive scientific evidence for their view, whether it is by the nature of a universal flood, or the faster rate of decay or deposits. And if the weight of the evidence favors their view, then the weight of the evidence goes against macroevolution, which demands long time periods.

The Other Alternative: An Old Universe. Other orthodox Christians defend their stance by accepting the possibility of an old universe of billions of years and pointing to the fact that the Bible nowhere commits them to a young universe. They usually point to several factors. First, Genesis 1:1 only says there was a “beginning” but not exactly when that was. Second, the “days” of Genesis may represent long periods of time. Third, there may be a time gap before the days of Genesis begin (as in some form of Gap Theory). Fourth, there are known gaps in the genealogical record (*see* GENEALOGIES, OPEN).

Scientific Dating and the Age of the Human Race. Another problem that both young-earth Christians and even many old-earthers have is reconciling the GAD of the age of the human race with the biblical record. Since this is discussed in more detail elsewhere (*see* MISSING LINKS), it will only be touched on here. There are several ways this problem may be resolved.

Rejecting the Dating Methods for the Human Race. The dating methods for the antiquity of the human race are subject to even more debate than those for the date of the universe—and for the same reasons, only to a higher degree in some cases. First, there is the problem of assuming

the original state was pure. Second, there is also the problem of demonstrating a constant, uninterrupted rate of decay. Third, there is the question of contamination of the sample or influence of other forces. In addition, some dating methods (like Carbon 14) are only accurate for thousands, not hundreds of thousands or millions of years. Other dating methods like the interglacial periods are even less accurate.

Challenging the Human Status of the Fossils. Another problem is the assumption that human-like anthropoids or Hominids of great age were really human beings created in the image and likeness of God rather than just highly developed apelike creatures. After all, morphology (bone structure) and even skull size does not prove true humanness. Nor does simple tool-making prove humanness, since some animals today are known to use simple tools (like seals using stones to open shells). Most scholars admit, civilized man is not hundreds of thousands of years old. And human beings with evidence of religion and God-consciousness are not much earlier. These much later forms point to the time of origin of true human beings made in God’s image, that is, beings with rational, moral, and religious capacity.

Demonstrating Gaps in the Biblical Genealogies. It is true that if one assumes there are no gaps in the biblical genealogies, then the human race must be little more than six thousand years old. However, there are demonstrable gaps in the ancestral records in the Bible (cf. Matt. 1:8 and 1 Chron 3:11–14), even in the early tables in Genesis (cf. Luke 3:36 with Gen. 11:12). This is discussed in more detail elsewhere (*see* GENEALOGIES, OPEN). Many noted evangelical scholars have held this view, from B. B. Warfield to Gleason Archer.

Conclusion. While there are conflicts between certain interpretations of the biblical record and prevailing theories of the age of the earth and humankind, there are no real contradictions. This is true for two basic reasons. First, no one has proven with absolute certainty that the universe is a given age, young or old. Second, there are different ways to interpret the biblical record so as to avoid conflict with the GAD of billions of years. Hence, while there is conflict with prevailing scientific theory and favored interpretations of the biblical record, there is no irresolvable contradiction.

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Scientism. *Scientism* is the belief that the scientific method is the only method for discovering truth. The father of modern scientism was the atheist (*see* ATHEISM) Auguste Comte (1798–1857), who also began a religion of secular humanism (*see* HUMANISM, SECULAR). Comte's view is also known as positivism, an ancestor to the logical positivism of A. J. Ayer.

Since scientism often embraces many individual beliefs, including atheism, evolution theories (*see* EVOLUTION BIOLOGICAL), antismiraculism (*see* MIRACLES, ARGUMENTS AGAINST), and materialism, it is evaluated in those articles. Those who reject God fail to seriously appreciate the weight of evidence (*see* GOD, EVIDENCE FOR). This misuse of the scientific method is restricted and truncated (*see* FAITH AND REASON ; ORIGINS, SCIENCE OF), being a form of naturalism and often materialism.

The methods of scientism are questionable, even if there is one universally agreed-upon scientific method. There is no reason to believe the scientific method is the only way to acquire truth.

This dependence on the scientific method also leaves out differences that most scientists see between operation sciences, which are empirically studied, and the equally legitimate forensic sciences, for which a strict scientific methodology is impossible (*see* ORIGINS, SCIENCE OF). The forensic sciences are not religion-based, though one of them, Origin science, has religious implications. But origin science is the only way to look at some key questions about humanity and its significance. Unlike scientism, it does draw on evidence to back up its assumptions. Those assumptions do lead toward a beginning point and the existence of an intelligent Designer (*see* ANTHROPIC PRINCIPLE ; BIG BANG ; EVOLUTION, CHEMICAL ; TELEOLOGICAL ARGUMENT). The findings of origin science directly contradict scientism.

Even empirical scientists recognize the limitations of the scientific method (see Sullivan), since it can only deal with observable phenomena. It begs the question in favor of materialism to assume that there is nothing beyond the observable. Other aspects of reality cannot be captured by the scientific method (see Gilson). Some are known intuitively (*see* FIRST PRINCIPLES), others inferentially (*see* CAUSALITY, PRINCIPLE OF) or transcendentally (*see* TRANSCENDENTAL ARGUMENT), and some only by special revelation (*see* REVELATION, SPECIAL).

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Secular Humanism. *See* HUMANISM, SECULAR .

Self-Evident Truths. As applied to propositions, self-evident means that once the terms are known the truth of the proposition is evident in itself, needing no elucidation or confirmation from anything outside it. For example, "All wives are married women" is self-evident, since the terms *wives* and *married women* mean the same thing. This kind of self-evident statement is said to be a tautology since it is empty of all meaning, not really stating that there are any wives. It simply means, " *If* there is a wife, then she is a married woman."

Self-Evident First Principles. First principles are said to be self-evident since they are the foundation (*see* FOUNDATIONALISM) on which all other true statements. Though there seems to be an order of priority among some first principles.

In contrast to foundationalism, coherentism rejects all first principles and self-evident truths, except tautologies which they claim are vacuous and useless in knowing reality. They insist that there need be no ultimate foundation for truth but merely consistency among its statements.

"I am I" is a self-evident statement. One needs no further information to know it is true. Once the terms are understood, it is evident within itself that it is true. Also, the basic laws of logic are held to be self-evident. For example, the law of noncontradiction states that a proposition cannot be both true and false at the same time and in the same sense. This is an irreducible truth in terms of which all other truths are known to be true. Without the law of noncontradiction, nothing else can be known to be true. It is a self-evident first principle.

Defense of Self-Evident Statements. There is no *direct* proof of a self-evident proposition in terms of anything but itself. It is known to be true simply by examining its terms. If the predicate is reducible to the subject, then it is self-evident. Self-evident statements cannot be proven in terms of anything else. If they could, then they would not be *self-* evident. That is, they would not be evident within themselves.

There is, however, an indirect "proof" of self-evident statements. For a self-evident truth cannot be denied without affirming it. For example, I cannot deny "I exist" unless I exist to deny

it. Likewise, the law of noncontradiction cannot be denied without implying that it is true. The statement: “A statement can be both true and false at the same time and in the same sense”— must be true or false. But it can only be accepted as true or opposed as false if the law of noncontradiction is valid. One has to assume the law is valid before affirming that it is not.

In this way there is an indirect “proof” of self-evident truths: They cannot be denied without employing them. This kind of proof is sometimes put in the form of a transcendental argument.

Self-Refuting Statements.

Various Names. Self-refuting statements are those which fail to satisfy their own criteria of validity or acceptability. They are also called self-referential, self-stultifying, self-destructive, and self-falsifying.

Some Examples. Statements such as “I cannot express a word in English” are self-refuting because that very statement is an expression in English. Likewise, the statement “I do not exist” is self-defeating, since the statement implies that I do exist in order to make the statement.

The principle of self-stultification is a handy apologetic tool, since most, if not all, non-Christian views involve self-defeating statements. Take, for example, the following self-refuting statements:

1. “Be skeptical about all truth claims.”
2. “No truth can be known.”
3. “No statements are meaningful.”

The problem with (1) is that it is a truth-claim about which it is not skeptical. But this is inconsistent with its own claim. Likewise, (2) is itself a truth-claim that can be known which is contradictory to what it affirms (namely, no truth can be known). The same point can be made about (3), which is offered as a meaningful statement that no meaningful statement can be made.

Defense of Principle of Self-Falsification. The principle of self-falsification is not a first principle, such as the law of non-contradiction. Rather, it is based in the law of non-contradiction. For a statement is self-refuting when it entails two statements that are contradictory, one that it makes explicitly and a contradictory one implied in the very act or process of making the first one. Hence, self-refuting statements are contradictory. And the law of non-contradiction is a self-evident first principle that is known to be such by examining the statement to see if the predicate is reducible to the subject.

Undeniability Principle. The principle of undeniability is also known as the principle of self-stultification, or of self-referentiality. The flip side of undeniability is unaffirmability. Certain things are undeniable because any attempt to deny them affirms them in the very process. So, they are literally unaffirmable without denying what they affirm or affirming what they deny. For example, the statement “I cannot utter a word in English” is obviously not true, because it is

the utterance of a sentence in English, claiming not to be able to utter a sentence in English. As such, it cuts its own throat.

Value of the Undeniability Principle. The principle of undeniability is used by many theists to establish a starting point for its argument for God’s existence (*see* GOD, EVIDENCE FOR). It begins with “Something exists” (e.g., I do). This must be true since any attempt to deny my existence affirms it in the process. For I must exist in order to deny that I exist. Hence, my existence is undeniable.

Comparison and Contrast with Other Principles. However, the principle of undeniability is not to be confused with the first principle of logical thought, such as the law of non-contradiction.

Difference from The Laws of Logic. The laws of logic are self-evident and rationally necessary. And logical necessity affirms that the opposite cannot possibly be true. For example, it is logically necessary for a triangle to have three sides. And a square circle is logically impossible. It is also logically necessary—if there is a Necessary Being—for it to exist necessarily. However, it is not logically necessary for there to be a Necessary Being. It is logically possible that there could have been a total state of nothingness forever (*see* ONTOLOGICAL ARGUMENT). This is not to say that there cannot be an undeniable argument for God’s existence (*see* GOD, EVIDENCE FOR); it is only to note that there is a difference between *logical necessity* (which some allege for invalidating the ontological argument) and *actual undeniability* (which other theists claim for the cosmological argument).

Likewise, my nonexistence is *logically possible* . But it is not *actually affirmable* . Indeed, it is actually undeniable, since I have to exist in order to deny that I do not exist.

There is, however, an important connection between the laws of logic and the principle of undeniability. The law of non-contradiction, for example, can be defended by showing that it is self-evident in that its predicate is either identical or reducible to its subject. So, self-refuting statements are false because they are contradictory. And contradictions are false because they violate the self-evident principle of noncontradiction.

Difference from a Transcendental Argument. The principle of undeniability bears resemblance to a transcendental argument. Both claim that certain conditions are necessary preconditions of other things. For example, I cannot deny truth (*see* TRUTH, ABSOLUTE) unless I affirm it by claiming that the statement “There is no truth” is true. A transcendently necessary truth is an undeniable truth. But a transcendental argument posits something beyond what is being affirmed. For instance, it is a transcendently necessary precondition of meaning that there is a mind behind meaning. In this sense, a transcendental argument is a kind of indirect form of undeniability. For it posits that certain things could not be true unless other preconditions prevailed.

However, the statement “No sentence is meaningful including this one” is directly self-defeating because it pulls the rug out from under itself without appealing to the necessity of any other conditions. Thus, a transcendental argument involves an indirect form of undeniability.

Status of the Principle of Undeniability. The principle of undeniability is not self-evident the way the traditional first principles are said to be. Some claim it is a metaprinciple, that is, a principle about principles. If so, it is neither arbitrary nor noninformative. It is applicable to reality (*see* REALISM). It is a principle that grows out of the very project of futile attempts to deny first principles or other statements that cannot be denied without affirming them. It is a principle that emerges from the impossible attempts to escape certain things without affirming them (either directly or indirectly) in the very process. It is not deduced or induced but adduced. It is not prescriptive but is descriptive of a process of thought that boomerangs and is self-destructive.

Undeniability is not a new rule for the game of truth but more of a referee. Using the rules of logic (such as the law of non-contradiction), it simply calls attention to the fact that certain statements have eliminated themselves from the game of truth by being self-contradictory or self-destructive. In this sense the principle of undeniability indirectly “referees” the truth game by pointing out which kinds of statements are allowed into the game. It points to certain “statements” that do not really belong in the truth game because they imply opposite statements in the very process of making them. They have eliminated themselves (*see also* FIRST PRINCIPLES ; REALISM ; AGNOSTICISM).

Sevi, Sabbatai. Sabbatai Sevi was a seventeenth-century Jewish teacher who claimed to be the Messiah and was apparently heralded by a contemporary named Nathan. After Sevi’s death in 1676, it was reported that his brother Elijah went to the tomb and found it empty but full of light. Many of his followers believed he had not really died and that he would soon reveal himself (*see* Scholem).

Critics of the resurrection use Sabbatai Sevi as one reason for claiming that the claims concerning the resurrection are not unique to Christianity. A close look at the facts, however, shows that the reports about this teacher place them solidly in the category of legend (*see* RESURRECTION CLAIMS IN NON-CHRISTIAN RELIGIONS).

Jesus started on a higher footing from Sevi. Dozens of Old Testament predictions were fulfilled in Jesus of Nazareth before his death. He then fulfilled prophetic prediction about how he would die (Isaiah 53) and even the approximate year of his death (ca. A.D . 33, Daniel 9:24–26). For more on the prophecies regarding Jesus, see PROPHECY AS PROOF OF THE BIBLE .

Another difference is that many of Sabbatai Sevi’s followers refused to believe he had died and arisen because they believed he could not die at all. His general disappearance theme fits more under apotheosis legends, in which a human being achieves divinity.

Using the group’s documents, researcher Gershom Scholem is able to trace the development of the story that Sabbatai’s brother found the empty tomb. While critics of Christianity theorize about the Christ legend changing and growing over time, there is no proof of the existence of protogospels, and at least one or two of the four Gospels we have apparently can be dated within the first three decades after the resurrection (*see* RESURRECTION, EVIDENCE FOR). Despite this the accounts of Jesus’ life, death, and resurrection have neither changed nor been embellished in the orthodox church since those original documents.

In the case of Sabbatai Sevi, there is conflicting evidence even about whether Nathan taught that the teacher was still alive. One letter that has been found relates that Nathan actually preceded Sevi in death by one month, and the two never actually had met one another.

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Sherlock, Thomas. Thomas Sherlock (1678–1761) wrote against deism in the early eighteenth century. He penned *The Use and Interest of Prophecy in the Several Ages of the World* (1725) against deist (*see* DEISM) Anthony Collins, author of *Grounds of the Christian Religion* . Sherlock is best known for *The Tryal of the Witnesses of the Resurrection of Jesus* (1729), which is a reply to Thomas Woolston’s *Discourses on the Miracles* . *The Tryal* went through fourteen editions and is a model of the early use of courtroom procedure to defend Christianity:

The judge and the rest of the company were for bringing on the cause a week sooner; but counsel for Woolston took the matter up, and said, Consider sir, the gentleman is not to argue out of Littleton, Plowden, or Coke, authors to him well known; but he must have his authorities from Matthew, Mark, Luke, and John; and a fortnight is time little enough of all conscience to gain familiarity with a new acquaintance; and turning to the gentleman, he said, I will call on you before the fortnight is out, to see how reverend an appearance you make behind Hammond on the New Testament, a Concordance on one hand and a folio Bible with references on the other.

Following a legal procedure model, others have come to vindicate the truth of Christianity. Evidential specialist Simon Greenleaf took that approach, as did John Warwick Montgomery and others.

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Shroud of Turin.

Description. The Shroud of Turin is a linen cloth that measures 14.25 feet by 3.58 feet (*Biblical Archaeology Review* [1986]: 26) and is housed in Turin, Italy. There is a double, head-to-head image of a man on the material, revealing the front and back of his body.

The Shroud has been known to exist since 1354, but many believe it is much older. In 1978, the Shroud was subjected to extensive scientific investigation. No sign of paint or dye that could

account for the image was on it. The image was thought to be three-dimensional and was found only on the surface of the cloth.

However, in 1988, three independent laboratories made carbon-dating tests of threads of the Shroud. They all gave it a late medieval date. Proponents of the Shroud objected that the sample was too fragmentary and was from a contaminated section of the Shroud that reflected a medieval church fire.

Authenticity. The authenticity of the Shroud is hotly debated. Those favoring it stress its unique features. Those against it point to the lack of historical evidence and the scientific dating evidence against it.

Arguments for Authenticity. Those who believe the Shroud is authentic (see Habermas) argue that (1) there is no known naturalistic way to explain the unique images on it; (2) there is no other explanation for the pollen unique to Palestine found on it; (3) the weave is compatible with first-century cloth; (4) the coin over the eye is quite possibly that of Pontius Pilate, minted around A.D. 29–32; (5) it fits with first-century crucifixion procedure and burial rights; (6) the lack of composition marks on the cloth reveals that the body exited quickly; (7) in 1982, a “secret” dating reportedly dated a thread to the first or second century A.D.

Arguments Against Authenticity. Those who reject its authenticity (see Mueller) note that none of the above arguments is definitive. For (1) there are some possible natural explanations, and there may be as yet an unknown natural explanation of the images; (2) the pollen may represent a time it spent in the Holy Land during the Middle Ages or pollen carried from there; (3) the weave is not necessarily unique to the first century or it could be a later reduplication of it or even a medieval image put on a first-century cloth; (4) the alleged coin is not clear enough to be beyond dispute, and if the Shroud is a fraud, then the coin is not real but only an artificially produced image; (5) detailed knowledge of first-century crucifixion and burial may have been known to some in the late Middle Ages; (6) the lack of composition marks could also be part of a knowledgeable artist’s reconstruction; (7) this “secret” dating is unconfirmed and contradicted by the three independent medieval scientific datings done in 1988.

Further, opponents of the Shroud argue that: (1) the lack of any early history of the Shroud places it in doubt; (2) the Bible speaks of many pieces of cloth, not just one (John 19:40); (3) independent carbon tests all point to a late medieval date, not to the first century (*Time*, 81). Even defenders of the Shroud admit that “It is still possible that the shroud is a fake” (Habermas, “Turin, Shroud of,” 1116). The Roman Catholic Church never officially pronounced it authentic. Indeed, “Shortly after the earliest known exhibit of the shroud, in 1354, a French bishop declared it to be a fraud” (*Time*, 81). And when the scientific dating proved negative, Pope John Paul ordered “Publish it” (ibid.).

Apologetic Value. As far as the apologetic value of the Shroud, the matter of its authenticity is not really relevant. All the essential evidence to defend Christianity is in fact apart from the Shroud. If it is authentic, it provides no essential evidence for Christ’s death or resurrection that we do not already possess elsewhere. And if it is not authentic, then we risk using a bad argument for a good cause and lose credibility for Christian apologetics.

Essential Value. There is no essential apologetic value in the Shroud. The evidence for Christianity is more than sufficient without it. The miracles of Jesus confirm that he is the Son of God. Both Jesus and supernatural prophecy are sufficient to support the claim that the Bible is the Word of God. No other evidence is needed. Christianity does not stand or fall in any sense on the question of the authenticity of the Shroud of Turin.

Theoretical Value. Theoretically, the Shroud has some factual apologetic value. If authentic, it would tend to confirm both the death and resurrection of Christ. Certainly the former, and possibly the latter, since resurrection would be a plausible explanation for the image on the Shroud.

Tactical Value. Given the dispute about the Shroud and the possibility that it may be a fraud, the tactical value of using it apologetically is negative. Since it is both unnecessary to the Christian apologetic and highly disputed, it is tactically wiser not to use it as evidence for the truth of Christianity.

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Sikhism.

The Roots of Sikhism. Sikhism is one of the youngest world religions, stemming from only the fifteenth century. Its founder, Nanak, was a Hindu who desired to cleanse Hinduism by way of Islam. He claimed a revelation from a monotheistic God (“The true Name”), who charged him with this redemptive mission.

Early Reformers of Hinduism. By the tenth century there were militant forms of Islam in India pressing for a purification of decadent Hinduism. By the eleventh century Islam dominated northwest India. In the twelfth century a reformer-poet called Jaidev, taught a key idea of future Sikhism, namely, that religious ceremonies and asceticism were of no value compared to the pious repetition of God’s Name. By the fourteenth century another reformer named Ramananda established a Vishnuite sect that sought to purge Hinduism of certain Hindu beliefs and practices such as the caste system and prohibitions against eating meat.

Kabir (1440–1518): Forerunner of Sikhism. Ramandanda's chief claim to fame was that he had a follower who was greater than himself. A contemporary of the Protestant Reformer, Martin Luther, who tacked up his 95 theses the year before Kabir died, Kabir caught his hatred of idols from Muslims (*see* ISLAM). As a monotheist he declared that the God of mercy was able to free anyone from the law of karma (*see* REINCARNATION). He denied the special authority of the Hindu Vedas (*see* HINDUISM) and attacked both Brahmins and Muslims for their barren ritualism (*see* Noss, 311–12).

After his death in A.D. 1518, his Muslim and Hindu followers were divided over whether or not to cremate his body (which Hindus favor and Muslims oppose). Kabir himself is said to have appeared to stop the controversy. When he directed them to draw back the cloth placed over his body, they found only flowers there. His Hindu followers burned half of the flowers and the Muslims buried the other half. Although some claim this is proof of his resurrection, there are substantial grounds for rejecting this claim (*see* RESURRECTION, NON-CHRISTIAN CLAIMS FOR).

Nanak: Founder of Sikhism. Nanak was born in 1469 in the village of Talwandi near Lahore, the capital of Punjab. His parents were Hindus, and his town ruler, Rai Bular, converted to Islam and encouraged reconciliation of the two religions.

Nanak is said to have been a precocious youth and a poet by nature. However, he was a failure as a husband and father, eventually leaving his wife and two children. Then "One day after bathing in the river Nanak disappeared into the forest, and was taken in a vision to God's presence." After accepting a cup of nectar, it is claimed that God said to him: "I am with thee. I have made thee happy, and so those who shall take thy name. Go and repeat Mine, and cause others to do likewise. Abide uncontaminated by the world. Practice the repetition of My name, charity, ablutions, worship, and meditation. I have given thee this cup of nectar, a pledge of My reward" (*see* Noss, 313).

Nanak is said to have uttered the preamble of the Japji, which is repeated silently each morning by Sikhs: "There is but one God whose name is True, the Creator, devoid of fear and enmity, immortal, unborn, self-existent, great and bountiful. The True One was in the beginning, the True One was in the primal age. The True One is, was, O Nanak, and the True One also shall be" (*ibid.*).

After three days Nanak is said to have left the forest and after remaining silent for one day he uttered: "There is no Hindu and no Musalman." This was the beginning of his evangelistic campaign to convert all India, Persia, and Arabia. He wandered through cities, singing his hymns on a small stringed instrument.

The Ten Gurus. Nanak appointed his successor and so on through the Ten Gurus: Nanak (1469–1538); Angad (1538–52); Amar Das (1552–74); Ram Das Sodhi (1574–81); Arjun Mal (1581–1606); Hargobind (1606–44); Har Raj (1644–61); Hari Krishen (1661–64); Tegh Bahadur (1664–75); and Gobind Rai (1675–1708). The succession ended when Gobind Rai had no sons left and appointed no successor.

The Sikh Bible. Guru Arjun, the fifth Guru, gathered many of the hymns and writings to that point. This collecting process continued until it was completed by the tenth Guru, Gobind Rai. These volumes containing the doctrines of Sikhism are known as the *Siri Guru Granth Sahib* (also called *Adi Granth*).

Sikh Doctrines and Practices. The teachings of Sikhism include monotheism, meditation, Reincarnation with its *samsara* and *karma* (*see* Mather, 257–58). Stricker Sikhs, called Khalsa, practice the five K's: (1) *kesa* —long hair kept uncut; (2) *kangha* —comb; (3) *kacha* —short pants; (4) *kacku* —metal bracelet; and (5) *kirpan* —weapon or sword.

Sikhs are forbidden to worship icons, though the *Adi Granth* has become an object of devotion. Their temples are called *Gurdwaras* . Sacred times, usually in the mornings, are reserved for prayers.

Sikhism gained a considerable influence in the West through Yogi Bhajan, who established a unique form of Sikhism known as Sikh Dharma. In 1968 he founded the Healthy, Happy, Holy Organization (3HO), beginning his first ashram in Los Angeles. Many young Americans of the counterculture movement joined him. From there he moved to a forty-acre ranch in New Mexico, where his follows practice methods of awakening Kundalini by staring into the eyes of fellow practitioners or at pictures of their Guru and uttering a mantra. They are strict vegetarians and live a drug-free life, egalitarian life.

Evaluation. Sikhism is certainly to be commended for its stress on monotheism and its iconoclastic crusade against idolatry, empty ritualism, and asceticism. Likewise, its emphasis on the nature of God and ethical life rank it among the other ethical monotheisms of the world such as Judaism, Christianity, and Islam .

However, its belief in reincarnation has been severely criticized by Christian theists. And the lack of any verified supernatural confirmations of his claims to be a prophet (*see* MIRACLES AS CONFIRMATION OF TRUTH) disqualify Sikhism as being the true religion such as Christianity claims. Its origins can be explained in terms of its roots, a natural reaction against decadent Hinduism in favor of a more Muslim form of monotheism without buying into the Islamic rituals. This kind of syncretism is typical of the Indian mind-set.

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Sin, Noetic Effects of. *See* NOETIC EFFECTS OF SIN

Skepticism. *See* AGNOSTICISM ; APOLOGETICS NEED FOR ; APOLOGETICS, OBJECTIONS TO ; BIBLE CRITICISM ; CERTAINTY/CERTITUDE ; FAITH AND REASON ; GOD, OBJECTIONS TO PROOFS FOR ; HUME, DAVID ; KANT, IMMANUEL ; MIRACLES, APOLOGETIC VALUE OF .

Skinner, B. F. *See* DETERMINISM

Smith, Wilbur M. Although Wilbur Smith (1894–1977) never earned a formal degree, he taught for many years at major evangelical institutions. Smith was a Bible teacher at Moody Bible Institute (1939–47), a member of the founding faculty at Fuller Theological Seminary (1947–63), and professor emeritus of English Bible at Trinity Evangelical Divinity School (1963–68). His major apologetic works include *The Supernaturalness of Christ* (1940) and *Therefore Stand* (1945).

Smith’s most comprehensive case for Christianity is found in *Therefore Stand*. The book studies Paul’s three points as he spoke in the Areopagus (Acts 17:24–31): creation, resurrection, and judgment. Around these themes, the first two of which are discussed below, Smith constructed his apologetic.

Existence of God. Smith argues for the Christian view of creation by appealing to science. All scientific inquiry is founded on the principles of causality and uniformity (*see* ORIGINS, SCIENCE OF). The former states that whatever has a beginning has a cause, the latter that whatever causes a certain effect in the present probably caused the same effect in the past. From these principles Smith developed a pair of cosmological arguments. The first shows that there must be a first cause of the universe because of the impossibility of an infinite series of past events (*see* KALAM COSMOLOGICAL ARGUMENT). This first cause, furthermore, must be a Mind, because the order and unity of the universe betray a certain intelligence (*see* TELEOLOGICAL ARGUMENT).

The second argument attempts to show that the universe needs a cause, not only to get started, but for its continual existence. For if the universe consists wholly of contingent things, the universe itself must be contingent. But if the universe as a whole is contingent, it must require a Cause beyond the universe. This Cause is God.

Resurrection. Smith held the resurrection of Christ to be the very citadel of faith (*see* RESURRECTION, EVIDENCE FOR). “If this goes, so must almost everything else that is vital and unique in the Gospel” (“Scientists and the Resurrection,” 22). Fortunately, the most evidence is found where evidence is needed the most. Smith proceeds to give historical evidence in support of the burial of Jesus, the empty tomb, and the resurrection of Jesus, along the way refuting various naturalistic explanations (*see* MIRACLES, ARGUMENTS AGAINST ; NATURALISM) of the data (*see* RESURRECTION, ALTERNATIVE THEORIES). He concludes that evidence for the resurrection “is so overwhelming that by no honorable intellectual device can the evidence be set aside” (*Therefore Stand* , 406).

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Son of Man, Jesus as. The phrase *Son of Man* is used more frequently to denote Jesus than is any other name, except the word *Jesus* itself. *Son of Man* occurs in all four Gospels; it appears thirty times in Matthew, fourteen in Mark, twenty-five in Luke, and thirteen in John (Marshall, 777). It is also found in Acts 7:56 . Hebrews 2:6 and Revelation 14:14 refer to “a son of man.”

The problem posed is why Jesus refers to himself almost exclusively as “the Son of Man,” when Christians claim he is the Son of God. Is this a tacit denial of his deity? Beyond the literal meaning of the words, Scriptures are used to argue this view: Psalms 8:4 ; 80:17 , and Ezekiel 2:1 ; 3:1 ; 4:1 , and others.

The literal meaning of the words does not necessarily convey the literal meaning of the expression. A lot of projects are “in the bag” that would not literally fit into a grocery sack or duffel bag. An organization’s “board” is not a wood plank, the original meaning of the word. Context has to help us understand these expressions. Ezekiel is responsible for ninety-three Old Testament appearances of the term. In most God is speaking, and they seem to express special intimacy toward Ezekiel, the servant. Daniel uses the term only twice but raises the stakes, for Daniel 7:13 is displaying a king Messiah in all his glory in the very presence of God. This is the One Daniel said looked “like a man” in 8:15 , with the implication that he was far more than flesh and blood. Interestingly, in 8:17 the Messiah passes on his name. Daniel is called by the name of the Messiah: “Son of man.” There are, obviously, some complex and subtle nuances at work in the Old Testament use of this term.

Whether Jesus uses the self-identification “Son of Man” to stress his own humanity and servanthood as in Ezekiel, or to announce his Messiahship as in Daniel, or both, the phrase certainly isn’t a denial of deity.

New Testament scholar I. Howard Marshall points out, that Jesus often employed the phrase when he was highlighting his divinity (*ibid.*; *see* CHRIST, DEITY OF). Jesus said to the crowd that he had forgiven the sins of the paralytic, “that you may know that the Son of Man has authority on earth to forgive sins” (Mark 2:10). Rather than figuring that he was denying divinity, the crowd was ready to stone him for his blasphemy.

Jesus repeatedly said that the Son of Man would die and rise from the dead, events that gave his messianic credentials. Mark wrote: “He then began to teach them that the Son of Man must

suffer many things and be rejected by the elders, chief priests and teachers of the law, and that he must be killed and after three days rise again” (8:31 ; cf. Mark 9:9 , 12 , 31 ; 10:33 ; 14:21). Jesus also used the phrase in connection with his second coming in power and glory. When asked by the high priest, “Are you the Christ, the Son of the Blessed One?” Jesus replied: “I am, and you will see the Son of Man sitting at the right hand of the Mighty One and coming on the clouds of heaven.” It was on the basis of these words that the Sanhedrin condemned Jesus to death for blasphemy (Mark 14:62–64). They recognized that the Son of Man in view was clearly the mighty man in Daniel’s vision:

“In my vision at night I looked, and there before me was one like a son of man, coming with the clouds of heaven. He approached the Ancient of Days and was led into his presence. He was given authority, glory and sovereign power; all peoples, nations and men of every language worshiped him. His dominion is an everlasting dominion that will not pass away, and his kingdom is one that will never be destroyed.” [7:13–14]

In the Matthew account of Jesus’ trial (27:63), Jesus described himself as the “Son of Man sitting at the right hand of the Power [God].” Who else but the Christ, the Son of God, could sit in the honored position at the right hand of God?

Further, when a voice from heaven confirmed Christ’s deity and glory, Jesus spoke of the Son of Man being “lifted up” in death (John 12:28–32). Then the crowd replied, “We have heard from the Law that the Christ will remain for ever, so how can you say, ‘The Son of Man must be lifted up’?” The crowd obviously understood the meaning of the phrase. It is used interchangeably with *Messiah* and the concept from Isaiah 48:11 of the Messiah’s “glory of the Father,” which God declared he would not share with another.

Even if the phrase were only a reference to humanity, that would not be a denial of his deity. Jesus clearly claimed to be God in various ways and on multiple occasions, as is shown in the article, Christ, Deity of. He also accepted acclaim as God on other occasions (see, for example, Matt. 16:16–18 ; John 20:28–29).

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Soul, Immortality of. See IMMORTALITY .

Spinoza, Benedict. Benedict Spinoza (1632–1677) was born to Portuguese Jewish refugee parents in Amsterdam. Although a lens grinder by trade who never taught philosophy at university, he exerted a strong influence on modern philosophy. He has particularly made a

negative impact on orthodox Christianity. Spinoza was even excommunicated from his synagogue in 1656 for believing that God is “extended,” a form of pantheism , that angels are imaginary, and that there is no immortality of the soul.

The Medieval philosopher Moses Maimonides (1135–1204), through his *A Guide for the Perplexed* , helped Spinoza conceptualize God as a Necessary Being and to employ human reason independent of divine revelation. Anselm ’s (ca. 1034–1109) idea of God as an absolutely perfect and necessary being was also formative on Spinoza’s thought. The French rationalist René Descartes (1596–1650), who penned the *Meditations* , taught Spinoza the use of mathematical methods in philosophy. The first-century Jewish philosopher Philo (13 B.C. – A.D . 45) influenced Spinoza to believe that God is ground of all being and that the Bible should be understood allegorically. Euclid’s (ca. 300 B.C .) geometry taught Spinoza his deductive rationalism. From his Jewish background he brought a strong stress on the unity of God. All these and other factors contributed to a unique form of rationalistic pantheism.

The two primary works of Spinoza are *Tractatus Theologico-politicus*, *Tractatus Politicus* (1670), and *Ethics* (1674).

Philosophy. As Euclid, Spinoza begins by defining his axioms and then proceeds to make deductions from them. In this way alone, he writes, can one find certainty in his conclusions. Truth is known only through a true idea. Perfect truth is known only through the perfect idea. Error has four causes: (1) Our minds provide only fragmentary expression of ideas. (2) Imagination is affected by the physical senses and confuses us. (3) Reasoning is too abstract and general. (4) We fail to begin with the perfect idea. The remedy for error is to return to the perfect Idea of God. The more one feeds on the perfect Idea, the more perfect one becomes. Sensations are confused and blurred.

Spinoza’s philosophy begins with the perfect Idea of God as an absolutely necessary and perfect being. God must be conceived as a being existing through himself—that is, self-caused. But there can only be one absolutely independent Being. All other beings are modally dependent on God. These “modes” are aspects or moments of God, God’s attributes in himself and properties to us. The only two attributes of God we know are thought and the *extension* of God infinitely in space.

Proofs for God. Spinoza believed the existence of God could be proven with mathematical certainty. The first form of his proof can be stated:

1. There must be a cause for everything, both existing and nonexistent.
2. A Necessary Being must necessarily exist, unless there is a cause adequate to explain its nonexistence.
3. But there is no cause adequate to explain why a Necessary Being does not exist: (a.) Such a cause would have to be either inside God’s nature or outside of it. (b.) No cause outside a necessary existence could possibly annul its existence, (c.) and nothing inside a

Necessary Being denies it is a necessary Being. (d.) So there is no cause adequate to explain why a Necessary Being does not exist.

4. Therefore, a Necessary Being necessarily exists.

The second form of Spinoza's argument is this:

1. Something necessarily exists.
2. This Necessary Existence is either finite or infinite.
3. But no finite cause can hinder infinite existence,
4. and it is contradictory to say that an infinite Cause hindered infinite Existence.
5. Therefore, there must be an infinite Existence.

Creation differs from God only as a mode differs from its substance or a thought from the mind that thought it. All modes flow necessarily from God as 180 degrees flows from a triangle. This is creation *ex Deo*, not creation *ex nihilo* (see CREATION, VIEWS OF). The effect must be as infinite as the Cause. Will is not an attribute of God but only a mode (hence, it is not a source of creation).

This world is the most perfect world possible. Evil is necessary. Natural world operates by natural (scientific) law (see NATURALISM). Newton's law of gravity is universal and is the model for all scientific laws. There are no exceptions to a true law.

The Impossibility of Miracles. Spinoza believed that there could be only one infinite substance, and that, therefore, the universe was uncreated. God is identical with the universe. He could not have created it, for it is of his substance (see MIRACLES, IMPOSSIBILITY OF). For Spinoza, God is not transcendent; he is not beyond or "other" than creation. This means God's creativity is no more than nature's activity. If Spinoza's supposition is true, miracles are impossible. If God (the supernatural) is identical with nature (the natural), there is no supernatural intervention into nature from outside it. With this general framework in mind, we can examine Spinoza's arguments against miracles.

Spinoza declared that "nothing then, comes to pass in nature in contravention to her universal laws, nay, everything agrees with them and follows from them, for . . . she keeps a fixed and immutable order." In fact, "a miracle, whether in contravention to, or beyond, nature, is a mere absurdity." Spinoza was dogmatic about the impossibility of miracles. He proclaimed, "We may, then, be absolutely certain that every event which is truly described in Scripture necessarily happened, like everything else, according to natural laws" (*Tractatus*, 1:83, 87, 92).

Spinoza's argument against miracles goes something like this:

1. Miracles are violations of natural laws.

2. Natural laws are immutable.
3. It is impossible to violate immutable laws.
4. Therefore, miracles are impossible.

The second premise is the key to Spinoza's argument. Nature "keeps a fixed and immutable order" (ibid., 83). Everything "necessarily happens . . . according to natural laws" (ibid., 92, emphasis added). If it is true that "nothing comes to pass in nature in contravention to her universal laws," then Spinoza is right in believing a miracle "is a mere absurdity" (ibid., 83, 87).

To appreciate the implications, one must be aware that Spinoza was a rationalist who tried to construct his philosophy around Euclidean geometry (*Ethics*, 1.1–42). He believed that one should accept as true only what is self-evident or what is reducible to the self-evident. Like Descartes, Spinoza argued in a geometric way from axioms to conclusions contained in these axioms. Spinoza lived in an age that was impressed by the orderliness of a physical universe. This is why it was axiomatic that natural laws are immutable.

Biblical Criticism. Spinoza's rationalism and naturalism have far-reaching consequences for anyone who believes in either miraculous events or supernatural revelations. Spinoza became one of the first modern intellectuals to engage in systematic higher criticism of the Bible (see BIBLE CRITICISM; WELLHAUSEN, JULIUS). His book, *A Theologico-Political Treatise*, widely circulated in the late seventeenth century, was chiefly a critical commentary of the Bible. He came to some radical conclusions that, if true, falsifies supernaturally inspired Scriptures.

Spinoza's naturalism led him to conclude that Moses could not have written many passages in the Pentateuch (see PENTATEUCH, MOSAIC AUTHORSHIP OF), so the view that Moses was its author is unfounded (*Tractatus*, 126). He believed that Ezra the scribe wrote the first five books of the Old Testament, as he wrote the rest of the Old Testament (ibid., 129–30).

Not surprisingly, Spinoza rejected the Gospel accounts of the resurrection. The apostles, he said, preached a universal religion based only in the crucifixion (ibid., 170). Christianity was a mystical, nonpropositional religion without foundations. Essentially, Spinoza agreed with Paul in 1 Corinthians 15 that, without the resurrection of Christ, Christianity is a religion without hope. Not believing the resurrection happened, that was his conception of it. All other miracles are likewise condemned. He commends "anyone who seeks for the true causes of miracles and strives to understand natural phenomena as an intelligent being" (*Ethics*, Appendix, pt. 1, proposition 36). Not only did everything happen according to natural laws, but Scripture itself "makes the general assertion in several passages that nature's course is fixed and unchangeable" (*Ethics*, 92, 96).

For Spinoza, Scripture merely "contains the word of God" (*Tractatus*, 165, emphasis added). This position was characteristic of later liberal Christianity from Friedrich Schleiermacher (1768–1834). It is false to say that the Bible is the Word of God (see BIBLE, EVIDENCE FOR). Parts of the Bible that contain the word are known to be such because the morality conforms to a natural law known by human reason (ibid., 172, 196–97).

The prophets did not speak from supernatural “revelation” and “the modes of expression and discourse adopted by the *apostles in the Epistles, show very clearly that the latter were not written by revelation and divine command, but merely by the natural powers and judgment of the authors” (ibid., 159). Spinoza occasionally says the prophets spoke by “revelation,” but he understands this as the extraordinary power of the imagination (ibid., 24).

The general concepts and antisupernaturalism of Spinoza’s biblical criticism is still widely held by both secular and liberal Christian scholars.

Evaluation. Three elements in Spinoza’s thought are of interest to Christian apologetics, his pantheism, his antisupernaturalism (see MIRACLES, ARGUMENTS AGAINST), and his biblical criticism. The three are related. Since pantheism and biblical criticism are critiqued in those respective articles, the focus here will be on naturalistic presuppositions and their consequences on belief in the inspiration of Scripture.

Spinoza’s attack on miracles rests on the foundations of Euclidean geometry or deduction, rationalism, natural determinism, and his view of the nature of God.

A Stacked Deductive Deck. Spinoza’s deductive, rationalistic pantheism suffers from an acute case of *petitio principii* or begging the question. This is true both of his pantheism and the antisupernaturalism that flows from it. As David Hume noted, anything validly deducible from premises must have already been present in those premises from the beginning. If God is defined as an absolutely necessary being, of which all else is nothing but a mode, then of course pantheism follows. For this builds a pantheistic definition of God into the axiom. If a pantheistic conception is stuffed into the hat, it is no surprise that it later can be pulled out.

Likewise, if materialism is already presupposed in Spinoza’s rationalistic premises, it is no surprise that he attacks the miracles of the Bible. The question is whether his rationalistic premises are defensible. He provides no convincing argument. But once one defines natural laws as “fixed,” “immutable,” and “unchangeable,” there is no great leap to the position that miracle reports are irrational. Nothing can break the unbreakable.

Spinoza’s God and Science. Spinoza’s God was of one substance with the universe. Miracles as supernatural interventions are possible only in a theistic universe. Hence, scientists will want reason to believe that a theistic God (see THEISM) exists before they are likely to believe there is any evidence for miracles. In a Nature = God universe, miracles simply do not happen.

Albert Einstein’s belief in Spinoza’s God gave rise to one of the fascinating stories in modern science. Astrophysicist Robert Jastrow tells of the reluctance of scientists to conclude that the universe came into existence through a “big bang” billions of years ago. Jastrow offers several lines of scientific evidence that support a beginning to the universe: the fact that the universe is running down, Einstein’s theory of relativity, and the expansion pattern and radiation echo that can be detected. The radiation echo “has convinced almost the last doubting Thomas” (Jastrow, 15). Einstein developed the general theory of relativity but failed to observe that an expanding universe followed as a conclusion from his own theory. The Russian mathematician Alexander Friedmann pointed out the reason for Einstein’s omission, a schoolboy’s error in

algebra. In effect, he had divided by zero. Einstein responded by defending his original thesis, only he made another mistake in this proof.

Eventually Einstein recognized his error and wrote, “My objection rested on an error in calculation. I consider Mr. Friedmann’s results to be correct and illuminating.” However, “this circumstance [of an expanding universe] irritated me.” Elsewhere he said, “To admit such possibilities seems senseless” (ibid., 16, 25–28).

Why would the view that the universe had a beginning seem “senseless” and so irritating that it caused Einstein to make a mathematical error? The answer, writes Jastrow, came when Einstein described his own religion as belief “in Spinoza’s God, who reveals himself in the orderly harmony of what exists” (ibid., 28).

Conclusion. Spinoza was a rationalist (see RATIONALISM) for whom God’s essence was equated with the universe, and for whom the universe is eternal and operates according to the uniformity of natural law. He led the philosophical attack against miracles and the Bible’s testimony about a personal God and Savior. But as shown, this faith presupposition begs the question when defended logically, because his definition of miracles, without foundation, assumes them to be unbreakable (see MIRACLES, ARGUMENTS AGAINST).

What Spinoza needed to do, but did not, was to provide a sound argument for his rationalistic presuppositions. His reasoning is geometric, but he spun his axioms out of thin air rather than empirical observation.

Spinoza’s concept of natural law as a deterministic system is self-defeating. If everything is determined, then so is the view of any that determinism is wrong. But determinism cannot be both true and false. Thus, Spinoza’s basis for antisupernaturalism is unfounded. Therefore, miracles cannot be pronounced as impossible.

Finally, the evidence has mounted for a unique beginning of the space-time universe (see BIG BANG THEORY ; EVOLUTION, COSMIC). If this is so, then there is an irrefutable example of a miracle, and the Spinozan hypothesis is falsified. Further, concluding that the universe had a beginning strikes a devastating blow to Spinoza’s concept of God, who does not exist beyond the universe.

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Strauss, David. David Strauss (1808–1874) was a German native of Ludwigsburg, who launched the quest for the historical Jesus with his naturalistic biography of the life of Christ.

Strauss studied under F. C. Baur (1792–1860) and came under the influences of Friedrich Schleiermacher (1768–1834) and G. W. F. Hegel (1770–1831) at Tübingen. After studying at Berlin he was appointed lecturer on Hegel at Tübingen (1832). His demythologized *Life of Jesus* (2 vols.) appeared in 1835–36, and in the resulting uproar Strauss was dismissed. In 1840–41 he published *History of Christian Doctrine*, a polemical history from the development of the New Testament to its dissolution in Hegel. In 1862 he wrote on biblical critic Herman Samuel Reimarus, whose *Fragments* in 1778 gave rise to the first quest for the historical Jesus (*see* JESUS, QUEST FOR THE HISTORICAL). Late works included *The Life of Jesus for the German People* (1864), *The Life of Christ and the History of Jesus* (1865) and *The Old Faith and the New* (1872/1873). The latter called for a new humanist religion that traded belief in theism and immortality for scientific materialism. It promoted Darwinian evolution (*see* DARWIN, CHARLES ; EVOLUTION, BIOLOGICAL).

Strauss moved from an earlier form of Hegelian developmental pantheism to materialistic evolutionism. Following David Hume, he rejected all miracles as myths. He eventually denied all belief in God and immortality of the soul. Since he rejected miracles, he viewed the Gospels as unintentional myths created by the piety of the early second century (*see* MYTHOLOGY AND THE NEW TESTAMENT). They were steeped in the messianic anticipation of the Old Testament and an eagerness to prove that Jesus was the Messiah (*see* CHRIST OF FAITH VS. JESUS OF HISTORY). Strauss was the first to consistently apply this thesis throughout the New Testament.

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Sufficient Reason, Principle of. The principle of sufficient reason arises out of modern rationalism, particularly as developed by Gottfried Leibniz (1646–1716). It was developed by Christian Wolfe and originally accepted by Immanuel Kant (1724–1804), though Kant subsequently rejected its metaphysical value, since he believed it led to contradictions and agnosticism.

The principle claims that “Everything has a sufficient reason, either in another or in itself.” That is, there is either a sufficient reason outside of everything, or else it is its own sufficient reason. Leibniz believed that since the world was contingent, it had a sufficient reason outside of itself (in God). And the sufficient reason for God is inside himself.

Since “reason” for the world means “ground” or “cause,” then the principle of sufficient reason means that everything that exists has a cause, either outside itself or inside itself. It did not take philosophical agnostics (*see* AGNOSTICISM), such as Kant, or atheists, such as Arthur Schopenhauer (1788–1860), long to figure out that this either leads to an infinite regress (*see* INFINITE SERIES), or else to a self-caused being, which is impossible. If literally *everything* has a cause, either the series of causes never ends, or it ends in a being who caused its own being. Since nothing can lift itself from ontological nonbeing, then the very concept of God is contradictory. God could not exist.

Many critics of rational theism believe the principle of sufficient reason spells the end of all theistic arguments (*see* GOD, EVIDENCE FOR ; GOD, OBJECTIONS TO PROOFS FOR) that use any causal premise (*see* COSMOLOGICAL ARGUMENT). This is not the case. There is a great difference between the principles of sufficient reason and cause. Criticisms of sufficient reason do not apply to the principle of causality (*see* CAUSALITY, PRINCIPLE OF). The latter was held by Thomas Aquinas, who never referred to any principle of sufficient reason, though some scholastic philosophers after Leibniz did mistakenly buy into it (*see* Gurr). The two principles are:

Principle of Sufficient Reason:	Principle of Causality:
1. All things need a cause.	1. Contingent things need a cause.
2. God is the Ultimate Reason.	2. God is the only Ultimate Being.
3. God is a Self-Caused Being.	3. God is an Uncaused Being.

The principle of sufficient reason leads to a contradiction. The principle of causality does not. Leibniz’s principle leads logically to modern atheism. Aquinas’s principle leads to theism. The God of the principle of sufficient reason is a God of reason, not reality. The God of the existential principle of causality leads to a God who exists and, in fact, is existence itself (*see* GOD, NATURE OF). It is no more incoherent to have an uncaused God than for atheists to claim there is an uncaused universe. Nor is there an inherent logical contradiction in the concept of a Being who just *is* and ever has been.

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Swoon Theory. *The swoon theory* is the naturalistic (*see* Naturalism) view that Christ was not dead when taken from the cross and placed in the tomb. Therefore, he was not raised from the dead (*see* RESURRECTION, EVIDENCE FOR). It was proposed by H. E. G. Paulus in *The Life of Jesus* (1828).

This theory has serious failings as an alternate explanation of the resurrection (*see* RESURRECTION, ALTERNATE THEORIES), since there is strong evidence that Jesus experienced an actual physical death on the cross (*see* CHRIST, DEATH OF), and hundreds of witnesses who saw him in a fully whole and transformed resurrection body (*see* RESURRECTION, EVIDENCE FOR). Even the naturalistic work, *A New Life of Jesus* (1879) by David Strauss debunked the swoon theory:

It is impossible that a being who had stolen half-dead out of the sepulchre, who crept about weak and ill, wanting medical treatment, who required bandaging, strengthening and indulgence, and who still at last yielded to his sufferings, could have given to his disciples the impression that he was a Conqueror over death and the grave, the Prince of Life, an impression which lay at the bottom of their future ministry. . . . Such a resuscitation could only have weakened the impression which he had made upon them in life and in death, at the most could only have given it an elegiac voice, but could by no possibility have changed their sorrow into enthusiasm, have elevated their reverence into worship. [Strauss, 1.412]

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