

John C. Wright Couldn't Be More Wrong

Another Armchair Astronomer Tries Unsuccessfully to Discredit Geocentrism

If I had a nickel for every armchair astronomer who has tried to discredit geocentrism I'd be a rich man. It is a special treat when one of them spices-up the attempt with vicious personal attacks. They think they are being so witty, but after doing this for 15 years, I have found that there is a direct proportion between the degree of personal attacks and the lack of knowledge of the critic. Mr. John C. Wright is a perfect example.

On September 26 2016, Mr. Wright took to the blogosphere to weigh in on the debate after someone told him to watch the geocentrism lecture I gave in Dallas last year.¹ As Mr. Wright will reveal later, he was quite disturbed that some “scientific” colleague of his who had seen my lecture was being persuaded toward geocentrism. Wright, believing he had sufficient knowledge of science to refute the lecture, donned his John Wayne hat and grabbed his gun to do battle. We can surmise this characterization of Mr. Wright from the image he chooses to present himself on the internet. (See below). I guess Mr. Wright fancies himself as some kind of vigilante against whatever he believes doesn't fit into his already-made universe.



Mr. Wright further describes himself as:

“a practicing philosopher, a retired attorney, newspaperman, and newspaper editor, and a published author of science fiction. Once a Houyhnhnm, he was expelled from the august ranks of purely rational beings when he fell in love; but retains an honorary title.”

I'll try not to be too prejudicial, but the occupations of “attorney,” “newspaper editor” and “author of science fiction” don't exactly inspire confidence in me that Mr. Wright has won any truth-telling awards in his career. His scurrilous rant about me and geocentrism provide enough evidence to see why. In my 15 years in this subject, I thought I had seen it all, but Mr. Wright's blatant historiography puts him right near the top for the dubious award of: “Who Can Twist the Truth the Best and Be the Most Obnoxious at the Same Time.”

As I usually do when confronted with such insufferable dilettantes, I will answer my opponent in the same spirit that he gave me, and to show my utter sincerity, I will refute every remark he made and show that it is either a half-truth, a downright lie, or just an example of his ignorance of the subject matter. In several instances Mr. Wright just makes things up out of thin air (e.g., page 52, Wright claims that a

¹ https://www.youtube.com/watch?v=Rwx7bYEUIF4&ab_channel=LoneStar1776.

² <http://www.scifiWright.com/2016/09/the-most-difficult-fifty-bucks-i-ever-earned/#more-16779>

Michelson-Morley experiment on the moon produces the same results as that on Earth), which perhaps is what Mr. Wright is used to since he writes science fiction for a living.

Wright: A reader asked me to view the following two hour lecture on geocentrism. He promised me fifty bucks if I was not convinced. I wished I had asked for more. This was painful to sit through. The man involved, Robert Sungenis, is, to put the matter kindly, a smug and dishonest crackpot without even the zealous honesty the other crackpots, flatearthers and theosophists, tend to radiate.

R. Sungenis: So here it starts. Yawn. Perhaps I am sometimes “smug,” but as we will see, “dishonest” in Mr. Wright’s world means that he doesn’t understand the science or know the history and thus thinks that his teacher is deceitful.

Wright: I was trying to count the number of scientific errors he made, and gave up counting when I realized every statement contained a scientific error but one. (He is correct that the microwave background radiation in space is not symmetrical).

R. Sungenis: This showed me quite early that Mr. Wright is not quite up to snuff with either the subject matter or the terminology. No one in the literature refers to the CMB as either “symmetrical” or “non-symmetrical.” It is referred to as either homogeneous or inhomogeneous and/or isotropic or anisotropic.

Wright: The argument was grossly illogical, merely an assertion that there is a conspiracy theory among scientists to discredit the Bible, and that scientists falsify results and ignore contrary experiments due to personal prejudice.

R. Sungenis: This is the favorite introduction of those of Mr. Wright’s ilk. The attempt is to demonize his opponent at the starting gate so that he can incite your prejudices. He will try his best to caricature me as a science-hating bible thumper as if he was doing character development for one of his science fiction books.

Wright: It haunts and horrifies me that any educated person could be deceived by this man. Robert Sungenis is an uncharismatic version of Professor Harold Hill, the Music Man. Only not as amusing, and without the song and dance.

R. Sungenis: Mr. Wright’s demagoguery is now sprinkled with images of con-men and parolees so that he can exploit his own straw man throughout his diatribe. Attorneys and newspaper editors are usually pretty good at this. It’s all in the image they create, but Mr. Wright exceeds all expectations when he addresses his imagined opponent as “Harold Hill” from the Music Man. Tsk, tsk. Fortunately, juries are good at picking out such snake oil salesmen, and after I’m done with Mr. Wright, you will be good at it, too. We will play the television game show, “To Tell the Truth,” and find out who the real Harold Hill is. Trust me.

Wright: Fairness requires me to at least list to the points I found unpersuasive. Professor Harold Hill (as I shall call him hereafter) begins with a fifteen minute explanation of his purpose, which is to show that the Earth is the center of the universe in order to undermine the atheist view that the Earth is in an insignificant area of a vast cosmos. He repeats this several times, and the argument is never made more

logically than this: he rejects anything other than a flatly literal interpretation of the Bible as discrediting the whole of the Bible, so that if an ancient writer speaks of the sun rising or the moon setting, this is support for geocentrism.

R. Sungenis: Apparently, Mr. Wright either doesn't understand the problem or is deliberately twisting it. The language of "the sun rises" or "moon sets" doesn't support either heliocentrism or geocentrism since it is purely phenomenological language. In neither system (the heliocentric or the geocentric) does the sun actually "set." In the geocentric system the sun is revolving around the Earth with the rest of the universe and it only appears to "set" because it is viewed from an observer with respect to the horizon. The same view is created in the heliocentric system as the Earth rotates.

Wright: The problem with Biblical literalism is that it requires a firmament of water above the atmosphere, plants older than the sun, and the presence of unicorns in the wilderness, leviathans in the sea, and God having hands and feet and wings and so on.

R. Sungenis: So now we see the root of the problem. Mr. Wright doesn't like reading the Bible at face value. So he will try to prove his point by showing you his favorite "biblical errors" and use them to prejudice you against the Bible and allow himself to discredit whatever he doesn't like in the Bible. So let's go through Mr. Wright's objections one by one:

Wright: "it requires a firmament of water above the atmosphere"

R. Sungenis: Genesis 1 does not say the firmament is either water or is above the atmosphere. The firmament is space itself, as stated in both Genesis 1:6-9 and Genesis 1:14-20. If Mr. Wright then wants to contend that water cannot be outside of space, then he will have to prove it, not just assert it. In these cases, I'll take the word of the Fathers. Unlike Mr. Wright, they weren't afraid to take Scripture at face value, particularly St. Augustine:

With this reasoning some of our scholars attack the position of those who refuse to believe that there are waters above the heavens while maintaining that the star whose path is in the height of the heavens is cold. Thus they would compel the disbeliever to admit that water is there not in a vaporous state but in the form of ice. But whatever the nature of that water and whatever the manner of its being there, we must not doubt that it does exist in that place. The authority of Scripture in this matter is greater than all human ingenuity.³

Wright: "plants older than the sun."

R. Sungenis: As I said, Mr. Wright gives us either half-truths, downright lies, or ignorance. This one is a half-truth since Genesis 1 allows no more than one day between the plants created on the Third Day and the sun created on the Fourth Day. Of course, Mr. Wright also leaves out the fact that the Light of the First Day in Genesis 1:3 serves as light and heat for the plants created on the Third Day (but I wouldn't expect Mr. Wright to read the Bible that carefully, much less believe what it says. After all, he will tell us that he is "Roman Catholic" and thus doesn't have to believe what the Bible says).

Wright: "the presence of unicorns"

³ *The Literal Meaning of Genesis*, Bk 2, Ch. 5, No 9.

R. Sungenis: Here Mr. Wright wants to prejudice you against the fact that unicorns were once real animals and make you feel silly for believing they once existed, all without the slightest proof, of course. This is how attorneys work. They make leading suggestions to the jury to get them to think a certain way (at least until the judge stops them). The fact is, unicorns are no stranger than the extinct Dodo bird. Here is a logical explanation from *Answers in Genesis* (but we can depend upon it that Mr. Wright's research went no farther than his own prejudice):

Modern readers have trouble with the Bible's unicorns because we forget that a single-horned feature is not uncommon on God's menu for animal design. (Consider the rhinoceros and narwhal.) The Bible describes unicorns skipping like calves (Psalm 29:6), traveling like bullocks, and bleeding when they die (Isaiah 34:7). The presence of a very strong horn on this powerful, independent-minded creature is intended to make readers think of strength.

The absence of a unicorn in the modern world should not cause us to doubt its past existence. (Think of the dodo bird. It does not exist today, but we do not doubt that it existed in the past.) Eighteenth century reports from southern Africa described rock drawings and eyewitness accounts of fierce, single-horned, equine-like animals. One such report describes "a single horn, directly in front, about as long as one's arm, and at the base about as thick. . . . [It] had a sharp point; it was not attached to the bone of the forehead, but fixed only in the skin."³

The elasmotherium, an extinct giant rhinoceros, provides another possibility for the unicorn's identity. The elasmotherium's 33-inch-long skull has a huge bony protuberance on the frontal bone consistent with the support structure for a massive horn.⁴ In fact, archaeologist Austen Henry Layard, in his 1849 book *Nineveh and Its Remains*, sketched a single-horned creature from an obelisk in company with two-horned bovine animals; he identified the single-horned animal as an Indian rhinoceros.⁵ The biblical unicorn could have been the elasmotherium.⁶

Assyrian archaeology provides one other possible solution to the unicorn identity crisis. The biblical unicorn could have been an aurochs (a kind of wild ox known to the Assyrians as rimu).⁷ The aurochs's horns were symmetrical and often appeared as one in profile, as can be seen on Ashurnasirpal II's palace relief and Esarhaddon's stone prism.⁸ Fighting rimu was a popular sport for Assyrian kings. On a broken obelisk, for instance, Tiglath-Pileser I boasted of slaying them in the Lebanese mountains.⁹

Extinct since about 1627, aurochs, *Bos primigenius*, were huge bovine creatures.¹⁰ Julius Caesar described them in his *Gallic Wars* as,

. . . a little below the elephant in size, and of the appearance, color, and shape of a bull. Their strength and speed are extraordinary; they spare neither man nor wild beast which they have espied. . . . Not even when taken very young can they be rendered familiar to men and tamed. The size, shape, and appearance of their horns differ much from the horns of our oxen. These they anxiously seek after, and bind at the tips with silver, and use as cups at their most sumptuous entertainments.¹¹

One scholarly urge to identify the biblical unicorn with the Assyrian aurochs springs from a similarity between the Assyrian word rimu and the Hebrew word re'em. We must be very careful when dealing with Anglicized transliterated words from languages that do not share the English alphabet and phonetic structure.¹² However, similar words in Ugaritic and Akkadian (other languages of the ancient Middle East) as well as Aramaic mean "wild bull" or "buffalo," and an Arabic cognate means "white antelope."

To think of the biblical unicorn as a fantasy animal is to demean God's Word, which is true in every detail.

However, the linguistics of the text cannot conclusively prove how many horns the biblical unicorn had. While modern translations typically translate re'em as "wild ox," the King James Version (1611), Luther's German Bible (1534), the Septuagint, and the Latin Vulgate translated this Hebrew word with words meaning "one-horned animal."¹³

The importance of the biblical unicorn is not so much its specific identity—much as we would like to know—but its reality. The Bible is clearly describing a real animal. The unicorn mentioned in the Bible was a powerful animal possessing one or two strong horns—not the fantasy animal that has been popularized in movies and books. Whatever it was, it is now likely extinct like many other animals. To think of the biblical unicorn as a fantasy animal is to demean God's Word, which is true in every detail.

3 Edward Robinson, ed., *Calmet's Dictionary of the Holy Bible* revised edition (Boston, MA: Crocker and Brewster, 1832), 907–908.

4 The report in *Nature* described a 33-inch-long skull with a bony frontal protuberance more than three feet in circumference. This bony protuberance with its associated structures is thought to have supported a horn over a yard long. Norman Lockyer, "The Elasmotherium," *Nature: International Weekly Journal of Science*, August 8, 1878, 388.

5 Austen Henry Layard, *Nineveh and Its Remains* (London: John Murray, 1849), 435.

6 A margin note on [Isaiah 34:7](#) placed in the King James Version in 1769 mentions this possible identity, and the Latin Vulgate translates the same Hebrew word as "unicorn" in some contexts and "rhinoceros" in others.

7 *Aurochs* is both singular and plural, like *sheep*.

8 Viewable at www.britishmuseum.org.

9 Algernon Heber-Percy, *A Visit to Bashan and Argob* (London: The Religious Tract Society, 1895), 150.

10 *Britannica Concise Encyclopedia*, 2007, s.v. "Aurochs."

11 Julius Caesar, *Gallic Wars*, Book 6, chapter 28, www.classics.mit.edu/Caesar/gallic.6.6.html.

12 Elizabeth Mitchell, "Doesn't Egyptian Chronology Prove That the Bible Is Unreliable?" in *The New Answer Book 2*, Ken Ham, ed. (Green Forest, AR: Master Books, 2008), 245–264.

13 Some writers who hold to the two-horned identity think that the KJV translators substituted the plural *unicorns* for the singular *an unicorn* in [Deuteronomy 33:17](#) because they were uncomfortable with the idea of a two-horned unicorn. However, the KJV translators themselves noted the literal translation *an unicorn* in their own margin note. They likely chose the plural rendering to fit the context of the verse. [Deuteronomy 33:17](#) states, "His [Joseph's] glory is like the firstling of his bullock, and his horns are like the horns of unicorns: with them he shall push the people together to the ends of the earth: and they are the ten thousands of Ephraim, and they are the thousands of Manasseh" (KJV). The verse compares the tribal descendants of Joseph's "horns," meaning descendants of his two sons Ephraim and Manasseh, with the strong horns of unicorns. "Horns" is plural because there are two sons in view, and "unicorn" is referenced because the unicorn's horn is so incredibly strong.

Wright: "leviathans in the sea"

R. Sungenis: Again, the attempt is to imply that leviathan is a creature that never existed and thus the Bible can't be trusted, all said, of course, without the slightest proof or even evidence from Mr. Wright. All Mr. Wright had to do (which he won't) is look up Leviathan on the internet, and he would have found something like this:

...(jointed monster) occurs five times in the text of the Authorized Version, and once in the margin of (Job 3:8) where the text has "mourning." In the Hebrew Bible the word *livyathan*, which is, with the foregoing exception, always left untranslated in the Authorized Version, is found only in the following passages: (Job 3:8; 41:1; Psalms 74:14; 104:26; Isaiah 27:1). In the margin of (Job 3:8) and text of (Job 41:1) the crocodile is most clearly the animal denoted by the Hebrew word. (Psalms 74:14) also clearly

points to this same saurian. The context of (Psalms 104:26) seems to show that in this passage the name represents some animal of the whale tribe, which is common in the Mediterranean; but it is somewhat uncertain what animal is denoted in (Isaiah 27:1). As the term leviathan is evidently used in no limited sense, it is not improbable that the "leviathan the piercing serpent," or "leviathan the crooked serpent," may denote some species of the great rock-snakes which are common in south and west Africa.

Wright: "God having hands and feet and wings and so on"

R. Sungenis: First of all, the Bible never says God has wings. Second, a common mistake is that since God is omnipresent, then he cannot localize himself in figures having hands and feet. God can localize his presence anyway he chooses (Exodus 33:19ff).

Wright: As Roman Catholic, I am not bound to affirm that every non-scholarly flatfooted literal reading in translation of every passage of the Bible, taken out of context, means what the non-scholar says.

R. Sungenis: And it is precisely the modern Roman Catholics like Mr. Wright who are the most guilty of ignoring the Church's tradition and its literal interpretation of Scripture, quite unlike the traditional Roman Catholics who died as martyrs rather than read Scripture non-literally. The literal reading of Scripture is the very reason that Roman Catholicism believes in such things as the Real Presence of Christ in the Eucharist, since our forefathers weren't afraid to take Matthew 26:26 very literally ("This is my body. Take and eat").

So let's give Mr. Wright a Catholic education. The fact is, according to Catholic doctrine, Mr. Wright is bound to accept all Scripture as inspired by God and to be interpreted literally, unless there is a good and sufficient reason not to do so (see *Providentissimus Deus* below by Pope Leo XIII). But I can assure you that after reading his attempt at scientific investigation, Mr. Wright provides no such sufficient reason. In fact, he will make us go the other way.

Like most modern Catholics, Mr. Wright is under the false impression that he can, willy-nilly, eliminate any literal reading of the Bible he desires if modern scientists say something to the contrary. Wrong. Bible interpretation must be literal unless it can be proven, scientific or otherwise, that a literal interpretation is not possible; and that we must look to the consensus of the Fathers when we make our interpretations. Let's look at the teaching:

...and, most of all, that they may understand that God has delivered the Holy Scriptures to the Church, and that in reading and making use of His Word, they must follow the Church as their guide and their teacher. St. Irenaeus long since laid down, that where the *charismata* of God were, there the truth was to be learnt, and that Holy Scripture was safely interpreted by those who had the Apostolic succession. His teaching, and that of other Holy Fathers, is taken up by the Council of the Vatican, which, in renewing the decree of Trent declares its "mind" to be this – that "in things of faith and morals, belonging to the building up of Christian doctrine, that is to be considered the true sense of Holy Scripture which has been held and is held by our Holy Mother the Church, whose place it is to judge of the true sense and interpretation of the Scriptures; and therefore that it is permitted to no one to interpret Holy Scripture against such sense or also against the unanimous agreement of the Fathers." By this most wise decree the Church by no means prevents or restrains the pursuit of Biblical science, but rather protects it from error, and largely assists its real progress.

The Professor of Holy Scripture, therefore, amongst other recommendations, must be well acquainted with the whole circle of Theology and deeply read in the commentaries of the Holy Fathers and Doctors, and other interpreters of mark. This is inculcated by St. Jerome, and still more frequently by St. Augustine, who thus justly complains: “If there is no branch of teaching, however humble and easy to learn, which does not require a master, what can be a greater sign of rashness and pride than to refuse to study the Books of the divine mysteries by the help of those who have interpreted them?” The other Fathers have said the same, and have confirmed it by their example, for they “endeavored to acquire the understanding of the Holy Scriptures not by their own lights and ideas, but from the writings and authority of the ancients, who in their turn, as we know, received the rule of interpretation in direct line from the Apostles.” The Holy Fathers “to whom, after the Apostles, the Church owes its growth – who have planted, watered, built, governed, and cherished it,” the Holy Fathers, We say, are of supreme authority, whenever they all interpret in one and the same manner any text of the Bible, as pertaining to the doctrine of faith or morals; for their unanimity clearly evinces that such interpretation has come down from the Apostles as a matter of Catholic faith. The opinion of the Fathers is also of very great weight when they treat of these matters in their capacity of doctors, unofficially; not only because they excel in their knowledge of revealed doctrine and in their acquaintance with many things which are useful in understanding the apostolic Books, but because they are men of eminent sanctity and of ardent zeal for the truth, on whom God has bestowed a more ample measure of His light. Wherefore the expositor should make it his duty to follow their footsteps with all reverence, and to use their labors with intelligent appreciation.

In 1965, **Vatican Council II** reiterated the Church’s teaching on the authority of the Fathers:

This tradition which comes from the Apostles develop in the Church with the help of the Holy Spirit. For there is a growth in the understanding of the realities and the words which have been handed down. This happens through the contemplation and study made by believers, who treasure these things in their hearts (Lk 2:19,51) through a penetrating understanding of the spiritual realities which they experience, and through the preaching of those who have received through episcopal succession the sure gift of truth. For as the centuries succeed one another, the Church constantly moves forward toward the fullness of divine truth until the words of God reach their complete fulfillment in her.

The words of the holy fathers witness to the presence of this living tradition, whose wealth is poured into the practice and life of the believing and praying Church.⁴

The bride of the incarnate Word, the Church taught by the Holy Spirit, is concerned to move ahead toward a deeper understanding of the Sacred Scriptures so that she may increasingly feed her sons with the divine words. Therefore, she also encourages the study of the holy Fathers of both East and West and of sacred liturgies.⁵

...faithful to the truth which we have received from the apostles and Fathers of the Church, in harmony with the faith which the Catholic Church has always professed.⁶

Following the study of Sacred Scripture, the Holy Fathers, the doctors and liturgy of the Church, and under the guidance of the Church’s magisterium...⁷

⁴ *Dei Verbum*, Ch. 2, 8.

⁵ *Dei Verbum*, Ch. 6, 23.

⁶ *Unitatis Redintegratio*, Ch. 3, II, 24.

⁷ *Lumen Gentium*, Ch. 8, IV, 67.

The knowledge of the sacred minister ought to be sacred because it is drawn from the sacred source and directed to a sacred goal. Especially is it drawn from reading and meditating on the Sacred Scriptures, and it is equally nourished by the study of the Holy Fathers and other Doctors and monuments or tradition.⁸

...the words and deeds which God has revealed, and which have been set down in Sacred Scripture and explained by the Fathers and by the magisterium.⁹

The Fathers of the Church proclaim without hesitation...¹⁰

This doctrine is contained in the word of God and it was constantly proclaimed by the Fathers of the Church.¹¹

Of course, Mr. Wright tries to justify his ignoring of the literal interpretation by his usual demonization, namely, “every non-scholarly flatfooted literal reading.” Notice the term “flatfooted.” The dictionary defines it as follows:

flat·foot·ed

ADJECTIVE

1. having flatfeet.
2. taking or showing an uncompromising stand in a matter; firm and explicit: a flatfooted denial.
3. clumsy or plodding; maladroit: flatfooted writing.
4. catch one flatfooted to catch one unprepared; surprise: The amount of the bill caught us flatfooted.

In other words, if Mr. Wright does not personally agree with a particular literal interpretation of the Bible (e.g., that plants came before the sun) he calls it “flat-footed” and “non-scholarly.” It means that Mr. Wright has bought into modern atheistic science’s belief that the universe came into existence by a Big Bang some 13.7 billion years ago, which is typical of most modern Catholics. But they believe such nonsense without the slightest evidence, much less proof.

In the end, whatever modern science says it believes, Mr. Wright takes this as positive proof against whatever the Bible says, *ipso facto*. Interestingly enough, science is supposed to be about empirical proof, but the Big Bangers and the evolutionists admit they have no proof. As Richard Lewontin candidly admitted:

We take the side of science in spite of the patent absurdity of some of its constructs, in spite of its failure to fulfill many of its extravagant promises of health and life, in spite of the tolerance of the scientific community for unsubstantiated just-so stories, because we have a prior commitment, a commitment to materialism. It is not that the methods and institutions of science somehow compel us to accept a material explanation of the phenomenal world, but, on the contrary, that we are forced by our *a-priori* adherence to material causes to create an apparatus of investigation and a set of concepts that produce material

⁸ *Presbyterorum Ordinis*, Ch. 3, 3, 19.

⁹ *Ad Gentes*, Ch. 3, 22.

¹⁰ *Ad Gentes*, Ch. 1, 3.

¹¹ *Dignitatis Humanae*, Introduction, 10.

explanations, no matter how counterintuitive, no matter how mystifying to the uninitiated. Moreover, that materialism is absolute, for we cannot allow a Divine Foot in the door.¹²

So the “science” that Mr. Wright believes in is not really science; rather, it is a philosophical presupposition disguised as science.

Wright: So, to me, the idea that even one Christian lost his faith due to the Copernican theory is absurd (or, rather, that only absurd Christians would find this a challenge to their faith) much less that the orbit of the Earth around the sun is the main reason for loss of Christian faith in the modern day.

R. Sungenis: Since Mr. Wright asserts this only as his opinion and hasn’t done any research to back up his claim, then it has about as much weight as a feather. All Mr. Wright had to do to get a second opinion is read the historians who have written what the Copernican revolution did to mankind. Here are a few:

As Alexander Koyré understood it:

The dissolution of the Cosmos...this seems to me to be the most profound revolution achieved or suffered by the human mind since the invention of the Cosmos by the Greeks. It is a revolution so profound and so far-reaching that mankind – with very few exceptions, of whom Pascal was one – for centuries did not grasp its bearing and its meaning; which, even now, is often misvalued and misunderstood. Therefore what the founders of modern science, among them Galileo, had to do, was not to criticize and to combat certain faulty theories, and to correct or to replace them by better ones. They had to do something quite different. They had to destroy one world and to replace it by another. They had to reshape the framework of our intellect itself, to restate and reform its concepts, to evolve a new approach to Being, a new concept of knowledge, a new concept of science – and even to replace a pretty natural approach, that of common sense, by another which is not natural at all.¹³

Koyré adds elsewhere:

I need not insist on the overwhelming scientific and philosophical importance of Copernican astronomy, which, by removing the earth from the center of the world and placing it among the planets, undermined the very foundation of the traditional cosmic world-order...as we know, the immediate effect of the Copernican revolution was to spread skepticism and bewilderment....At the end we find nihilism and despair....The infinite Universe of the New Cosmology, infinite in Duration as well as in Extension, in which eternal matter in accordance with eternal and necessary laws moves endlessly and aimlessly in eternal space, inherited all the ontological attributes of Divinity. Yet only those – all the others the departed God took away with Him.¹⁴

Arthur Koestler says it this way:

The new philosophy destroyed the mediaeval vision of an immutable social order in a walled-in universe together with its fixed hierarchy of moral values, and transformed the European landscape, society, culture, habits and general outlook as thoroughly as if a new species had arisen on this planet.¹⁵

James Burke:

¹² “Billions and Billions of Demons,” *The New York Review of Books*, January 9, 1997, pp. 28, 31.

¹³ Alexandre Koyré, “Galileo and Plato,” *Journal of the History of Ideas*, vol. 4, no. 4, Oct. 1943.

¹⁴ Alexandre Koyré, *From the Closed World to the Infinite Universe*, 1968, pp. 29, 43, 276.

¹⁵ Arthur Koestler, *The Sleepwalkers*, p. 13.

The work, published in 1543, was called *On the Revolution of the Celestial Spheres*. It stated that the center of the universe was a spot somewhere near the sun...The scheme met the requirements of philosophical and theological belief in circular motion. In every other respect, however, Copernicus struck at the heart of Aristotelian and Christian belief. He removed the Earth from the center of the universe and so from the focus of God's purpose. In the new scheme man was no longer the creature for whose use and elucidation the cosmos had been created. His system also placed the Earth in the heavens, and in doing so removed the barrier separating the incorruptible from the corruptible.¹⁶

Owen Barfield, in his penetrating book on human thought, suggests that the Copernican revolution dwarfs any other:

The real turning-point in the history of astronomy and of science in general was... when Copernicus...began to think, and others, like Kepler and Galileo, began to affirm that the heliocentric hypothesis not only saved the appearances, but was physically true. It was this, this novel idea that the Copernican (and therefore any other) hypothesis might not be a hypothesis at all but the ultimate truth, that was almost enough in itself to constitute the "scientific revolution," of which Professor Butterfield has written: "it outshines everything since the rise of Christianity and reduces the Renaissance and Reformation to the rank of mere episodes, mere internal displacements, within the system of medieval Christendom"...It was not simply a new theory of the nature of the celestial movements that was feared, but a new theory of the nature of theory; namely, that, if a hypothesis saves all the appearances, it is identical with truth.¹⁷

Although Barfield does not give the citation, he is referring to the quote in Herbert Butterfield's book *The Origins of Modern Science: 1300-1800*.¹⁸ Yet he left out the more significant of Butterfield's words:

Since it [the Copernican Revolution] changed the character of men's habitual mental operations even in the conduct of the non-material sciences, while transforming the whole diagram of the physical universe and the very texture of human life itself, it looms so large as the real origin both of the modern world and of the modern mentality, that our customary periodisation of European history has become an anachronism and an encumbrance.¹⁹

E. A. Burtt adds that after the Copernican revolution...

Man begins to appear for the first time in the history of thought as an irrelevant spectator and insignificant effect of the great mathematical system which is the substance of reality.²⁰

Friedrich Engels, co-author with Karl Marx of the *Communist Manifesto*, reveals that the Copernican revolution was the beginning of modern man's humanistic religion, and for added flavor, he describes its advancement in Newtonian terms:

What Luther's burning of the papal Bull was in the religious field, in the field of natural science was the great work of Copernicus... from then on the development of science went forward in great strides, increasing, so to speak, proportionately to the square of the distance in time of its point of departure...²¹

¹⁶ James Burke, *The Day the Universe Changed*, p. 135.

¹⁷ Owen Barfield, *Saving the Appearances: A Study in Idolatry*, 2nd ed., 1988, pp. 50-51.

¹⁸ Herbert Butterfield, *The Origins of Modern Science: 1300-1800*, 1957, p. 7.

¹⁹ *Ibid.*, pp. 7-8.

²⁰ E. A. Burtt, *The Metaphysical Foundations of Modern Science*, p. 90.

²¹ Nicholas Rescher, *Scientific Progress*, Oxford, United Kingdom, 1978, pp. 123-124. It is commonly admitted by historians that the Copernican Revolution spawned both the French and Bolshevik Revolutions. Marx said he was indebted to Copernicus.

The nihilist Friedrich Nietzsche, after seeing what the scientific revolution did to mankind, despondently concluded: “God is dead.” What is even more significant is why Nietzsche proffered such sentiments. He writes:

“Where has God gone?” he cried. “I shall tell you. We have killed him – you and I. We are his murderers. But how have we done this? How were we able to drink up the sea? Who gave us the sponge to wipe away the entire horizon? What did we do when we unchained the Earth from its sun? Whither is it moving now? Whither are we moving now? Away from all suns? Are we not perpetually falling? Backward, sideward, forward, in all directions? Is there any up or down left? Are we not straying as through an infinite nothing? Do we not feel the breath of empty space? Has it not become colder? Is it not more and more night coming on all the time? Must not lanterns be lit in the morning? Do we not hear anything yet of the noise of the gravediggers who are burying God? Do we not smell anything yet of God’s decomposition? Gods, too, decompose. God is dead. God remains dead. And we have killed him. How shall we, murderers of all murderers, console ourselves?”²²

The references to “What did we do when we unchained the Earth from its sun?” or “Is there any up or down left?” show that Nietzsche is speaking about none other than the Copernican revolution and the cataclysmic upheaval it ignited in the hearts of men. Many moderns have repeated Nietzsche’s quote with the interpolation “God is dead...Our science has killed him,” but few have noticed that the science to which Nietzsche was referring is Copernicanism and its offshoots, regardless of whether Nietzsche agreed or disagreed with heliocentric cosmology. The poet John Donne expressed a similar sentiment:

And new philosophy calls all in doubt
The element of fire is quite put out
The sun is lost, and th’ Earth, and no man’s wit
Can well direct him where to look for it.
And freely men confess that this world’s spent,
When in the planets and the firmament
They seek so many new; they see that this
Is crumbled out again to his atomies
‘Tis all in pieces, all coherence gone²³

Wright: The Copernican theory was not an issue for Christians until the Evangelical (sic) movement springing from the Protestant movement, some hundreds of years after the entire Christian world saw no conflict between astronomy and theology. It is a make believe problem believed neither by honest scientists nor by orthodox Christians.

²² “The Gay Science” in Nietzsche’s *Thus Spoke Zarathustra* (1885). The above quote is not chosen to suggest that Nietzsche had any sympathies or sentiments towards God or religion, but only that, in his inimitable way, he saw the obvious truth that, to whatever degree, Copernicanism separated man from God. Rest assured, many other quotes reveal Nietzsche’s negative feelings about God and religion: “I cannot believe in a God who wants to be praised all the time.” “After coming in contact with a religious man, I always feel that I must wash my hands.” Nietzsche eventually contracted syphilis and committed suicide.

²³ John Donne (d. 1631). These lines extracted from a 238-line poem titled, *An Anatomy of the World* written in 1611, some say as an elegy for 15-year-old Elizabeth Drury whose death Donne saw as a symbol of the world’s decay, while her heaven bound soul gave hope for regeneration. Others see included in it Donne’s commentary on Galilean cosmology, since it came only a year after Galileo’s *Sidereus Nuncius* published in 1610 (per Cohen, *Revolution in Science*, p. 498). Donne was born into Catholicism but joined the Anglican church in the 1590s, not caring much for the papacy. A poem written a year before, *Ignatius His Conclave*, satirized the Jesuits. Ignatius of Loyola is ejected from hell and commanded to colonize the moon, a place in which he will not cause much harm.

R. Sungenis: This shows that Mr. Wright is utterly ignorant of the history. The only thing that is “make-believe” is his knowledge of what happened. The Copernican theory became an “issue” right from the get-go, since Copernicus 1543 book, *De revolutionibus*, was put on the *Index of Forbidden Books* in 1559; and seven years later, in 1566, geocentrism became that standard teaching of the Church when it was formally taught in the Tridentine catechism. In 1615, Fr. Paolo Foscarini’s book on heliocentrism was condemned by the Church; and a year later in 1616, Galileo was condemned for writing letters supporting heliocentrism. In 1633, Galileo was again condemned again for writing a book on heliocentrism, and the Church officially designated heliocentrism as a “formal heresy.”

Wright: The fight between faith and reason exists only the narrow minds of atheists who worship science without understanding it and heretics who worship of Bible (sic) without understanding it: two brands of idolaters, each a mirror reflection of the other.

R. Sungenis: Mr. Wright’s choice of words (“worship of Bible”) betrays his prejudice. His desire is to make you think that those who try to remain as faithful to the literal words of Scripture as possible (per the command of Pope Leo XIII in *Providentissimus Deus*) are those who “worship” the Bible as opposed to merely obeying what God says in the Bible. Mr. Wright’s desire is to demonize those who are faithful to the Bible. That sounds more like a devil than it does a Christian.

Again, it was the Roman Catholic Church who led the world in literal exegesis of the Bible, and it is the very reason she believes in the sacraments, since they are products of literal interpretation. But Mr. Wright thinks he can then dismiss the Bible’s teaching on geocentrism when, in fact, the Catholic Church long before him stated that heliocentrism is a heresy and that geocentrism is the truth of Scripture. Mr. Wright thinks that because he is an educated “scholarly” Catholic he can dismiss whatever the Church taught before him. On the one hand he condemns those who “worship science” but he allows himself to pick and choose from science what science he will accept, and that decision is made when he doesn’t want to accept what the Bible literally says. He has no proof that the Bible is wrong or that his science is right, but he prefers to believe them nonetheless.

Wright: As an ex-atheist, I solemnly assure you that not a single atheist, no, not one, would give a flying fig over whether geocentrism were proven true.

R. Sungenis: As we have seen earlier, Mr. Wright is prone to count his opinion as if it were fact. But as the evidence shows from the historians we noted above (Koyre, Butterfield, et al), it is precisely the Copernican theory that has upset mankind’s thinking. In my 15 years of experience, it is precisely an Earth in the center of the universe that modern science abhors since it speaks of a universe of little time and no chance. An Earth in the center means one thing: that Someone put it there on purpose and had everything else revolve around it. That will make any atheist shudder in his boots.

Wright: Earth being in the center of the cosmos does not prove God exists, or even hint as much. How many atheist of your acquaintance fell down and worshiped God when the Big Bang became the standard model?

R. Sungenis: Why would he? He has no more reason to worship God over the Big Bang than he does with the idea that man came from monkeys, since both contradict the Bible.

Wright: Lucretius the Roman philosopher and poet was an atheist (or, at least, a man who believed the serene gods never interfered in human affairs) and he believed the geocentric model.

R. Sungenis: Unfortunately, Mr. Wright is blind to the utter anachronism of his argument. Our issue concerns how Copernicanism, which began in 1543, was a principle cog in the machinery of modern man, not what caused Lucretius to be an atheist. There are many and varied reasons Lucretius was an atheist. But the fact remains that most, if not all, secularists today believe and promote a non-geocentric universe so as to prove the Bible and the Church as mistaken so that they can then have an excuse for siding with atheism and live life the way they want to.

Wright: Astronomy is not what makes atheist doubt the witness of the Christians. (It is our lack of charity and godliness that makes them doubt.)

R. Sungenis: This is nothing more than the pot calling the kettle black. Mr. Wright opens and closes this critique of me and geocentrism with the most utter “lack of charity” I have seen in a long time. It wouldn’t be so bad if Mr. Wright claimed ignorance on the issues, but he considers himself an expert that can discredit his opponent with a flick of his finger. So far, I have shown that Mr. Wright knows little of what he is talking about, and it gets much worse as we move on.

Wright: The medieval writers who put Earth in the center of gravity, where are all the heavy, mundane, mortal, and un-divine material fell, regarded the center of the universe as the bottom, where hell was. The Earth’s surface was the roof of hell. The stars were the palaces of the saints and angels, the important part of the universe. We were the sewer.

R. Sungenis: Another half-truth. It was SECULAR medieval writers who made Earth the sewer, following Aristotle, not Christian medievals. The Fathers of the Church to the 700s, and all the Christian medievals following through the 1800s, said Earth was the crown prince of God’s creation and his own footstool. It was because of its specialness and honor that it was put in the center – the very opposite of the secular medievalists.

Wright: And, as writers from Chesterton to Lewis have pointed out, in no sober man does the size of the universe show man to be too small for the concern of God, rather than stand in mute witness to his glory. Man is indeed small in relation to the universe. For that matter, he is small in relation to the nearest tree.

R. Sungenis: Obviously, Mr. Wright has never heard of “Pascal’s cry.” If he did, he would realize that the utter vastness of the Copernican universe was what caused Pascal to cower at what appeared to be his own insignificance. Obviously, Mr. Wright never understood Donne’s poem which said much the same as Pascal. By the same token, no Christian would be upset that the universe could be very big. If the Earth is the center of a big or small universe would make no difference to a Christian. But many Christians today have been sucked into the idea that the Earth is on the outskirts of a vast universe, making it a speck of dust indistinguishable from any other lifeless body in the universe. But the Bible says no. The Earth is special, and in a special place. Mr. Wright has no reason not to accept that teaching, since he has no proof to the contrary. Rather, he has kept the baggage from his atheism – similar to the “high places” that the Jews worshipped at the same time they claimed to be following God.

Wright: Arguing that heliocentrism moves man from the central position of God's love to a forgotten corner of the cosmos is as illogical as arguing that Caesar must be a god but Christ cannot be god, because Caesar was in Rome, adorned in purple, whereas Christ was born in a stinking stable.

R. Sungenis: The only thing that "stinks" is Mr. Wright's forced analogy. No one is arguing that heliocentrism moves man from God's love. We are arguing that attempts to deny geocentrism (which would necessarily eliminate any claims to a time and chance universe from a Big Bang and its antecedent Multiverse) are made because they know the revolutionary implications of a central Earth. A central earth is the very antithesis of modern man's concept of himself.

Wright: Only someone unfamiliar with (or perhaps an enemy of) both Christian humility and scientific honesty could make such a stupid argument as to claim heliocentrism erodes faith and geocentrism will restore it.

R. Sungenis: Mr. Wright doesn't know the first thing about "humility" considering the manner in which he has addressed me and this issue.

Wright: Therefore when Professor Hill says at the outset that his purpose is not to learn science, but to use science to teach about God, salvation and the eternity of the soul, he attempting gross malfeasance, first by identifying a wrong cause of atheism (it is not caused by heliocentrism) and second by identifying a wrong method of Biblical exegesis (expecting science to match tin-eared literalism of those heretics who worship the Bible, not Christ.)

R. Sungenis: So, once again, we see that Mr. Wright doesn't understand the legacy of literalism taught by the Catholic Church since its inception, and that it is only the presumptuous claims of science (e.g., Copernicanism, Darwinism, Freudianism, et al) that are being used to discredit the Bible's literal words, all, of course, without the slightest scientific proof.

Wright: So the introduction gave me the intellectual measure of the man: the question he approaches are above his mental pay grade.

R. Sungenis: And yet this is the same person who told us that the atheist doesn't accept God because of our "lack of charity." What we have seen is, at every turn, Mr. Wright doesn't know the history and thus he engages in his historiography to suit his own agenda.

Wright: His approach, throughout, is based on three simple tricks that a child could see through:

he quotes a famous scientist out of context;

R. Sungenis: What is really happening is that the opponents like Mr. Wright don't like the truth of the quote being used, so they have to grasp for something to discredit the truth-value of the quote. Accusing the opponent of "taking it out of context" is the easiest method to create such prejudice, all, of course, without a single example to back up his claim.

Wright: he then accuses the scientist of being motivated solely by anti-Biblical bigotry, and lying to the public in order to deceive them and spread atheism;

R. Sungenis: Another ploy is to make blanket statements (e.g., “solely by anti-Biblical bigotry”) and claim that the opponent only uses such means to make his point.

Wright: he then misquotes the theory, purpose, and results of various famous experiments as if confident that no one in the audience knows either the history of science or the methods of natural philosophy.

R. Sungenis: Another ploy is to make it appear that the opponent believes his audience is ignorant so that the opponent can “misquote a theory” but believe he won’t get caught doing so.

Wright: Unfortunately for him, I know both.

R. Sungenis: We will see that Mr. Wright knows enough to be dangerous, but like many, he *thinks* he knows what the truth is. You will see this when I expose his dubious analysis of the scientific issues.

Wright: I read the Ptolemy, Copernicus, Brahe, Kepler and Newton in school, not filtered through the modern opinions of the textbook writers, but in the original. I performed some of the experiments and took myself some of the observations on which some of the results are based. So I know exactly what each man was trying to prove and not trying to prove, and why.

R. Sungenis: If that is the case, then Mr. Wright doesn’t know what he claims to know, as we will see shortly.

Wright: And I can spot the fraud. This lecture was nothing but.

R. Sungenis: At the end of this paper, I will show Mr. Wright is the fraud. The easiest way for him to cover it up is to claim that his opponent is a fraud. We have already seen several instances of Mr. Wright’s erroneous accounting of the history. Wait until you see his “science.”

Wright: Since men I respect have paid this lecture high compliments, and claimed at least to have been scientifically trained, it behooves me to remind them of the basics of the scientific method they should have learned in high school.

R. Sungenis: So at least Mr. Wright admits that men of his own self-proclaimed caliber who have been “scientifically trained” have been convinced by my video, and thus the burden is solely on Mr. Wright to show why they are wrong.

Wright: First, no scientist claims to know an absolute truth. Ever. He claims to have a model with the following properties: it predicts measurable phenomena more accurately than other models; it is the most elegant (that is, most parsimonious and robust) of the models available.

R. Sungenis: Another half-truth. The fact is, heliocentrism is taught in grade, high, and university level schools as the absolute truth. Don’t believe me? Attend a local physics or astronomy class at your neighborhood school. No room is given to geocentrism, or any other model, except to discredit them as being erroneous.

Wright: When a model predicts a result that differs from the observed result, the model is tinkered with, assumptions are added or subtracted, to do what is called “saving the appearance” that is, to make the revised model match the observed result. This is neither deception nor subterfuge, but the normal progress

of science. When Ptolemy could not explain the motion of a planet, he added an epicycle or a differens or something to make his figures come out right.

R. Sungenis: But this sword cuts both ways. The geocentric model can “save the appearances” and often do so much better than the heliocentric model, but it is not given the time of day in our schools. Mr. Wright is a living testimony to that attitude, since for all his attempts to allow “tinkering,” he doesn’t allow it for the viability of the geocentric model. In other words, Mr. Wright is a scientific hypocrite. He calls those who “tinker” with the geocentric model “Bible worshipers” and “Harold Hills.”

Wright: Only someone with no scientific training whatsoever could be amazed at the fact that the different model predict the same results. The three models discussed in the lecture are the Ptolemaic, the Copernican, and the Tycho Brahe model. For those of you who never studied science: the Ptolemaic model places Earth at the center of the solar system, and has all the heavens revolve around it: the moon, Mercury, Venus, the Sun, Mars, Jupiter, Saturn. The inner and outer planets differ in that Mercury and Venus never rise to the zenith. The planets orbit on perfect circles riding on other circles, which revolve around a center of motion rotating near the core of the Earth. The universe turns once a day on its axis, producing day and night, and moves turns in the opposite direction one degrees per day, so that at the end of 360 degrees the year is completed. This model explains gravity as issuing from the Earth only, and has only bodies made of heavy matter falling toward the center of the earth. Light bodies such as the sun, moon, and stars, including the wandering stars called planets (which were thought to be lamps, not globes like the earth) were made of light and ethereal substance. The Ptolemaic model makes no account of the phases of Venus, the Galilean satellites orbiting Jupiter, the parallax of the stars, or luminiferous aether, none of which was detected before Galileo’s day. (In two paragraphs I have explained more than Professor Harold Hill about the Ptolemaic model.)

R. Sungenis: My lecture wasn’t about nor had time to cover in depth the Ptolemaic model. If it did, it would have been five hours long instead of two. But leave it to the “lack of charity” Mr. Wright to make it appear as if I wanted to hide information from the audience.

Suffice it to say, Mr. Wright left out the most important part of Ptolemy’s model, which is the Equant. The Equant allowed the planets to have irregular orbits, which, unlike Copernicus’ model, accounted for their irregular orbits we see in the sky. In fact, the Equant was the forerunner to Kepler’s elliptical orbits. This gave the Ptolemaic model a high degree of accuracy and was one of the reasons it was used for so long. The problem of the Ptolemaic model was that Ptolemy did not know how far away Mercury and Venus were from Earth or the sun, but he left six variables in his model in case someone could figure it out, which happened when Tycho Brahe came on the scene.

Wright: Tycho Brahe’s model has the Earth also at the center, but, for ease of calculation, has the moon only revolving around the Earth. The other planets revolve around the sun, which revolves around the Earth. This model make no account of gravity. The one advantage of the Tychoic model is that it explains the phases of Venus.

R. Sungenis: It not only explains the phases of Venus, it explains every motion in the solar system identical with the heliocentric system – every motion. Moreover, a “tinkered” Tycho model known as the Neo-Tychonic, explains stellar parallax and steller aberration, which were two of the so-called “proofs” of heliocentrism in the 1800s and 1900s. Those proofs have since been discredited.

Wright: The Copernicus model had some 44 epicycles to retain the circular motions, but put the Sun at the center of the system, and had the Earth move around it. The main argument against the Copernicus model is that lack of sensation of motion to observers on the earth, and the lack of stellar parallax (which was, however, discovered in 1838 by Bessel, who picked a nearby star, 61 Cygni).

R. Sungenis: This shows that Wright doesn't know the history or the science. First, the star's name is Cygni 61 or Cygnus 61, not Cyni. Second, the main argument against Copernicus was not the LACK of stellar parallax in his model. It was Tycho Brahe who said that if Copernicus was right then his model would SHOW stellar parallax! But since no one had seen stellar parallax in the 1500s or 1600s, Brahe used this as evidence against Copernicus, not for it! Wright's errors continue to mount. Pretty soon I'm going to be calling him "Harold Hill, the Music Man."

Wright: Kepler's model reduced the complexity of Copernicus to three laws of astronomical motion by eliminating circular orbits and positing elliptical.

R. Sungenis: Actually, the Greeks were the first to propose elliptical orbits. Kepler was just using them and crediting it to himself, which is the same that Copernicus did with Aristarchus' Greek heliocentric model. Ptolemy's Equant already prepared for the elliptical orbits. Moreover, if the same elliptical orbits of Kepler's Copernican model were put into the Brahe model, the Brahe model would have been just as accurate as the Kepler model (although no model is completely accurate).

Wright: Newton's three laws of motion were even simpler, since all of the Kepler could be deduced from them, but also ballistics, billiards, the fall of apples, the motions of eddies, and all inelastic collisions. Newton solved the problem of Aristotle's local violent motion by positing that bodies in motion stayed in motion and that bodies at rest stayed at rest, a property he called inertia.

R. Sungenis: He called it "inertia" but he had no more reason than Aristotle why a body remained in motion. In other words, Newton did not explain the cause of gravity or inertia. He merely gave us mathematical equations to show how fast or how long these processes would take place.

Wright: Most significantly, Christiaan Huygens established what is now known as Newton's Second Law of motion ($F=ma$). He also established a central principle of modern physics, the main point of which Professor Harold Hill in his lecture is unaware: that from the point of view of physics, the motions of bodies in collision (or orbit) must be the same from any frame of reference. Two trains at fifty miles an hour crashing headlong are the same as one train at one hundred miles an hour crashing into a stationary train.

R. Sungenis: Note that Mr. "lack of charity" Wright (the one who thinks that the Copernican model would not show stellar parallax) is trying to accuse me of being "unaware" of Galilean relativity. (My guess is that Mr. Wright didn't know it was also called Galilean relativity). Of course, he has no way of knowing what I know about this issue since I didn't venture into this area in my lecture. But it serves as a good sound bite for the callous Mr. Wright.

Wright: This is called the principle of relative motion. Example: from the point of view of a man on Earth, Venus is an interior planet (sets on the same horizon from which it rises) and Mars is an exterior (rises to the zenith). From the point of view of an observer on Venus, Earth is an exterior planet. From the point of view of an observer on Mars, Earth is an interior planet. Whether the Earth spins on its axis daily,

or the universe rotates daily about a motionless earth, the motion seen from the surface of the Earth would be the same. (The motion seen from the moon, of course, would be different, unless the moon is somehow being carried along with the circular motion of the universe in a fashion that cannot be detected.) Now, the astonishment and smirking glee with which Professor Harold Hill, over and over and over again, in his boring lecture expects to blow the minds of the scientifically illiterate audience shows he has never heard of this principle, or expects his audience never to have heard of it.

R. Sungenis: The only one being entertained here is Mr. Wright, as he laughs at his own jokes. Unfortunately, no one in the public audience is laughing, since they all know that I teach Galilean relativity as a reality. Mr. Wright would have known this if he had read my books or seen my movies, but his goal is to make me look like I don't know what I'm talking about so that his colleagues who were convinced by my lecture can be dissuaded from it.

Wright: But it is the most obvious principle in modern physics. The only way to abridge it, is to posit an absolute space to act as a framework from whose special vantage all relative motions can be measured, but even then, the principle holds as long as inertia holds. That is, if there were an absolute frame, no observation could determine it: by definition, the observations of all accurate models must be the same. It would be selected on the basis of the elegance of the model.

R. Sungenis: Which means that if we DO know there is an absolute frame, then it can be the judge of every other frame. This is precisely what the geocentric model gives us – an absolute frame from which to judge all other frames and motions. But, of course, Mr. Wright believes there is no such absolute frame because he has rejected the Bible's claim to an absolute frame as "Bible worship."

Wright: In particular, the Brahe model predicts the same lunar eclipses, and retrograde motions, oppositions, triunes and conjunctions at the same latitudes and dates as the Ptolemaic model or the Copernican model. Professor Hill's argument is that it is invalid to determine scientific models on scientific grounds, that is, on the basis of the elegance (robustness and parsimony) of the model.

R. Sungenis: And I'm right, since "elegance" is not a scientific, empirical method. We are not participating in the Miss America pageant in which things are judged on "elegance." Be that as it may, Mr. Wright is implying that the heliocentric model is the "elegant" model, filled with "robustness and parsimony" (whatever they mean in this context). In effect, Mr. Wright is inadvertently admitting that he doesn't have any scientific proof for the heliocentric model, but he will be the first one to insist that only the heliocentric model be taught to our grade school children. I can assure you that no grade school kid is told that Copernicus was right because his was the "elegant" model, but because "science has proved it correct." We will see more on the "elegance" issue later on.

Wright: He, displaying grotesque scientific ignorance unbecoming to any literate man raised in the West, scoffs at these principles as being a philosophical bias, which he dishonestly and deceptive characterizes as being motivated solely by an animus against Christ, which he heretically and blasphemously takes to be synonymous with the geocentric model.

R. Sungenis: What a bag of wind. I guess it was time for Mr. Wright to take to the preacher's podium. This usually happens when my opponent's argument is weak and he has to buttress it with bravado to try to convince his audience. I'm beginning to feel that Mr. Wright isn't worth my time to refute. Be that as it

may, allow me to quote from one of the premier physicists in the world on this very question of “philosophical bias.” This comes from George F. R. Ellis:

People need to be aware that there is a range of models that could explain the observations. For instance, I can construct [for] you a spherically symmetrical universe with Earth at its center, and you cannot disprove it based on observations. You can only exclude it on philosophical grounds. In my view there is absolutely nothing wrong in that. What I want to bring into the open is the fact that we are using philosophical criteria in choosing our models. A lot of cosmology tries to hide that.²⁴

Wright: Professor Harold Hill makes a huge point, over and over again, that all three models predict the same results. And he dismissed the other rule uses for preferring one model to the other, the elegance, as a mere bigotry of philosophy.

R. Sungenis: Let’s use Mr. Wright’s argumentation for the sake of it. That being the case, notice how he just assumes that his model is the “elegant” one and that the geocentric model is not elegant. On what basis? Stay tuned.

Wright: Now, I must say, the scientific community is much to blame for creating an atmosphere of science worship rather than scientific rigor which would allow an audience to scientifically illiterate dupes to be found which would find any of this baloney convincing. Science-worshippers do not like the fact that models are based on elegance, and that more than one model fits the available facts. They want science to be a religion and to give final and absolute answers, and it does not. They want science to make no mention of elegance, since this is an aesthetic or philosophical criterion, one where human judgment is involved. In real history, outside of the hysterical lies of Professor Harold Hill, the Tycho Brahe model was not rejected on the ground of it being unable to predict the motions of the planets as seen from the Earth’s surface. Because it was not rejected on those ground, it cannot be revived on the grounds that it accurately predicts the motions of the planets as seen from the Earth’s surface.

R. Sungenis: Notice how Mr. Wright wants to make up his own rules as to how this matter should be judged (e.g, “it cannot [be] revived on the grounds that it accurately predicts the motions of the planets”). In other words, he admits that the Brahe geocentric model accurately predicts the motions of the planets, but we aren’t allowed to use it because, according to Wright, it wasn’t rejected because of its accuracy, but for some other reason – “lack of elegance,” I presume. Stay tuned.

Wright: It was rejected because Kepler’s model is robust, in that it allows one to calculate the motion of the moons of Jupiter, as seen from the surface of Jupiter, or the hours of the rise and fall of the moons of Mars as seen from the surface of Mars, or the position of the Earth in the black skies of the Moon at any given latitude and longitude of the moon.

R. Sungenis: This is fallacious. Kepler’s model could only demonstrate things on a geometric level, not a dynamic level, despite his “laws of motion.” Kepler did the same thing as Newton would do – he merely gave us an equation to calculate the movement but he did not tell us *the cause of the movement*. In fact, Kepler believed that the planets moved around the sun because the sun has giant magnetic arms that swept the planets around, as it were. Since the farther away the planet was meant that it met less of the

²⁴ “Profile: George F. R. Ellis,” W. Wayt Gibbs, *Scientific American*, October 1995, Vol. 273, No. 4, p. 55.

sun's sweep, the planet would move more slowly. This, of course, was wrong, since magnetic arms don't move the planets besides the fact that the sun has no magnetic arms.

Second, any equations Kepler used for his heliocentric model could be used for Brahe's geocentric model, including how the moons of Jupiter go around Jupiter. Since Brahe believed, as Kepler did, that the planets go around the sun, not the Earth, then the same dynamics could be used for either system.

Third, the only issue left was how the sun could go around the Earth, since the sun was presumably bigger than the Earth, but this question wouldn't be settled until much later when Galilean relativity on the geometric level was then developed into Machian and Einsteinian relativity on the dynamic level.

Wright: More to the point, the Newtonian mechanics explains not only motions in the heavens, but the motions of billiards and cannon balls on Earth, and so the theory is far more robust than Ptolemy could have imagined.

R. Sungenis: That depends on what one means by "explains the motions." Neither Newton nor anyone else has explained why an apple falls to the Earth. They have only told us how fast the apple falls. The problem for Newton was that if you confine the equations to the solar system, well, yes, the Earth will have to go around the sun. But if you expand Newton's equations to include the rest of the universe, even Newton admits that the Earth could be in the center and the sun and stars will go around it. In Proposition 43, which is outlined in Steven Weinberg's new book, *To Explain the World*, Newton is quoted as saying:

If we were to adopt a frame of reference like Tycho's in which the Earth is at rest, then the distant galaxies would seem to be executing circular turns once a year, and in general relativity this enormous motion would create forces akin to gravitation, which would act on the Sun and planets and give them the motions of the Tychonic theory. Newton seems to have had a hint of this. In an unpublished 'Proposition 43' that did not make it into the *Principia*, Newton acknowledges that Tycho's theory could be true if some other force besides ordinary gravitation acted on the Sun and planets.²⁵

Weinberg's reference to "forces akin to gravitation" refers to inertial forces, such as centrifugal, Coriolis and Euler forces. Using Einstein's General Relativity as the sanction, Weinberg indicates that, in the view of modern physics, a universe rotating around a fixed Earth will create inertial forces that mimic the force of gravity. As the universe's inertial forces meet the gravitational forces in our solar system, both will contribute to how the sun and planets will move with respect to each other.

Weinberg also notes that the inclusion of forces outside the solar system that will allow Tychonian geocentrism are specified in Newton's Proposition 43, which was originally planned to be added to page 510, the last page of the *Principia*. In Proposition 43²⁶ Newton says:

In order for the Earth to be at rest in the center of the system of the Sun, Planets, and Comets, there is required both universal gravity and another force in addition that acts on all bodies equally according to the quantity of matter in each of them and is equal and opposite to the accelerative gravity with which the Earth tends to the Sun...

²⁵ Steven Weinberg, *To Explain the World: The Discovery of Modern Science*, HarperCollins, 2015, pp. 251-252.

²⁶ My thanks to George E. Smith of Tufts University for the granting of his essay for my use. The essay is titled: "Newtonian Relativity: A Neglected Manuscript, an Understressed Corollary," and his granting me the accompanying Power Point presentation, emailed to me on August 8, 2015, record on file.

For, such a force, acting on all bodies equally and along parallel lines, does not change their position among themselves, and permits bodies to move among themselves through the force of universal gravity in the same way as if it were not acting on them.

Since this force is equal and opposite to its gravity toward the Sun, the Earth can truly remain in equilibrium between these two forces and be at rest. *And thus celestial bodies can move around the Earth at rest, as in the Tychoic system.*²⁷

Wright: And again, the Newtonian model specifies only three entities to explain all the non-frictional motions of the heavens and earth: gravity, mass, and inertia.

R. Sungenis: In my lecture I mentioned that Newton allowed a geocentric universe, and I used the above quotes and equations from Newton shown above. Notice how Wright is ignoring all of it.

Wright: The Tycho Brahe model requires gravity for Earth to hold the moon around it, and a second force, never named, which pins the planets around the Sun, and a third force to move the Sun with the diurnal motion, and a final force to move the orb of the fixed stars with daily motion in the other direction. The model was rejected because it was neither robust (it could not be used to calculate locations from anywhere but Earth, whereas the Kepler could) nor did it explain Earthly motions (as Newton could) nor was it parsimonious (Tycho requires dozens of entities for Newton's three.)

R. Sungenis: Mr. Wright has it ass backwards. First, since Kepler and Newton assumed that they could confine the dynamic forces to the solar system and forget the rest of the universe, the heliocentric system seemed to work very well and everyone glommed on to it. But it didn't prove heliocentrism. It only proved that if one discounts geocentrism at the get-go, he doesn't have to account for the forces outside the solar system and thus he could pretend that heliocentrism was "elegant." In reality, the Newtonian system eliminated the rest of the universe. In place of the forces in the universe, the Newtonian system decided to add in by-hand the centrifugal, Coriolis and Euler forces, which it then called "fictitious forces." In the geocentric system, the centrifugal, Coriolis and Euler forces are actually created by a rotating universe and thus are not "fictitious."

As the famous astronomer Fred Hoyle admits:

...we can take either the Earth or the Sun, or any other point for that matter, as the center of the solar system. This is certainly so for the purely kinematical problem of describing the planetary motions. It is also possible to take any point as the center even in dynamics, although recognition of this freedom of choice had to await the present century.²⁸

²⁷ Latin: Ut Terra quiescat in centro Systematis Solis Planetarum & Cometarum, requiritur et gravitas universalis, et alia insuper vis quae agit in omnia corpora aequaliter pro quantitate materiae in ipsis et aequalis est gravitati acceleratrici qua Terra tendit in Solem, eique contraria est, tendendo secundum lineas parallelas in plagam eandem cum linea quae ducitur a centro Solis ad centrum Terrae...Nam talis vis in corpora omnia aequaliter & secundum lineas parallelas agendo situm eorum inter se non mutat sed sinit corpora eodem modo per vim gravitatis universalis inter se moveri, ac si non ageret in eadem. Terra vero, cum haec vis gravitati ejus in Solem aequalis sit & contraria, in aequilibrio inter has duas vires manere potest et quiescere. Et sic corpora caelestia circa Terram quiescentem moveri possunt ut in Systemate Tychoico.

²⁸ Fred Hoyle, *Nicolaus Copernicus: An Essay on his Life and Work*, p. 82. Also from the same book: "Today we cannot say that the Copernican theory is "right" and the Ptolemaic theory is "wrong" in any meaningful sense. The two theories are...physically equivalent to one another" (*ibid*, p. 88). Physicist J. L. McCauley who reviewed Hoyle's book stated it was "The only brief

Indeed, it was later shown by Mach and Einstein that, in picking one's model, the rest of the universe could not be ignored (as even Newton hinted at in his Proposition 43 but never followed through with it).

Wright: But Professor Harold Hill did not bring up any of these objections to the Tycho Brahe model or the Ptolemaic model. All he did was say that the geocentric model was rejected on the grounds that it lent credence to the Bible.

R. Sungenis: That is a lie, of course, and Mr. Wright apparently has no shame in making such false charges. Not only did the Dallas lecture include dynamics, but the dynamic issue is covered in all my books, movies, lectures and CDs. Mr. Wright would do well to consult them before accusing his opponent of being Harold Hill.

Wright: At this point, Professor Hill loses, for me, the charm of a cunning con man like THE MUSIC MAN, because he then covers over the glaring errors in his theory by launching a vicious and dishonorable attack on Galileo. He claims that Galileo was not a Christian at the time before and during his trial, but had a conversion experience, and became Christian late in life, three years before his death, and on that ground and that alone affirmed the Ptolemaic model once more.

R. Sungenis: Another lie. I never said that Galileo's spiritual life had anything to do with whether his system was correct or not correct, nor did it affirm or deny Ptolemy. Galileo's system was judged on its own demerits.

Wright: His proof the Galileo was not a Christian was that he fathered bastard Children out of wedlock, whereas we all know Italians never could possibly do that, and that Christians never sin.

R. Sungenis: Another lie. I never used Galileo's fathering of four children out of wedlock as proof. I merely offered his life style as evidence of the more involved conclusion that Galileo was not a true Christian. If Mr. Wright thinks that fathering four children out of wedlock and stealing other men's wives is not evidence against Galileo, then we can see why Mr. Wright is having problems with this whole issue.

Wright: His proof that Galileo rejected his own pro-Copernicus stance was not because it did not fit the available evidence at the time (it did not, by the way. Galileo held that the tides were caused by the Earth sloshing as it circled the sun, which even other scientists of his day thought was absurd) but because of his sudden conversion to Christianity was an unsigned letter. He says that an evil conspiracy to use science to undermine the Church removed the signature.

R. Sungenis: Once again, Mr. Wright has to pull out his boogeyman in order to win over his audience. If he had only done his research before he made his accusations, he would have found that one of the world's greatest Galileo historians, Stillman Drake, revealed the plot that showed Galileo's friend, Francesco Rinuccini, had erased Galileo's signature off a 1641 letter Galileo wrote to him in which

account, using understandable modern terminology, of what Ptolemy and Copernicus really did. Epicycles are just data analysis (Fourier series), they don't imply any underlying theory of mechanics. Copernicus did not prove that the Earth moves, he made the equivalent of a coordinate transformation and showed that an Earth-centered system and a sun-centered system describe the data with about the same number of epicycles. For the reader who wants to understand the history of ideas of motion, this is the only book aside from Barbour's far more exhaustive treatment" (Letters on File, 10-1-04).

Galileo totally denied the heliocentric system. But it seems that Mr. Wright isn't interested in these facts, since they upset his preconceived ideas.

Wright: At that point, as I say, the lunatic lost his charm for me. All the astronomers and mathematicians involved for the first three hundred years of these debates were Christians, and Kepler was a monk.

R. Sungenis: Again, Mr. Wright shows his incompetence. Kepler was not a monk. He wasn't even a Catholic. He grew up in the Lutheran religion, if he had any religion at all. The truth is that Kepler was heavily influenced by the occult, as was his mother, Katherina Kepler, which eventually led to her trial as a witch.²⁹

Wright: Newton wrote books on Biblical prophecy.

R. Sungenis: We can see the extent of Mr. Wright's understanding of Christianity. He thinks someone is a Christian simply because they write books on biblical prophecy. Hardly. As for Newton's personal life, he was hardly the epitome of a sincere Christian. Case in point: astronomer John Flamsteed was the owner of voluminous notes charting lunar movements and the positions of the stars, notes that Newton desperately needed to fit the moon into his gravitational theory for the publishing of his famous *Philosophiae Naturalis Principia Mathematica*. A bitter feud resulted between the two men wherein Newton, using his influence with government officials, forced Flamsteed's hand. Not only did Newton surreptitiously wrest Flamsteed from his painstaking work, he did the same to Gottfried Leibniz, Stephen Gray and Robert Hooke. Regarding Leibniz, Westfall informs us:

By 1713, moreover, Newton's perpetual neurosis had reached its passionate climax in the crusade to destroy the arch-villain Leibniz. Only a year earlier the Royal Society had published its *Commercium epistolicum*, a condemnation of Leibniz for plagiarism and a vindication of Newton, which Newton himself composed privately and thrust upon the society's committee of avowed impartial judges.³⁰

In 1666,³¹ 1674³² and again in 1679 in direct correspondence with Newton, Hooke published his theory of the 'inverse square law' regarding the force of gravity. Despite admitting in his letter to Hooke that Hooke deserved credit for the discovery, Newton tried to claim it as his own, feigning that he had thought about it many years earlier but didn't decide to publish it in his own book until thirteen years after the initial ideas came to him. As historian Ellen Tan Drake notes:

Newton, however, claimed to have arrived at his universal law of gravitation at his country home in Woolsthorpe during the plague years 1665 or 1666 (it is not clear which), during his *annus mirabilis* (this "marvelous year" when the legendary apple fell). This date, of course, would clearly predate Hooke's expression of the law except that there is clear proof that as late as 1675, Newton still thought that the planets and Sun were kept apart by "some secret principle of unsociableness in the ethers of their vortices," and that gravity was due to a circulating ether that had to be replenished in the center of the Earth by a process like fermentation or coagulation.³³

²⁹ *Kepler's Witch*, James A. Connor, 2004, pp. 275-307. *The Sleepwalkers*, pp. 389-393. The woman relative who raised Katherina was executed for practicing witchcraft (John Lear, *Kepler's Dream*, 1965, p. 31).

³⁰ Richard S. Westfall, "Newton and the Fudge Factor," *Science*, 179, 751, 1973.

³¹ Lecture given to the Royal Society titled *Planetary Movements as a Mechanical Problem*, on May 23, 1666, as reproduced in *Early Science in Oxford* by R. T. Gunther, 1930, ref. 1, Vol. vi, p. 256.

³² Hooke's monograph: *An Attempt to Prove the Motion of the Earth by Observation*, London, 1674, as reproduced in *Early Science in Oxford* by R. T. Gunther, 1930, ref. 1, Vol. vii, pp. 1-28.

³³ *Restless Genius: Robert Hooke and his Earthly Thoughts*, Ellen Tan Drake, 1966, pp. 32-33. Drake's source is Newton's letter to Oldenberg, Dec. 7 1675, as cited in Turnbull, 1959, vol. 1: 368; Patterson, 1950. John Aubrey in *Aubrey's Brief Lives*, 1957, p.

Newton won the day against Hooke by using his influence at the Royal Society, just as he did in heading off the new discoveries of Robert Boyle, all in an effort to advance his own career.³⁴ On at least three separate occasions Newton introduced fallacious figures into the *Principia* in order to increase its apparent power of prediction.³⁵ As Westfall notes:

And having proposed exact correlation as the criterion of truth, it took care to see that exact correlation was presented, whether or not it was properly achieved. Not the least part of the *Principia's* persuasiveness was its deliberate pretense to a degree of precision quite beyond its legitimate claim. If the *Principia* established the quantitative pattern of modern science, it equally suggested a less sublime truth that no one can manipulate the fudge factor quite so effectively as the master mathematician himself.³⁶

Because of Newton's vast social influence, the book was considered an "epoch-making" work long before it was thoroughly reviewed, the highly popular John Locke having accepted it based merely on the word of Newton.³⁷

In addition to the ill-treatment he gave to his scientific colleagues, Newton was rumored to have had a homosexual relationship with one John Wickins, a friend with whom he had lived for twenty years. He is also said to have had a liaison with Nicholas Fatio De Duillier, a man twenty years his junior and with whom he exchanged intimate letters, many of which were later censured by Newton or a confidant. Newton was also deep into alchemy (illegal at the time) and the Jewish Kabbalah, the occult musings of medieval Talmudic authors. Although he was reputed to have Christian moorings, Newton embraced the heresy of Arianism (*i.e.*, the denial of both the divinity of Christ and the Trinity).³⁸

166, confirms that Hooke's discovery of the Inverse Square Law predated Newton's *Principia*, as does I. Bernard Cohen: "In 1717 Newton wanted to ensure his own priority in discovering the inverse-square law of gravitation, and so he invented a scenario in which he made the famous moon test not while writing the *Principia* but two decades earlier in the 1660's.... Newton never published his invented scenario of the early moon test. He included it in the manuscript draft of a letter to the French writer Pierre Des Maizeaux but then crossed it out. Newton also circulated the familiar story that a falling apple set him on a chain of reflections that led to the discovery of universal gravitation. Presumably this invention was also part of his campaign to push back the discovery of gravity, or at least the roots of the discovery, to a time 20 years before the *Principia*" ("Newton's Discovery of Gravity," *Scientific American*, 244 (3), 166, 1981).

³⁴ David Clark and Stephen P. H. Clark, *Newton's Tyranny: The Suppressed Scientific Discoveries of Stephen Gray and John Flamsteed*, 2001; Richard S. Westfall, *Never at Rest: A Biography of Isaac Newton*, 1981, 1983, pp. 471f, 601f; on Robert Boyle see *False Prophets*, Alexander Kohn, 1986, p. 39.

³⁵ Richard S. Westfall, "Newton and the Fudge Factor," *Science*, 179, 751-758, 1973; *False Prophets*, Alexander Kohn, 1986, pp. 36-39.

³⁶ Richard S. Westfall, "Newton and the Fudge Factor," *Science*, 179, 751, 1973.

³⁷ Richard S. Westfall, *Never at Rest: A Biography of Isaac Newton*, 1981, 1983, pp. 469-470; Morris Kline, *Mathematics in Western Culture*, 1953, p. 230. See also Kline's *Mathematics: The Loss of Certainty*, 1982.

³⁸ Westfall writes: "In Newton's eyes, worshipping Christ as God was idolatry, to him the fundamental sin" (Richard S. Westfall, *Never at Rest: A Biography of Isaac Newton*, Cambridge University Press, 1981, 1983, p. 314). On Newton's intimacy with Wickens and Fatio, see *Isaac Newton: The Last Sorcerer*, Michael White, 1997, pp. 235-254. In addition, Voltaire had accused Newton of using his niece to entice politicians so that Newton could gain various positions of prestige. Voltaire writes: "I thought in my youth that Newton made his fortune by his merit. I supposed that the court and the city of London named him Master of the Mint by acclamation. No such thing. Isaac Newton had a very charming niece, Madame Conduitt, who made a conquest of the minister of Halifax. Fluxions and gravitation would have been of no use without a pretty niece" (*Dictionnaire Philosophique*, as cited in N. Martin Gywnne's *Sir Isaac Newton and Modern Astronomy*, Britons Catholic Library, n. d., p. 8). Westfall, although an admirer of Newton and predisposed to dismiss any hearsay, adds: "The wider ramifications with Halifax, and Newton's involvement in it, do not evaporate with equal ease," although "With Halifax the libertine, Victorian eulogizers could not bear to associate Newton. Nor could they bear the thought, the point of Voltaire's jibe, that Newton used the degradation of his niece to advance his own career." (*Never at Rest: A Biography of Isaac Newton*, 1981, 1983, pp. 596-597).

As noted, Newton spent most of his time interpreting biblical prophecy, writing over a million words on the subject. One of his more intriguing predictions is the date of 2060 A.D. as the end of the world, but that date surfaces only because Newton decided that the Roman Catholic Church was the Antichrist. Having arbitrarily put the Church's historical peak at 800 A.D., he interpreted the 1260 days of Apocalypse 11-13 as years, adding them to 800 A.D. to come up with 2060 A.D. as the date of the end of the world.³⁹ As Westfall says, Newton "hated and feared popery,"⁴⁰ and as Koestler concludes, Newton was "a crank theologian like Kepler...and held that the tenth horn of the fourth beast of the Apocalypse represented the Roman Catholic Church."⁴¹

Wright: The idea that these scientific men were trying to undermine rather than glorify God in their works is refuting by a cursory glance at their writings.

R. Sungenis: And that's all the research that Mr. Wright did before he wrote his critique – "a cursory glance at their writings." It is easy to see that Mr. Wright doesn't have a clue what the real history is. He simply didn't like it that someone like me was bursting the bubble of his preconceived ideas.

Wright: Let me dwell for a moment on the sheer effrontery of the man's argument. All he did was put up on a powerpoint screen, one after another, of famous scientists explaining the principle of relative motion or the principle of saving the appearances, and quote where the famous scientist would say something like "on the basis of predicting the appearances alone, there is no reason to prefer the heliocentric to the geocentric model".

R. Sungenis: Putting up quotes about "relative motion" is certainly not the only thing I did during the lecture, but the accusation serves as a good sound bite for Mr. Wright. I went heavily into the dynamics after I went into the geometrics (as noted above in the discussion about Kepler, Newton, Mach and Einstein).

As for quotes about "relative motion," they are essential for people who are just being introduced to this topic, as were the people in the Dallas lecture. Since they have been brainwashed from childhood that only the heliocentric geometric system works, it is absolutely essential that they learn the truth about "relative motion" so that they can see that heliocentrism has no privileged place. Mr. Wright simply doesn't like the fact that I burst the bubble of the illusion he and the rest of academia have been using against these poor people.

Wright: And he would smirk and click the slide away, without reading the rest of the sentence or the paragraph. I took the trouble of pausing the film the first dozen times he pulled this trick. One the same page he was quoting, using in the next paragraph or the next line, was an explanation of the grounds for

³⁹ Newton borrowed the '1260 days = 1260 year' scheme from the Puritan mystic Joseph Mede. Mede added the 1260 years to 400-455 AD and held that the end of the world would come around 1760-1815 AD. Others began at different dates (e.g., Bengel at 576; Ellicott at 608; Melancthon at 660, et al., most trying to bring the terminus to the Reformation). Newton believed that the Second Coming of Christ would follow plagues and war and would precede a 1,000-year reign of Christ and the saints on Earth, otherwise known today as "premillennialism." He spent close to 50 years delving into biblical prophecy, writing over 4,500 pages in an effort to determine the end of the world. Many of these papers had lain undisturbed in the house of the Earl of Portsmouth for 250 years, which were eventually sold by Sothebys in the late 1930s. This collection of papers was purchased by Abraham Yahuda, and was stored in the Hebrew National Library. It was among these documents that the date 2060 was found. (See also Michael White's *The Last Sorcerer*, pp. 156-157).

⁴⁰ Richard S. Westfall, *Never at Rest: A Biography of Isaac Newton*, 1981, 1983, p. 483.

⁴¹ Arthur Koestler, *The Sleepwalkers*, p. 536.

rejecting geocentrism, which were not, and were never said to be, on the basis of observations made at the time of Galileo.

R. Sungenis: Mr. Wright is hoist by his own petard. Obviously, if in the slide I showed the whole context (knowing that the viewer could pause the video and look at what the context said), then I wasn't trying to hide anything from the audience. The viewer could look to his heart's content at the context. It is the same reason that I photocopy, in my books, the exact pages from the scientists whose quotes I am using so that my reader can see the whole context.

Second, notice that Mr. Wright doesn't give you an example in which I allegedly put up a quote wherein the context then revealed that the scientist rejected geocentrism. Instead, Mr. Wright makes up his own line ("on the basis of predicting the appearances alone, there is no reason to prefer the heliocentric to the geocentric model").

Third, Mr. Wright fails to mention that even if there were a scientist who, after he admitted to the viability of geocentrism, then said that he preferred heliocentrism, this is perfectly understandable for the scientist. The point in fact is that the scientist admits he has no scientific proof against the geocentric model, and therefore we win our case and establish the very reason why we used his quote. It was my intention to show that the scientists had no scientific proof against geocentrism and that the scientists sided with heliocentrism only out of philosophical preference, not science. As you can see, I have nothing to hide.

Fourth, let's say there is a scientist who on one page admits to the geocentric alternative but on the next page tries to justify heliocentrism on a scientific basis. I know of one such context in my book *Geocentrism 101*. It is Arthur Eddington. Here is what he says:

Regarding the Michelson-Morley experiment he writes:

"There was just one alternative; the earth's true velocity through space might happen to have been nil.

In other words, Eddington is admitting that one explanation to the experiment would be that the Earth was not moving through space. But then Eddington tries to dismiss this possibility, but he does so with faulty scientific reasoning. He says,

This was ruled out by repeating the experiment six months later, since the earth's motion could not be nil on both occasions. Thus the contraction was demonstrated and its law of dependence on velocity verified."⁴²

Eddington's reference to "six months later" refers to when, in the heliocentric system, the Earth is moving on the other side of its orbit around the sun. But this just begs the question as to why Eddington would side with the contraction theory based on the idea that the Earth's orbit "could not be nil on both occasions" if it was already understood as impossible for the Earth to stop revolving in its orbit! In common parlance, not only has Eddington fell into a logical fallacy, he has engaged in *petitio principii*, that is, using as proof (the contraction of objects) the very thing he is trying to prove (the contraction of objects). Suffice it to say that no "contraction" was ever demonstrated for no one had ever measured one. Like his contemporaries, Eddington depended solely on his unproven but foundational assumption that

⁴² Arthur Eddington, *The Nature of the Physical World*, 1929, p. 11.

the Earth was revolving around the sun. Therefore, in his mind, there must be no question of a contraction of time and space, since that was the only alternative short of becoming a geocentrist.

Wright: Now, after the discover of the Galilean satellites, the fact that the stars are at various distances, and gathered into galaxies, clusters, and superclusters, far, far more than the observations available at the time of Galileo would have to be explained away if we wanted to return to a robust and parsimonious geocentric model.

R. Sungenis: It is precisely the opposite. It is because of the stars and their dynamic and visual effect on Earth that geocentrism was once again considered after Kepler and Newton. Mr. Wright apparently didn't get this part of the story.

Wright: For one thing, you would have to explain why satellites see the Earth turning, or observers on the Moon.

R. Sungenis: This is a common objection from amateurs. They fail to realize that if the universe is daily rotating around a fixed Earth, the universe is carrying the satellite with it, which means the satellite is rotating around the Earth as it is observing the Earth, thus making it look like the Earth is turning.

Wright: Merely saying, as Professor Harold Hill quotes over and over respectable scientists saying, that any point can be taken as the center of observation when observing relative motion does not prove Earth is the center of the universe.

R. Sungenis: Mr. Wright has an obnoxious way of twisting his opponent's words. I never said that relative motion "proves the Earth is the center of the universe." I said that relative motion will not allow anyone to have proof that heliocentrism is true. Mr. Wright apparently agrees, but he still wants kids in school to be taught that heliocentrism is the only true system, despite what relative motion says.

Wright: Indeed, that statements are enunciating a philosophical principle that the universe, contra Newton, has no special center.

R. Sungenis: No, relative motion does not PROVE there is no center. Obviously, if relative motion allows a geocentric universe in which the Earth is fixed and the universe rotates around it, then relative motion ALLOWS for a special center.

Wright: So what am I to make of a con man so clumsy that the quotes he puts up on the screen for me to read CONTRADICT the interpretation he wishes to draw from them?

R. Sungenis: As I have pointed out above, the only "con-man" here is Mr. Wright. He is trying to con you into believing that a scientist can't both admit to the scientific viability of geocentrism but prefer, on a personal basis, to be a heliocentrist; or he is trying to con you into believing that there is some scientific proof for heliocentrism. There isn't.

Wright: I cannot decide if he is a fool and does not notice the contradictions in the same paragraph he quotes, or assumes I am a fool and will not notice. Either assumption puts paid to any serious discussion with the man or his ideas.

R. Sungenis: It is quite obvious that I have nothing to hide from my viewer if I deliberately put the very pages of the quote on the screen. Mr. Wright is also a fool for thinking that a scientist cannot admit on one page to the viability of a geocentric universe yet still believe on the next page in heliocentrism. In fact, most of the scientists I quote hold to heliocentrism, but admit to the viability of geocentrism. If they had denied the scientific viability of geocentrism and had scientific proof for heliocentrism, then, and only then, would Mr. Wright have something to talk about. Anything less, of course, means that Mr. Wright is the fool, not me.

Wright: Anyone who doubts me can click through the link, listen to the lecture, and pause the playback whenever he throws a quote on the screen. Read them yourself. Usually the full statement is in the next sentence right after he stops reading aloud. It is a pathetic attempt. The real Harold Hill would not be caught so easily.

R. Sungenis: And we are still waiting for that one crucial example that Mr. Wright believes proves his case against me. Alas, he provides none. The reason is that Mr. Wright knows that the scientist's belief in heliocentrism does not disprove the scientist's admission to the viability of geocentrism.

Wright: He explains stellar parallax by saying it is not necessarily the case that Earth is in a different point in space on the opposite sides of its orbit. Rather, the star 61 Cygni, and all the other stars, even though no known force of gravity or motion could act on them to produce this motion, and jogging to the left and then to the right once a year by the precise distance of the diameter of Earth's orbit, 2 AU's.

R. Sungenis: This again shows Mr. Wright's incompetence. At first, Mr. Wright insisted on "relative motion." But when that same relative motion is used against him (as in the case of stellar parallax), suddenly Mr. Wright has to switch to a new apologetic and claim that the relative motion of the stars against a fixed Earth can't be true because there is "no known force of gravity or motion could act on them to produce this motion." And Mr. Wright can prove this to us by what scientific facts? He has none.

In fact, as Newton already admitted in Proposition 43 that forces outside the solar system would allow the Earth to be fixed and the stars move around them to create stellar parallax, so the next most famous scientist in the world, Albert Einstein, said the same. It is called "the dynamic principle of co-equivalence or co-variance." It states that the same gravitational and inertial forces present in the system of a rotating Earth in a fixed star system are reciprocal and equivalent to the gravitational and inertial forces present in the system of a rotating universe around a fixed Earth. If they were not equivalent, then Einstein's General Relativity would be disproven, and surely Mr. Wright does not want to go there. In other words, someone needs to inform Mr. Wright that there IS a "known force of gravity or motion that could act on them to produce this motion," since apparently Mr. Wright is unaware of it.

Wright: So much for basic errors in the philosophy and methods of science. His next trick was just to accuse scientists of being in an anti-Christian cabal. This is Dan Brown levels of paranoia I will not pause to refute, except to say that Robert Sungenis is a damnable liar blackening the names of better man than he, and I wish I were not a Christian man, so that I could punch him handsomely in the nose.

R. Sungenis: Of course, this is what happens to men who have been deceived by their own illogic – they crucify the messenger for bringing them the bad news. Be that as it may, if Mr. Wright wants to punch me

in the nose for being the bearer of bad news, he can try. Please warn him that I'm 6 foot 2 inches @ 250 pounds, and know boxing and karate, and I have three sons that are blackbelts in karate.

Wright: Einstein is the scientist he slanders most wantonly, calling him a virulent anti-Christian. He was a Jew who toyed with the idea of joining a Christian denomination, but it was one of those Protestant puritanical groups that would have made him give up cigars.

R. Sungenis: That is a flat-out falsehood. Einstein never toyed with joining a Christian denomination. If Mr. Wright thinks otherwise, tell him to provide the documentation. The problem with Mr. Wright is that he knows next to nothing about Einstein (including Einstein's support of the geocentric universe), but worships him nonetheless.

For those interested, in Appendix 1 I give the scoop on Albert Einstein from my research for Galileo Was Wrong. Here is one of the gems you will find from his lips:

It was, of course, a lie what you read about my religious convictions, a lie which is being systematically repeated. I do not believe in a personal God and I have never denied this but have expressed it clearly. If something is in me which can be called religious then it is the unbounded admiration for the structure of the world so far as our science can reveal it.⁴³

Wright: Let me see if I can remember and list some of the scientific errors and misstatements made. By no means can I recall them all. He makes the argument that Mach claims the whole mass of the universe surrounding the Earth creates the illusion of inertia, which does not actually exist.

R. Sungenis: Again, Mr. Wright shows his incompetence to deal with this subject. He has it ass backwards. I never said, and never would say, that "Mach claims the whole mass of the universe surrounding the Earth creates the illusion of inertia, which does not actually exist." Mach said that the gravity of the stars creates inertia on the Earth, and that inertia does actually exist because of that gravity. In fact, modern scientists say the same using Einstein's and Mach's understanding. In the book, *Gravitation*, the three renowned scientists, Misner, Thorne and Wheeler say: "Mass there governs inertia here."⁴⁴ In other words, the mass of the stars creates inertia on Earth.

⁴³ *Albert Einstein: The Human Side*, editors: Banesh Hoffman and Helen Dukas, 1981. In the same source, Einstein is quoted as saying: "I do not believe in immortality of the individual, and I consider ethics to be an exclusively human concern with no superhuman authority behind it." To a child who asked if scientists prayed, Einstein responded: "Scientific research is based on the idea that everything that takes place is determined by laws of nature, and therefore this holds for the action of people. For this reason, a research scientist will hardly be inclined to believe that events could be influenced by a prayer, *i.e.* by a wish addressed to a Supernatural Being." Einstein had a particular animosity for the Catholic Church. Another book by the same editors, *Albert Einstein: Creator and Rebel*, contains anecdotes that appear to be for the purpose of creating a cult following for Einstein. Other remarks from Einstein about God include: "Everything is determined, the beginning as well as the end, by forces over which we have no control. It is determined for the insect as well as for the star. Human beings, vegetables, or cosmic dust, we all dance to a mysterious tune, intoned in the distance by an invisible piper" (*Einstein: The Life and Times*, p. 422). In 1921 he replied to a Jewish rabbi: "I believe in Spinoza's God who reveals himself in the orderly harmony of what exists, not in a God who concerns himself with fates and actions of human beings" (*Einstein: The Life and Times*, p. 502). More to the point, Einstein writes: "I cannot conceive of a God who rewards and punishes his creatures, or has a will of the type of which we are conscious in ourselves. An individual who should survive his physical death is also beyond my comprehension, nor do I wish it otherwise; such notions are for the fears or absurd egoism of feeble souls" (*The World As I See It*, Citadel Press, 1956, 1984, p. 5); "The Jewish God is simply a negation of superstition, an imaginary result of its elimination" (*ibid.*, p. 91).

⁴⁴ Misner, Charles W., Kip S. Thorne and John A. Wheeler, *Gravitation*, 1973, pp. 543, 546-47, 549. See Kip Thorne in a 2004 flash video speaking of Mach's Principle in relation to Gravity Probe-B and its detection of the dragging of space with respect to the Earth at http://einstein.stanford.edu/Media/Thorne-GPB_Significance-Flash.html

Wright: In other words, Professor Harold Hill dismisses the three Newtonian laws of motion in the name of Mach.

R. Sungenis: I do no such thing. Not only do I use Newton's laws to explain physics to pretentious people like John C. Wright, I also show that if Newton's laws are extended to the rest of the universe, Newton becomes a Machian or an Einsteinian, as even Newton himself admitted in Proposition 43 noted earlier.

Wright: Unfortunately for him, having a large gravity field covering the universe would not copy the effects of inertia, since all the rest of the universe is in free fall with respect to us, as we are to them.

R. Sungenis: Since the universe is in free fall, then it has inertia, for, according to Newton, anything that is in motion (free fall) will continue in motion (inertia). And since free fall is caused by gravity, then inertia is caused by gravity.

Wright: He makes much ado of the fact that gravity fields extend to infinity, which says Newton denies, even though Newton is the one who first formulated the inverse square law saying that gravity extends to infinity (getting infinitely weaker as it goes, of course. The star 61 Cygni is exerting gravitational influence on your body right now. Your refrigerator, while a smaller mass, is closer, and exerts more influence.)

R. Sungenis: Was Mr. Wright watching the same video? I have never seen so many misstatements from one individual. I didn't say "gravity fields extend to infinity" since I don't believe the universe is infinite.

As for Newton, he formulated the inverse square law for gravity (actually, the inverse square law already existed and Newton just applied it to gravity before anyone else did), but he failed to be consistent with it.

On the one hand, Newton believed that the gravity of the universe would cause it eventually to collapse on itself. Newton reasoned, however, that if the universe were infinite, this would stop the collapse, since infinity against infinity is infinity.

On the other hand, when using the inverse square law to demonstrate that the Earth goes around the sun, Newton conveniently left out the gravity of the rest of the universe (the same universe of gravity he said would collapse in on itself if it were finite).

Essentially, the only reason Newton could justify confining the inverse square law to the solar system to support heliocentrism was because he assumed the universe was infinite, which meant its gravity would be infinitely dispersed and not affect our solar system. Of course, the big problem here is the single assumption that the universe is infinite. Mach and Einstein stopped this speculation by saying that if one is bound by "relative motion," then he cannot say the universe is infinite. The universe is finite, which then means that the stars it contains in its finiteness WILL affect the Earth with their combined gravity of 5 sextillion stars.

Wright: Professor Harold Hill several times repeats this incoherent idea that the total mass of the universe is what creates the frame of reference so that an accelerating body suffers the same sensation as gravity produces in the direction of motion. However, a simple thought experiment should dismiss that notion. If, as he says, you are pushed into your carseat by the acceleration of your car due to the stars

effecting (sic) you with gravity, then you would be pushed out of your car seat whenever you accelerated the opposite direction. The stellar gravity cannot be moving so that it is always behind your buttocks no matter which way you point your car's nose.

R. Sungenis: First, "stellar gravity" doesn't move. It is ubiquitous and constant, forming the same frame throughout the universe. As such, no matter which direction one moves (north, east, south or west), he will experience inertia against the ubiquitous gravitational frame. So, yes, one would be pushed out of his car seat whenever he accelerated against that frame. It's simple physics.

Wright: Be that as it may, even so, the presence of a universal gravity field would not provide an explanation for the other things heliocentrism and relativity explain which geocentrism does not.

R. Sungenis: If it couldn't be explained by geocentric dynamics, then Mr. Wright has disproven both Newtonian and Einsteinian physics, and he should win the Nobel Prize. The reality is this, however. It is a fact that if Newtonian physics is applied to a finite universe, it must accept the viability of geocentrism. As such, the finite universe will rotate around its center of mass, the Earth. In Einsteinian physics, the principle of co-variance and co-equivalence demands that reciprocal dynamic forces allow both a rotating Earth in a fixed universe and a rotating universe around a fixed Earth. Hence, Mr. Wright is trapped like the proverbial rat in a corner.

Wright: Having 61 Cygni, at the distance of only ten lightyears, circle a stationary Earth once a day produces a speed of motion somewhat alarming for a star of that mass. Now, the Andromeda galaxy, which is two and a half million lightyears away, must sweep out a much larger radius a circle in the same 24 hour period, and its mass is ten times the mass of the Milky Way. I leave it as an exercise for the reader to calculate the speed and kinetic energy of the Corona Borealis Supercluster, which is immensely more massive than any mere cluster of galaxies, and allegedly circles the stationary earth once a day, slinging 12×10^{16} solar masses around a radius of one thousand million lightyears.

R. Sungenis: Once again, Mr. Wright shows his incompetence, since he doesn't understand the geocentric system or the basic physics employed. The stars don't move any faster in the geocentric system than in the heliocentric system. Except for proper motion, they are more or less fixed in space. It is the finite universe itself that is rotating around the Earth and it carries the stars with it. With respect to the universe, then, the stars are not moving.

If Mr. Wright thinks that the universe can't move that fast, then he needs to contend with Einstein's General Relativity which says it can. In fact, General Relativity says that light and matter can assume any speed. Allow me to show this by quoting from a General Relativist, V. G. Rosser:

"If gravitational fields are present the velocities of either material bodies or of light can assume any numerical value depending on the strength of the gravitational field. If one considers the rotating roundabout [earth] as being at rest, the centrifugal gravitational field assumes enormous values at large distances, and it is consistent with the theory of General Relativity for the velocities of distant bodies to exceed 3×10^8 m/sec [c] under these conditions."⁴⁵

Wright: Unfortunately for Professor Hill, his statement of Mach's Principle is incorrect. Mach does not say the stellar gravity causes inertia,

⁴⁵ *An Introduction to the Theory of Relativity*, William G. V. Rosser, 1964, p. 460.

R. Sungenis: It is becoming plainly obvious that Mr. Wright doesn't know modern physics. Mach certainly *did say* that stellar gravity causes inertia. But don't take my word for it. Let's consult Albert Einstein, the very person who advanced on Mach's Principle to form his General Relativity theory:

Let K [the universe] be a Galilean-Newtonian coordinate system [a system of three dimensions extending to the edge of the universe], and let K' [the Earth] be a coordinate system rotating uniformly relative to K [the universe]. Then centrifugal forces would be in effect for masses at rest in the K' coordinate system [the Earth], while no such forces would be present for objects at rest in K [the universe].

Already Newton viewed this as proof that the rotation of K' [the Earth] had to be considered as "absolute," and that K' [the Earth] could not then be treated as the "resting" frame of K [the universe].

Yet, as E. Mach has shown, this argument is not sound. One need not view the existence of such centrifugal forces as originating from the motion of K' [the Earth]; one could just as well account for them as resulting from the average rotational effect of distant, detectable masses [the stars] as evidenced in the vicinity of K' [the Earth], whereby K' [the Earth] is treated as being at rest.⁴⁶

In other words, Einstein has confirmed that a universe in rotation around the Earth would produce the same centrifugal and Coriolis forces attributed to a rotating Earth in a fixed universe. Advocates of his theory confirm our understanding. C. Møller writes:

...if we consider a purely mechanical system consisting of a number of material particles acted upon by given forces...Newton's fundamental equations of mechanics may be applied with good approximation in the description of the system.

On the other hand, if we wish to describe the system in an accelerated system of reference, we must introduce, as is well known, so-called fictitious forces (centrifugal forces, Coriolis forces, *etc.*) which have no connexion (sic) whatever with the physical properties of the mechanical system itself....It was just for this reason that Newton introduced the concept of absolute space which should represent the system of reference where the laws of nature assume the simplest and most natural form....

Therefore Einstein advocated a new interpretation of the fictitious forces in accelerated systems of reference: instead of regarding them as an expression of a difference in principle between the fundamental equations in uniformly moving and accelerated systems he considered both kinds of systems of reference to be completely equivalent as regards the form of the fundamental equations; and the 'fictitious' forces were treated as real forces on the same footing as any other force of nature.

The reason for the occurrence in accelerated systems of reference of such peculiar forces should, according to this new idea, be sought in the circumstance that the distant masses of fixed stars are accelerated relative to these systems of reference. The 'fictitious forces' are thus treated as a kind of gravitational force, the acceleration of the distant masses causing a 'field of gravitation' in the system of reference considered....

Previously the effect of the celestial masses [the stars] had been considered to be negligible; now, however, we must included the distant masses in the physical systems considered....It can, however, be assumed that all systems of reference are equivalent with respect to the formulation of the fundamental laws of physics. This is the so-called general principle of relativity.⁴⁷

⁴⁶ Hans Thirring, "Über die Wirkung rotierender ferner Massen in der Einsteinschen Gravitationstheorie," *Physikalische Zeitschrift* 19, 33, 1918, translated: "On the Effect of Rotating Distant Masses in Einstein's Theory of Gravitation."

⁴⁷ *The General Theory of Relativity*, Christian Møller, Oxford, Clarendon Press, 1952, pp. 219-220.

Wright: ...and he certainly does not say that it creates inertia on Earth only, and nowhere else, which would need to be the formulation to save the appearances of geocentrism.

R. Sungenis: No one ever claimed that Mach said the stars create inertia on Earth only. This is just another one of Mr. Wright's strawmen. What Mach said was that the gravity and inertia experienced on Earth would be different than that experienced on other planets, since if Earth was the center of mass of that gravity, then much of that gravity and inertial effects would be neutralized.

Wright: Let me see if I can recall the other misstatements of high school physics. Newton did not say that if Tycho Brahe stipulated another force aside from gravity that "this enormous force would create forces of motion acting on the sun and planets" but not on the Earth. Newton was discussing the possibility that a second gravitating body could draw the Sun around the Earth if it were sufficiently massive, but that this would affect the Earth also.

R. Sungenis: First, Newton did not say that "this would affect the Earth also." How could he, if Newton admitted that the outside force would allow "the celestial bodies to move around the Earth at rest, as in the Tyconic system"? An Earth at rest doesn't move, and whatever forces there are outside of it are neutralized so that it can remain at rest. Let's see what Newton said, again:

Since this force is equal and opposite to its gravity toward the Sun, the Earth can truly remain in equilibrium between these two forces and be at rest. And thus celestial bodies can move around the Earth at rest, as in the Tyconic system.⁴⁸

Second, Mr. Wright seems to want to confine the "second gravitating body" to some local body outside the solar system, but that is not necessarily what Newton means, and it certainly isn't what Mach and Einstein meant. Mach and Einstein said that the "second gravitating body," if you will, was the whole star system.

Wright: Newton's formula for calculating tensors does not lead to the result that in (sic) the Earth is sufficiently small, the laws of inertia suddenly no longer apply to it. I honestly have no idea why Professor Hill bothered saying this or how he imagines it aids his argument. Bodies in motion tend to stay in motion unless acted on by an outside force, and that is true for any size of bodies, large or small.

R. Sungenis: I think Mr. Wright meant to say: "Newton's formula for calculating tensors does not lead to the result that if the Earth is sufficiently small, the laws of inertia suddenly no longer apply to it." Here I will make an adjustment. It really doesn't matter how big the Earth is. As long as it shares a center of mass with the universe, nothing is going to move it. Since the center of mass of the Earth is connected to the rest of the Earth, and the Earth's center of mass is connected to the universe's center of mass, it will not move.

Be that as it may, Mr. Wright's clear mistake is that he is assuming the Earth is at first moving and thus concludes that "Bodies in motion tend to stay in motion unless acted on by an outside force," implying that the Earth will move. But inertia also means that a body at rest will remain at rest unless compelled to

⁴⁸ Latin: Terra vero, cum haec vis gravitati ejus in Solem aequalis sit & contraria, in aequilibrio inter has duas vires manere potest et quiescere. Et sic corpora caelestia circa Terram quiescentem moveri possunt ut in Systemate Tyconico.

move by a net external force. Hence, an Earth at rest will remain at rest unless moved by a net external force. The problem for Mr. Wright, however, is that there is no “net external force” at the center of mass.

Wright: He misstates Ptolemy, who did not put Mercury and Venus “in the wrong positions” whatever that means. In the Ptolemaic model, they orbit the Earth above the moon and below the sun. Mars, Jupiter, and Saturn are above the sun, in that order.

R. Sungenis: Mr. Wright appears to be playing dumb. Putting Mercury and Venus in the “wrong positions” means that he put them below the sun. If he had reversed the order and adjusted the deferents, he would have ended up with something like Tycho’s system.

Wright: He has no explanation for stellar parallax, except if he wants to introduce an epicycle drawing nearby stars in a yearly cycle closer and farther from their fixed positions.

R. Sungenis: Not only do we have an explanation for stellar parallax, we have one for stellar aberration – the mainstay “proof” for at least two hundred years of the heliocentrists. But don’t take my word for it. Let’s see what a college course in physics said about the Tychonic system’s ability to show stellar parallax:

It is often said that Tycho’s model implies the absence of parallax, and that Copernicus’ requires parallax. However, it would not be a major conceptual change to have the stars orbit the sun (like the planets) for Tycho, which would give the same yearly shifts in their apparent positions as parallax gives. Thus if parallax were observed, a flexible Tychonean could adjust the theory to account for it, without undue complexity. What if parallax were not observed? For Copernicus, one only requires that the stars be far enough away for the parallax to be unmeasurable. Therefore the presence or absence of parallax doesn’t force the choice of one type of model over the other. If different stars were to show different amounts of parallax, that would rule out the possibility of them all being on one sphere, but still not really decide between Tycho and Copernicus. In fact, if we don’t worry about the distant stars, these two models describe identical relative motions of all the objects in the solar system. So the role of observation is not as direct as you might have guessed. There is no bare observation that can distinguish whether Tycho (taken broadly) or Copernicus (taken broadly) is right.⁴⁹

Wright: He has no explanation for the bulge of the Earth aside from the lunatic misinterpretation of Mach’s principle that stellar gravity somehow effects (sic) things at the stellar equator but not at the stellar poles.

R. Sungenis: More incompetence from Mr. Wright. Let me first quote from Arthur Eddington who, unlike Mr. Wright, is honest about applying the law of “relative motion” to celestial movements:

The bulge of the Earth’s equator may be attributed indifferently to the Earth’s rotation or to the outward pull of the centrifugal force introduced when the Earth is regarded as non-rotating.⁵⁰

Allow me also to quote from physicist Andre Assis on the same principle:

As we have seen, Leibniz and Mach emphasized that the Ptolemaic geocentric system and the Copernican heliocentric system are equally valid and correct...the Copernican world view, which is usually seen as being proved to be true by Galileo and Newton...the gravitational attraction between the sun and the planets, the earth and other planets do not fall into the sun because they have an acceleration relative to

⁴⁹ University of Illinois, Physics 319, Spring 2004, Lecture 03, p. 8.

⁵⁰ *Space, Time and Gravitation: An Outline of the General Relativity Theory*, 1923, p. 41.

the fixed stars. The distant matter in the universe exerts a force, $-m_g \vec{a}_{mf}$, on accelerated planets, keeping them in their annual orbits.

In the Ptolemaic system, the earth is considered to be at rest and without rotation in the center of the universe, while the sun, other planets and fixed stars rotate around the earth. In relational mechanics this rotation of distant matter yields the force (8.17)⁵¹ such that the equation of motion takes the form of equation (8.47).⁵² Now the gravitational attraction of the sun is balanced by a real gravitational centrifugal force due to the annual rotation of distant masses around the earth (with a component having a period of one year). In this way the earth can remain at rest and at an essentially constant distance from the sun. The diurnal rotation of distant masses around the earth (with a period of one day) yields a real gravitational centrifugal force flattening the earth at the poles. Foucault's pendulum is explained by a real Coriolis force acting on moving masses over the earth's surface in the form $-2m_g \vec{u}_{me} \times \vec{\omega}_{Ue}$ where \vec{u}_{me} is the velocity of the test body relative to the earth and $\vec{\omega}_{Ue}$ is the angular rotation of the distant masses around the earth. The effect of this force will be to keep the plane of oscillation of the pendulum rotating together with the fixed stars.⁵³

A simpler way of viewing this is to take the "Absolute Space" in Newton's $F = ma$ and replace it with Absolute Matter, namely, the stars and their collective gravity. Whereas in Newton's Absolute Space the centrifugal (C_f), Coriolis (C_o) and Euler (E) forces are "fictitious" or secondary, the model for Absolute Matter they are real and written $F = ma + C_f + C_o + E$, the latter three caused by the gravity of the stars (G_s), so that we can write $F = ma + G_s$ or $F - ma = G_s$. In essence, the gravity of the stars acts precisely like the rigid Absolute Space that Newton wanted but could not find the cause. Any object [m] in sudden movement [a] against the spatial rigidness caused by stellar gravity [G_s or F] will result in equal and opposite inertial forces, which is why T. E. Phipps once said: "When the subway jerks, it's the fixed stars that throw you down."

As for Mr. Wright's claim that gravity would affect both the equator and poles, first, he obviously doesn't understand that if Earth is the center of mass for the universe, a center cuts the gravity into two hemispheres. These hemispheres produce the Coriolis force, which causes hurricanes to turn counterclockwise in the northern hemisphere and clockwise in the southern hemisphere, but it has no effect on the equator since at the equator the two hemispheres of forces are neutralized, which is why the Foucault Pendulum does not work at the equator.

Second, as for the bulge of the Earth, since the Earth is malleable, the centrifugal force that is created at its 4000 mile diameter and 25,000 mile circumference will pull the entire equator outward. But the centrifugal force from the rotation of the universe will not pull the poles, since there is nothing really to pull. In such cases, the centrifugal force essentially becomes a Coriolis force.

Wright: He misquotes Einstein in a most egregious and dishonest fashion, so much so that any benefit of the doubt we might give the man should evaporate.

R. Sungenis: Simply not true. I never misquote Einstein or take him out of context. But let's see how Mr. Wright tries to wiggle out of this one.

⁵¹ $\vec{F}_{Im} = -\Phi m_g [\vec{a}_{ms} + \vec{\omega}_{US} \times (\vec{\omega}_{US} \times \vec{r}_{ms}) + 2\vec{u}_{ms} \times \vec{\omega}_{US} + \vec{r}_{US} \times \frac{d\vec{\omega}_{US}}{dt}]$, p. 176.

⁵² $\sum_{j=1}^N \vec{F}_{jm} - \Phi m_g [\vec{a}_{ms} + \vec{\omega}_{US} \times (\vec{\omega}_{US} \times \vec{r}_{ms}) + 2\vec{u}_{ms} \times \vec{\omega}_{US} + \vec{r}_{US} \times \frac{d\vec{\omega}_{US}}{dt}] = 0$, p. 185.

⁵³ André Koch Torres Assis, *Relational Mechanics*, pp. 190-191.

Wright: Allow me to explain: Michaelson (sic) and Morley performed an experiment to detect the relative motion of the Earth through the luminiferous aether. The theory was that light traveled like ripples on a pond through a medium called aether, and that the earth, passing through the aether, would add its momentum to the waves at the bow of its motion and subtract momentum from the waves left behind in its wake. The Newtonian model predicted exactly this result. If a man on the bow of a ship shot a musketball at a motionless target directly in front of the ship, the speed of the ship would be added to the speed of the musketball. If the musketball ricocheted back from the target in a straight line, the speed of the ship would be added to it again. To the contrary, if the musketeer shoots at a target at right angles (sic) to the line of motion, no velocity is added. Two musketballs shot at the same time will go and rebound, and the one shot in the direction of motion will rebound and return first. Please note that if the lake is moving in the opposition direction the boat is pointing but the boat is still, the target off the prow is still moving and still adds its momentum to the reflected musketball. Whether the lake is still and the boat is moving, or the boat is still and the lake is moving, the result is the same. The prow-ward bullet moves faster and returns first. So Michaelson (sic) and Morley tested, but using light rather than musketballs. The shocking result which turned the scientific world on its ear was that the light returned both in the direction of motion and at right angles was the same. The scientific community was astonished by the result that the two light waves were measured to be the same speed. Now, the reason given for this result is Einstein's relativity, which says the speed of light is the same to all observers. If the speed of light is the same to all observers, this means from from (sic) an outside frame of reference, a moving body shrinks in the direction of motion, increases in mass, and the measurement of time slows down.

R. Sungenis: Notice how glibly Mr. Wright refers to the presumed Einstein "shrinking" solution to the Michelson-Morley experiment. He appeals to "a moving body shrinks in the direction of motion, increases in mass, and the measurement of time slows down" as if these monumental changes to physical science are normal and expected. They have depended on these three effects so often that it doesn't even faze them any longer that none of them have been proven to exist. Length, mass and time can be distorted out of recognition, but that's ok for Mr. Wright since he knows that the alternative is that the Earth is motionless in space.

Wright: The implications of this are that gravity bends light. A famous experiment in 1919 (performed by Arthur Eddington and his collaborators during a total solar eclipse) confirmed this result.

R. Sungenis: Wrong. The tenets of the Special Theory of Relativity (that lengths shrink, time dilates and mass increases) have little to do with the General Relativity theory. The General theory was invented in 1915 to make up for the fact that Special Relativity did not incorporate gravity and inertial forces. If the Special Theory DID include gravity, then it would never be able to say that lengths shrink, time dilates mass increases and light stays constant, since there would never be an inertial frame to make such claims. As such, the General theory says that light and material objects can go any speed, and doesn't make any claims about length contraction, time dilation or mass increase. In effect, we have two different theories that contradict one another regarding how time, space, matter and light work in the universe.

Wright: Indeed, the difference in time measurement even between satellites and surface clocks are earth are effected by relativistic Lorentz contractions so that engineers have to adjust these measurements to make your GPS and cellphones operate.

R. Sungenis: No, that is not what happens at all. In the GPS, there is a 50 nanosecond difference between light beams traveling east-to-west as opposed to those traveling west-to-east. Special Relativity says there should be no difference, since, as we've all heard, "light speed is constant." So in order to make Special Relativity work, the GPS engineers pre-program the satellites with what is called a "Sagnac correction" in order to make up for the 50 nanosecond difference. After making the illicit "correction," the Einsteinians then claim that the speed of light is constant between the two satellites and thus the GPS "supports" the Special Theory of Relativity. This is nothing but a shell game. They merely adjust the GPS computers the Lorentz equation ($\beta = 1 - \sqrt{1 - v^2/c^2}$) to make up for the 50 nanoseconds. This isn't science; it's magic, and no one is the wiser since they don't tell the public what they've done to the computers. If you don't believe me, contact Ronald Hatch who worked as a GPS engineer for John Deere tractor company, which uses the GPS to guide its unmanned tractors. He went through the GPS computer program line-by-line and discovered how the GPS engineers pre-programmed the computers to account for the non-constancy of the speed of light – a veritable shame in the annals of physics, to be sure.

Wright: If the Michaelson (sic) Morley experiment were wrong, and relativity is wrong, much, much more than the question of the relative motion of the Earth is at stake: the entire standard model of physics is radically incorrect.

R. Sungenis: This is a backhanded way of admitting that if Einstein's solution to the Michelson-Morley experiment is wrong (e.g., Einstein's invention of length contraction, time dilation, mass increase, and light constancy to account for Michelson's null result), then the Earth is at rest and the whole science community has been destroyed in less than a second.

The fact is, neither length contraction, time dilation, mass increase and light constancy have ever been empirically proven. That's a fact. They were merely assumed to exist since they could never accept that the Earth was actually at rest. It was better to invent a whole new physics than it was to accept the ancient notion that the Earth was fixed in space. As noted above, we have already seen that light constancy has been disproven by the GPS 50ns difference in the speed of light. The only reason length contraction is used is so that they can shorten the distance the east-to-west light beam has to travel, which will then allow it to match the speed of the west-to-east light beam. But length contraction has never been proven to exist. It is merely a mathematical lash up to get both sides of the equal sign to balance. It is all math; not empirical science.

Wright: Professor Harold Hill, smirking and giggling, would have us believe the reason why there is no difference in the measurement of light traveling through the luminiferous aether between rays at right angles issuing from the Earth is that the Earth is stationary, and the universe is moving. This is like saying the boat is still and the lake is moving. The problem is that this is not the expected result, because, as shown above, a musketball bouncing off a moving target or a lightwave bounding off moving point in the aether, even if the boat or the earth is still, nonetheless should gain velocity.

R. Sungenis: Again, Mr. Wright doesn't understand the geocentric system. In the geocentric system, the universe is rotating around the Earth, not moving head-on toward to Earth. As such, the light beam can't "bounce off" directly from the aether since the aether is moving at right angles with respect to Michelson's interferometer. As such, there is very little momentum from the aether that Michelson's interferometer can pick up, since the aether is not moving toward Michelson's interferometer. It is moving around the interferometer, across it, not toward it.

As such, Michelson would only have been able to pick up a little of the aether, just as air going across a funnel should allow the funnel to pick up only some of the air. But it won't be able to pick up all the air, since the air is not going directly into the funnel. Lo and behold, this small amount of aether is precisely what Michelson found, and thus his result was not "null," rather, it registered precisely the very amount of aether we would expect if the aether was traveling at right angles relative to the interferometer. Let's hear it from Michelson himself:

Considering the motion of the Earth in its orbit only, this displacement should be $2D v^2/V^2 = 2D \times 10^{-8}$. The distance D was about eleven meters, or 2×10^7 wavelengths of yellow light; hence, the displacement to be expected was 0.4 fringe. The actual displacement was certainly less than the twentieth part of this, and probably less than the fortieth part.⁵⁴ But since the displacement is proportional to the square of the velocity, the relative velocity of the Earth and the ether is probably less than one-sixth the Earth's orbital velocity, and certainly less than one-fourth.⁵⁵

It was not just Michelson who wrote about this. Hendrik Lorentz (the very person who invented the length contraction theory in 1892 to account for Michelson's results) said the same:

Together with Morley, Michelson has started again the investigation, where (to increase the sensitivity) he let reflect every light beam by some mirrors back and forth. This artifice gave the same advantage, as if the arms of the earlier [1881] apparatus would have been considerably extended....Although every beam had to traverse a path of 22 meters, and by Fresnel's theory, when passing from one main position to the other, a displacement of 0.4 of the fringe distance was to be expected. Nevertheless, during the rotation only displacement of at most 0.02 of the fringe-distance were obtained.⁵⁶

Notice that Michelson does not say he had a "null" result. This is especially important in light of the fact that the Einsteinians bandied about the claim that there was not a single drop of aether for Michelson to discover in space. They ran with this because if even a tiny bit of aether was discovered it would have immediately nullified Einstein's Special Relativity theory.

In reality, Michelson says exactly what we predicted he would have to say, namely, that there was enough aether detected by his interferometer to register a least "one-sixth" of what he expected to find. Obviously, Michelson did not have enough aether drift to show the Earth was revolving around the sun, since that would require six-sixths of what he wanted.

⁵⁴ In the 1904 experiment of Morley and Dayton Miller, they state: "In 1887 Michelson and one of the present writers made an experiment....We found that, if there were any effect, it was not sensibly larger than one-fortieth of the amount expected" ("On the Theory of Experiments to detect Aberrations of the Second Degree," *Philosophical Magazine*, S. 6, Vol. 9. No. 53, May 1904, pp. 669-680).

⁵⁵ A. A. Michelson and E. W. Morley, "On the Relative Motion of the Earth and the Luminiferous Ether," Art. xxxvi, *The American Journal of Science*, eds. James D and Edward S. Dana, No. 203, vol. xxxiv, November 1887, p. 341. As one textbook calculates it: " $\Delta t - \Delta t' = (l_1 + l_2) v^2/c^3$. Now we take $v = 3.0 \times 10^4$ m/s, the speed of the Earth in its orbit around the Sun. In Michelson and Morley's experiment, the arms l_1 and l_2 were about 11 m long. The time difference would then be about $(22\text{m})(3.0 \times 10^4 \text{ m/s})^2 / (3.0 \times 10^8 \text{ m/s})^3 \approx 7.0 \times 10^{-16}$ s. For visible light of wavelength $\lambda = 5.5 \times 10^{-7}$ m, say, the frequency would be $f = c/\lambda = (3.0 \times 10^8 \text{ m/s}) / (5.5 \times 10^{-7} \text{ m}) = 5.5 \times 10^{14}$ Hz, which means that wave crests pass by a point every $1 / (5.5 \times 10^{14} \text{ Hz}) = 1.8 \times 10^{-15}$ s. Thus, with a time difference of 7.0×10^{-16} s, Michelson and Morley should have noted a movement in the interference pattern of $(7.0 \times 10^{-16} \text{ s}) / (1.8 \times 10^{-15} \text{ s}) = 0.4$ fringe. They could easily have detected this, since their apparatus was capable of observing a fringe shift as small as 0.01 fringe. But they found no significant fringe shift whatever....Never did they observe a significant fringe shift. This 'null' result was one of the great puzzles of physics at the end of the nineteenth century" (*Physics: Principles with Applications*, Fourth Edition, Douglas C. Giancoli, 1995, p. 749). Notice that the author does not say there was no fringe shift, but that there was no "significant fringe shift."

⁵⁶ Hendrik Lorentz, "Attempt of a Theory of Electrical and Optical Phenomena in Moving Bodies," 1886, Section VI, p. 6.

So where is this “one-sixth” of aether coming from? The Einsteinians didn’t have an answer. In fact, they did their best to deny that Michelson found one-sixth of what he was looking for. They chalked it up to “experimental error,” and they did the same hocus pocus to every other interferometer experiment that was performed for the next 50 years.

They did it again to Michelson when he repeated his experiment in 1897. They did it to Morley when he worked with Dayton Miller in 1904. They did it again to Miller when he did 100,000 trials of the Michelson experiment from 1908 to 1920. At this point, Einstein hired a scientific hit-man, Robert Shankland, to discredit all of Miller’s experiments, claiming that his results were “distorted by heat.” When Miller did even more experiments that eliminated the alleged “heat” issue, Shankland and Einstein refused to accept the results. On and on the denials went, since by this time Einstein had become world famous and anyone who attacked him was vilified and lost their former careers in physics (e.g., Herbert Dingle, who was formerly an Einstein devotee, but then discovered the flim-flam of Special Relativity and spent the rest of his life exposing it). This went on with about a dozen more experiments until the last of them was done by Joos in 1930. Every time the “one-sixth” or near it was found (and it was found in all of the experiments), Einstein and his colleagues just ignored it.



But there was another experiment of Michelson’s done in 1925 that didn’t allow any of the flim-flam of Special Relativity. In this experiment, Michelson set up his apparatus to detect a daily rotation between Earth and space. To do so, Michelson had the tubes going east-to-west and west-to-east instead of north-to-south. This time, he didn’t end up with only one-sixth of what he needed. He received six-sixths of what he needed, or more precisely, 97.6% of the aether drift needed to account for a daily rotation.

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rotating disk. The mean of ten determinations gave $\lambda = 1700 \pm 30$ angstroms.

The displacement of the fringes due to the earth's rotation was measured on many different days, with complete readjustments of the mirrors, with the reflected image sometimes on the right and sometimes on the left of the transmitted image, and by different observers. The deflections were averaged usually in sets of twenty, in the order in which they were taken. The resulting means are given in Table I. The entire set of two hundred and sixty-nine determinations

TABLE I

Observation*	Displacement in Fringes	Number of Observations	Weighted Mean
1	0.110	20	0.110
2	0.112	20	0.112
3	0.115	20	0.115
4	0.118	20	0.118
5	0.120	20	0.120
6	0.122	20	0.122
7	0.125	20	0.125
8	0.128	20	0.128
9	0.130	20	0.130
10	0.132	20	0.132
11	0.135	20	0.135
12	0.138	20	0.138
13	0.140	20	0.140
14	0.142	20	0.142
15	0.145	20	0.145
16	0.148	20	0.148
17	0.150	20	0.150
18	0.152	20	0.152
19	0.155	20	0.155
20	0.158	20	0.158
21	0.160	20	0.160
22	0.162	20	0.162
23	0.165	20	0.165
24	0.168	20	0.168
25	0.170	20	0.170
26	0.172	20	0.172
27	0.175	20	0.175
28	0.178	20	0.178
29	0.180	20	0.180
30	0.182	20	0.182
31	0.185	20	0.185
32	0.188	20	0.188
33	0.190	20	0.190
34	0.192	20	0.192
35	0.195	20	0.195
36	0.198	20	0.198
37	0.200	20	0.200
38	0.202	20	0.202
39	0.205	20	0.205
40	0.208	20	0.208
41	0.210	20	0.210
42	0.212	20	0.212
43	0.215	20	0.215
44	0.218	20	0.218
45	0.220	20	0.220
46	0.222	20	0.222
47	0.225	20	0.225
48	0.228	20	0.228
49	0.230	20	0.230
50	0.232	20	0.232
51	0.235	20	0.235
52	0.238	20	0.238
53	0.240	20	0.240
54	0.242	20	0.242
55	0.245	20	0.245
56	0.248	20	0.248
57	0.250	20	0.250
58	0.252	20	0.252
59	0.255	20	0.255
60	0.258	20	0.258
61	0.260	20	0.260
62	0.262	20	0.262
63	0.265	20	0.265
64	0.268	20	0.268
65	0.270	20	0.270
66	0.272	20	0.272
67	0.275	20	0.275
68	0.278	20	0.278
69	0.280	20	0.280
70	0.282	20	0.282
71	0.285	20	0.285
72	0.288	20	0.288
73	0.290	20	0.290
74	0.292	20	0.292
75	0.295	20	0.295
76	0.298	20	0.298
77	0.300	20	0.300
78	0.302	20	0.302
79	0.305	20	0.305
80	0.308	20	0.308
81	0.310	20	0.310
82	0.312	20	0.312
83	0.315	20	0.315
84	0.318	20	0.318
85	0.320	20	0.320
86	0.322	20	0.322
87	0.325	20	0.325
88	0.328	20	0.328
89	0.330	20	0.330
90	0.332	20	0.332
91	0.335	20	0.335
92	0.338	20	0.338
93	0.340	20	0.340
94	0.342	20	0.342
95	0.345	20	0.345
96	0.348	20	0.348
97	0.350	20	0.350
98	0.352	20	0.352
99	0.355	20	0.355
100	0.358	20	0.358
101	0.360	20	0.360
102	0.362	20	0.362
103	0.365	20	0.365
104	0.368	20	0.368
105	0.370	20	0.370
106	0.372	20	0.372
107	0.375	20	0.375
108	0.378	20	0.378
109	0.380	20	0.380
110	0.382	20	0.382
111	0.385	20	0.385
112	0.388	20	0.388
113	0.390	20	0.390
114	0.392	20	0.392
115	0.395	20	0.395
116	0.398	20	0.398
117	0.400	20	0.400
118	0.402	20	0.402
119	0.405	20	0.405
120	0.408	20	0.408
121	0.410	20	0.410
122	0.412	20	0.412
123	0.415	20	0.415
124	0.418	20	0.418
125	0.420	20	0.420
126	0.422	20	0.422
127	0.425	20	0.425
128	0.428	20	0.428
129	0.430	20	0.430
130	0.432	20	0.432
131	0.435	20	0.435
132	0.438	20	0.438
133	0.440	20	0.440
134	0.442	20	0.442
135	0.445	20	0.445
136	0.448	20	0.448
137	0.450	20	0.450
138	0.452	20	0.452
139	0.455	20	0.455
140	0.458	20	0.458
141	0.460	20	0.460
142	0.462	20	0.462
143	0.465	20	0.465
144	0.468	20	0.468
145	0.470	20	0.470
146	0.472	20	0.472
147	0.475	20	0.475
148	0.478	20	0.478
149	0.480	20	0.480
150	0.482	20	0.482
151	0.485	20	0.485
152	0.488	20	0.488
153	0.490	20	0.490
154	0.492	20	0.492
155	0.495	20	0.495
156	0.498	20	0.498
157	0.500	20	0.500
158	0.502	20	0.502
159	0.505	20	0.505
160	0.508	20	0.508
161	0.510	20	0.510
162	0.512	20	0.512
163	0.515	20	0.515
164	0.518	20	0.518
165	0.520	20	0.520
166	0.522	20	0.522
167	0.525	20	0.525
168	0.528	20	0.528
169	0.530	20	0.530
170	0.532	20	0.532
171	0.535	20	0.535
172	0.538	20	0.538
173	0.540	20	0.540
174	0.542	20	0.542
175	0.545	20	0.545
176	0.548	20	0.548
177	0.550	20	0.550
178	0.552	20	0.552
179	0.555	20	0.555
180	0.558	20	0.558
181	0.560	20	0.560
182	0.562	20	0.562
183	0.565	20	0.565
184	0.568	20	0.568
185	0.570	20	0.570
186	0.572	20	0.572
187	0.575	20	0.575
188	0.578	20	0.578
189	0.580	20	0.580
190	0.582	20	0.582
191	0.585	20	0.585
192	0.588	20	0.588
193	0.590	20	0.590
194	0.592	20	0.592
195	0.595	20	0.595
196	0.598	20	0.598
197	0.600	20	0.600
198	0.602	20	0.602
199	0.605	20	0.605
200	0.608	20	0.608
201	0.610	20	0.610
202	0.612	20	0.612
203	0.615	20	0.615
204	0.618	20	0.618
205	0.620	20	0.620
206	0.622	20	0.622
207	0.625	20	0.625
208	0.628	20	0.628
209	0.630	20	0.630
210	0.632	20	0.632
211	0.635	20	0.635
212	0.638	20	0.638
213	0.640	20	0.640
214	0.642	20	0.642
215	0.645	20	0.645
216	0.648	20	0.648
217	0.650	20	0.650
218	0.652	20	0.652
219	0.655	20	0.655
220	0.658	20	0.658
221	0.660	20	0.660
222	0.662	20	0.662
223	0.665	20	0.665
224	0.668	20	0.668
225	0.670	20	0.670
226	0.672	20	0.672
227	0.675	20	0.675
228	0.678	20	0.678
229	0.680	20	0.680
230	0.682	20	0.682
231	0.685	20	0.685
232	0.688	20	0.688
233	0.690	20	0.690
234	0.692	20	0.692
235	0.695	20	0.695
236	0.698	20	0.698
237	0.700	20	0.700
238	0.702	20	0.702
239	0.705	20	0.705
240	0.708	20	0.708
241	0.710	20	0.710
242	0.712	20	0.712
243	0.715	20	0.715
244	0.718	20	0.718
245	0.720	20	0.720
246	0.722	20	0.722
247	0.725	20	0.725
248	0.728	20	0.728
249	0.730	20	0.730
250	0.732	20	0.732
251	0.735	20	0.735
252	0.738	20	0.738
253	0.740	20	0.740
254	0.742	20	0.742
255	0.745	20	0.745
256	0.748	20	0.748
257	0.750	20	0.750
258	0.752	20	0.752
259	0.755	20	0.755
260	0.758	20	0.758
261	0.760	20	0.760
262	0.762	20	0.762
263	0.765	20	0.765
264	0.768	20	0.768
265	0.770	20	0.770
266	0.772	20	0.772
267	0.775	20	0.775
268	0.778	20	0.778
269	0.780	20	0.780
270	0.782	20	0.782
271	0.785	20	0.785
272	0.788	20	0.788
273	0.790	20	0.790
274	0.792	20	0.792
275	0.795	20	0.795
276	0.798	20	0.798
277	0.800	20	0.800
278	0.802	20	0.802
279	0.805	20	0.805
280	0.808	20	0.808
281	0.810	20	0.810
282	0.812	20	0.812
283	0.815	20	0.815
284	0.818	20	0.818
285	0.820	20	0.820
286	0.822	20	0.822
287	0.825	20	0.825
288	0.828	20	0.828
289	0.830	20	0.830
290	0.832	20	0.832
291	0.835	20	0.835
292	0.838	20	0.838
293	0.840	20	0.840
294	0.842	20	0.842
295	0.845	20	0.845
296	0.848	20	0.848
297	0.850	20	0.850
298	0.852	20	0.852
299	0.855	20	0.855
300	0.858	20	0.858
301	0.860	20	0.860
302	0.862	20	0.862
303	0.865	20	0.865
304	0.868	20	0.868
305	0.870	20	0.870
306	0.872	20	

But Silverstein's claim set off another set of contradictions. It started in Einstein's 1920 Leiden paper. Although Einstein had reintroduced the aether he had abandoned in the Special Theory, he insisted that the aether of General Relativity was "not ponderable," that is, it has no measurable presence. It has no mass and cannot be weighed. It has no concrete dimensions. It has no parts that can be dissected and it has no time for us to say that it changed or moved from here to there. We can't examine it because, in the dimensions we live in, the aether doesn't exist.



But that was not the way the aether was treated by the General Relativists for the Michelson-Gale experiment. The dichotomy is noted in the write-up of the experiment by the *New York Times* of January 9, 1925. On the one hand, its headline admits that "Ether Drift is Confirmed" since a full aether drift was measured by Michelson-Gale. On the other hand, it does not admit that since aether was measured this means the aether is "ponderable," the very opposite claimed by Einstein in General Relativity. Einstein's aether cannot be tracked by time but a tracking of time is precisely what Michelson-Gale demonstrated for the aether in 1925, since it made one light beam return in a shorter time than the other, which the article itself admits:

'The register in the flight of these beams was an instrument known as the interferometer, which Professor Michelson has been perfecting for forty years. Through it was visible a white circle striped with vertical find lines like hair drawn tightly across the face of an oval mirror. These were called interference fringes due to the fact that if the beams reached home at different times it would be recorded by a displacement of these lines. This displacement was shown in the experiment.'

Ironically, instead of admitting that the experiment disproved both Special and General Relativity, the article's top headline is "Michelson Proves Einstein Theory."

Finally, since aether was proven to exist in space and thus nullified Special Relativity, this meant that modern science had only two answers left for the 1887 Michelson-Morley experiment: (1) aether moved with the Earth around the sun; or (2) the Earth was motionless in space. The first was called the "aether entrainment" theory, proposed by both Lorentz and Michelson soon after Michelson's 1887 experiment, but long before his 1925 experiment. This theory asserts that the reason Michelson did not measure the Earth moving against the ether at 66,000 mph around the sun is because the Earth carries the ether with it. If true, both of Michelson's 1887 light beams would experience little or no ether drift.

The problem with this solution became quite apparent by 1913 and 1925, however. If ether entrainment was used to explain the 1887 Michelson-Morley experiment, it would contradict the 1913 Sagnac and 1925 Michelson-Gale experiments. Michelson-Gale necessitates that the ether cannot be entrained with the Earth, otherwise the experiment would not have found a 97% daily rotation of ether against the Earth. Instead, it would have found a near 0% rotation rate. As it stands, the entrainment theory does not answer

all the empirical data and should be discarded. This leaves only one answer to the Michelson-Morley experiment – the Earth is motionless in space.

Wright: In describing this, Professor Hill, assuming his audience knows nothing about Albert Einstein, made the outrageous assertion that when Lorentz published his theory of the contraction in the direction of motion needed to explain the Michaelson Morley result, Einstein simply asserted that the thing had happened for no reason and without a cause. This is a lie and an unconvincing one. It is not a mistake, not a difference of opinion, not an innocent misunderstanding. No one familiar with Einstein, his theories, and his approach would dare say this about him.

R. Sungenis: Once again, Mr. Wright is wrong. He simply doesn't know the history. For example, Wolfgang Pauli, a famous physicist and supporter of Einstein's theory of Relativity, admitted that Einstein had no explanation for the shortening of moving matter. In his 1958 book, *Theory of Relativity*, Pauli writes that while Einstein distanced his theory from Lorentz's theory, in effect he kept the main ingredient – the contraction of matter – as a postulate for his Special Relativity theory, which then led to accusations that Special Relativity was defying the laws of causality. Pauli writes:

It is also of great value that Einstein rendered the theory independent of any special assumptions about the constitution of matter....It [the contraction] would not take place except for the covariance with respect to the Lorentz group of the basic equations of electron theory....We can only postulate that this is so....The epistemological basis of the theory of relativity has recently been undergoing a close examination from the side of philosophy. In this connection the opinion has been expressed that the theory of relativity has thrown overboard the concept of causality.⁵⁸

Of course, if Mr. Wright would like to explain to us what physical process causes matter to contract when it moves through space, or what causes time to dilate, he is welcome to fill the vacuum. I dare say he has no physical explanation. At least Lorentz laid the cause at the feet of aether compression. Einstein laid it at the feet of nothing, except his imagination. We must remember that, keeping the Earth moving was paramount. Whatever needed to be done to rearrange physics to keep the Earth moving was acceptable. It didn't matter if physics was turned into Alice in Wonderland. Believing in the Mad Hatter and the Cheshire Cat was better than accepting the fact that modern science had been wrong about the cosmos for the last 500 years. Einstein, the consummate physics magician, was their savior.

Wright: Those of you who know something of the history of scientific disputes know that Einstein defended Newtonian cause and effect determinism and argued against the probabilistic Quantum Mechanics interpretation put forward by Heisenberg. That is what his famous "God does not play at dice" means: Einstein said that every event, even subatomic events, had to have definitive causes, even if those causes, due to Heisenberg limitations on observation, cannot never be known.

R. Sungenis: But this only means that Einstein talked out of both sides of his mouth. When Quantum Mechanics of the Copenhagen variety carried his make-believe world to its logical conclusion, Einstein suddenly became a realist instead of an idealist.

Wright: And one wonders why, if Einstein was such an ardent enemy of Christianity, he refers to God as the ultimate authority in matters of physics?

⁵⁸ *Theory of Relativity*, Wolfgang Pauli, London, Pergamon Press, 1958, page 15.

R. Sungenis: The “God does not play dice” comment was just a figure of speech. Einstein used the figure of “God” when it suited his agenda. As we noted earlier, Einstein said that all the talk of him “believing in God” was nonsense.

Wright: Beside, the general and special theory of Relativity was exactly Einstein’s explanation of the Lorentz contraction in the direction of motion.

R. Sungenis: Science requires that both Lorentz and Einstein prove that length contraction exists before they apply it to Michelson’s experiment. But the reality is, they didn’t like the results of Michelson’s experiment since it implied that the Earth wasn’t moving, so they proposed “length contraction” had to occur to account for the experiments results. They had no proof of length contraction. It was only the famous names of Lorentz and Einstein that made it stick as if it was a reality. To this very day no one has proven that length contraction or time dilation occurs.

Wright: Now, the other possibilities for why light sent out at right angles from the Earth and returns at the same interval include that the luminiferous aether is being carried along with the earth as it moves, or that the earth is not moving at all.

R. Sungenis: So at least Wright finally admits that a non-moving Earth is a solution to Michelson’s 1887 experiment. This shouldn’t surprise us, since it is exactly what Einstein and his colleagues admitted. Here is Einstein’s biographer on the issue:

In the United States Albert Michelson and Edward Morley had performed an experiment which confronted scientists with an appalling choice. Designed to show the existence of the ether...it had yielded a null result, leaving science with the alternatives of tossing aside the key which had helped to explain the phenomena of electricity, magnetism, and light or of deciding that the earth was not in fact moving at all.⁵⁹

The problem which now faced science was considerable. For there seemed to be only three alternatives. The first was that the Earth was standing still, which meant scuttling the whole Copernican theory and was unthinkable.⁶⁰

Wright: The problem with the second theory is that the same experiment using the moon rather than the Earth as the body whose motion is being added or subtracted from lightspeed gets the same result. So, under the geocentric model, measurements only from the Earth would get this same result.

R. Sungenis: What the blazes is Wright talking about?! There have never been any Michelson interferometer experiments on the moon or involving the moon. Apparently, Wright is trying to make the argument that the 1887 Michelson interferometer experiment or any similar experiment (which I assume is what Wright means when he says “the same experiment”), if done on the moon or with respect to the moon, would produce the same result as Michelson found in 1887 on the Earth. If so, then Wright is not only incompetent, he is insane, since nothing of the sort has ever been attempted. If Wright thinks otherwise and he has some information that the rest of us don’t have, the least he could do is cite what peer-reviewed research he is alluding to. Without such a citing, Wright is nothing but a charlatan, a Harold Hill that surpasses the Music Man.

⁵⁹ *Einstein: The Life and Times*, 1984, p. 57.

⁶⁰ *Ibid.*, pp. 109-110, emphasis added. In the opposite vein, senator James W. Fulbright once remarked: “We must care to think about the unthinkable things, because when things become unthinkable, thinking stops and action becomes mindless.”

Wright: Indeed, my first readings of Michaelson (sic) and Morley were of another experiment, where they were attempting to measure the acceleration the motion of the moon added to light along its bow edge in its orbit around the earth, and subtracted from its wake.

R. Sungenis: What Wright may be thinking about is Michelson's attempt in 1878 to measure the speed of light, but it had nothing to do with the moon; rather, it used an earth-based apparatus that improved on Foucault's and Fizeau's. The only one to do an experiment with a moon was Römer, but it was Io, the moon of Jupiter. Michelson and Morley had also written a paper in 1886 titled "Influence of Motion of the Medium on the Velocity of Light"⁶¹ but you will find no mention of the moon or its wakes in that paper.

So it appears that what Wright did here is conflate his own understanding of the moon and its movement through the aether with the experiments of Michelson to come up with a totally unique scenario, all his own, which claims that "the same experiment using the moon rather than the Earth as the body whose motion is being added or subtracted from lightspeed gets the same result." I have never seen such a brazen attempt at altering the actual history to try to prove one's pet point. Yet Mr. Wright has the gall to call me "Harold Hill"! I can just hear "76 Trombones" playing now, and Mr. Wright is leading the band with his baton.

Wright: Since in all three models, Ptolemy, Tycho Brahe, or Kepler, the moon orbits the earth, the explanation of the result (light is the same to all observers) cannot possibly be that the moon is motionless with respect to the luminiferous aether. If the Earth is motionless in the Earth, and the moon orbits the Earth, the moon cannot also be motionless.

R. Sungenis: So one error leads to another. Since Mr. Wright has convinced himself that the same results of the Michelson-Morley experiment would occur when the experiment is applied to the moon, this means that geocentrists cannot have the same explanation to the experiment as they had when it was done on Earth in 1887, since geocentrists claim the Earth is not moving but the moon is. Mr. Wright's convoluted thinking speaks for itself. Since neither the Michelson-Morley experiment nor any similar experiment has ever been done or applied to the moon, then Mr. Wright's whole dealing with this topic is ludicrous.

But despite Mr. Wright's convoluted thinking, indeed, it is the claim of the geocentrists that if a Michelson interferometer experiment were done on the moon, it would show that the moon is moving. Don't expect it to be done anytime soon.

Wright: Professor Hill gawks and gapes at the idea that Lorentz would seek another explanation aside from the motionlessness of the Earth to explain the lack of light acceleration from the Michaelson-Morley (sic) result. His comical goggle-eyed flappy-lipped pantomime at the idea of Lorenz (sic) transformation (that the measuring instrument shrank in the direction of motion) is disingenuous to say the least.

R. Sungenis: As I said at the beginning, "there is a direct proportion between the degree of personal attacks and the lack of knowledge of the critic," and Mr. Wright is a perfect example of that proportion. But to back up my so-called "comical goggle-eyed flappy-lipped pantomime" at the thought that

⁶¹ https://en.wikisource.org/wiki/Influence_of_Motion_of_the_Medium_on_the_Velocity_of_Light, sourced from *American Journal of Science*, 31:386-377, 1886.

Lorentz's explanation of the Michelson-Morley experiment was to posit that one of the arms of Michelson's apparatus shrunk in size just enough to make it appear as if the Earth was not moving, allow me to show you the conversation between its co-inventor, George Fitzgerald, and Hendrik Lorentz in the late 1800s. Here is an excerpt from my book:

Two of the leading physicists of the day, George Fitzgerald (1851–1901) and Hendrik Lorentz (1853–1928), came up with a specious yet creative solution to explain Michelson's astounding results. Although in 1892 Lorentz's letter to Rayleigh revealed he was still struggling with how to explain Michelson's experiment, by 1894 he had thought of a solution and shared it in a letter with George Fitzgerald. In his letter of November 10, 1894, Lorentz writes:

My dear Sir,

In his Aberration problems Prof. Oliver Lodge mentions a hypothesis which you have imagined in order to account for the negative results of Mr. Michelson's experiment. Two years ago I arrived at the same view as you may see from the number of the Proceedings of the Dutch Academy of Sciences which I have the honour to send you at the same time with this letter. A memoir in which I consider the whole subject of Aberration in connexion with the electromagnetic theory of light being now in course of publication – it will in fact appear in a week – you would oblige me very much by telling me, if your hypothesis has already been published. I have been unable to find it and yet I should wish to refer to it.

Most respectfully yours,
H. A. Lorentz

In a return letter dated four days later on November 14, 1894, Fitzgerald writes to Lorentz the following. Notice that he complains that everyone was "laughing" at him:

My Dear Sir, I have been for years preaching and lecturing on the doctrine that Michelson's experiment proves, and is one of the only ways of proving, that the length of a body depends on how it is moving through the ether....I am particularly delighted to hear that you agree with me, for I have been rather laughed at for my view over here. I could not even persuade my own pupil W. Preston to introduce this criticism into his book on Light published in 1890 although I pressed upon him to do so and it was only after reiterated positiveness that I induced Dr. Lodge to mention it in his paper, but now that I have you as an advocate and authority I shall begin to jeer at others for holding any other view....

Yours most sincerely,
Geo. Fra. Fitzgerald.⁶²

So we see, I am not only one laughing. As physicist Dennis Sciama notes about similar acts of desperation in science:

No one would take this theory seriously, of course. One reason for this, no doubt, would be the obviously *ad hoc* and, indeed, ludicrous appearance of the theory. But the fundamental reason for objecting to the theory is that the demons cannot be observed *except through the very phenomenon they were invented to explain*. The introduction of the demon thus adds nothing to what we know already.⁶³

Even Lorentz was skeptical about his own *ad hoc* theory. In 1904 he stated:

⁶² Actual letter of Fitzgerald to Lorentz, courtesy of the Niels Bohr Library, College Park, MD, in microfilm, reel #1 of eight reels of correspondence between Lorentz and his colleagues. Permission for usage granted under public domain rights.

⁶³ Dennis Sciama, *The Unity of the Universe*, 1961, p. 103, emphasis his.

It need hardly be said that the present theory is put forward with all due reserve. Though it seems to me that it can account for all well-established facts, it leads to some consequences that cannot as yet be put to the test of experiment. One of these is that the result of Michelson's experiment must remain negative...⁶⁴

The experiments of which I have spoken are not the only reason for which a new examination of the problems connected with the motion of the Earth is desirable...in order to explain Michelson's negative result, the introduction of a new hypothesis has been required...Surely this course of inventing special hypotheses for each new experimental result is somewhat artificial. It would be more satisfactory if it were possible to show by means of certain fundamental assumptions...⁶⁵

But there weren't any solid "fundamental assumptions." As Lorentz himself admits, he was forced to invent this laughable theory because he had "to explain Michelson's negative result," which negative result showed that the Earth wasn't moving around the sun. And yet for over 100 years this sorry excuse for logical thinking has been used as "science" and has brainwashed the whole world into thinking that what is fiction is fact. Instead of my "comical goggle-eyed flappy-lipped pantomime," I should have been rolling on the floor with uncontrollable laughter.

Wright: Lorenz (sic) was attempting to find an explanation which would prove true for all moving bodies, not just Earth, and it was no more of an ad hoc than any other tinkering with any scientific model to save the appearances. That is the way science works.

R. Sungenis: Ah, the "scientific method." Perhaps Mr. Wright can tell us why, if the "scientific method" is so fair and unbiased and is so open to "tinkering...to save the appearances," that it decided not to be open to "tinkering" with the possibility that the Earth is motionless. After all, many scientists had at least noticed that a motionless Earth would have answered the results of the Michelson experiment quite simply, as we saw above in the two references in Ronald Clark's biography of Einstein. I have about 50 more quotes, but I won't belabor the point. All we have so far from Mr. Wright is his ludicrous suggestion that a Michelson experiment done on the Moon would produce the same results as that on Earth. As such, Mr. Wright has gone far beyond mere "tinkering" and into manufacturing.

In the end, Mr. Wright tries to defend Lorentz's lack of "fundamental assumptions" and Einstein's lack of cause-and-effect science by claiming that men will hold on to their favorite philosophical model until it blows up in their faces. This is why Max Planck said, "Science progresses funeral by funeral."

Wright: Professor Hill makes Lorentz out to be mountebank. Liars always project their flaws onto the men about whom they tell lies.

⁶⁴ "Electromagnetic Phenomena in a System Moving with any Velocity Less Than that of Light," in *The Principle of Relativity: A Collection of Original Memoirs on the Special and General Theory of Relativity* by H. A. Lorentz, A. Einstein, H. Minkowski and H. Weyl, translated by W. Perrett and G. B. Jeffery from the original 1923 edition, 1952, p. 29).

⁶⁵ As cited in *Thematic Origins of Scientific Thought*, Gerald Holton, 1988, p. 323. Christian Møller adds this criticism: "The contraction hypothesis looks rather startling at first sight, but, as stressed by Lorentz, it is impossible to escape from it as long as the conception of an absolute unmovable ether is maintained.... The difficulty was only that the presupposition that the particles are held together exclusively by electric forces could scarcely be assumed to be satisfied in the real substances. In particular it was difficult to imagine how the charge of a single electron could be held together, unless strong attractive forces of non-electrical nature were active inside the electron. If one therefore assumes that the contraction formula [$l = l_0(1-v^2/c^2)^{1/2}$] is valid also for a single electron, as was actually assumed by Lorentz, this must be regarded as a pure hypothesis which cannot be based on the principles of the electron theory alone" (C. Møller, *The Theory of Relativity*, p. 29).

R. Sungenis: As you can see, Lorentz can lie about having a proven scientific solution to the Michelson experiment, but I'm accused of being a liar in pointing out that Lorentz was a liar. C'est la vie.

Wright: The grotesque misquote from Hill of Einstein was where Einstein says "Since then I have come to believe that the motion of the Earth cannot be detected by any optical experiment." Professor Hill would have the gullible chumps in his audience believe that this means Einstein is saying no experiment of any kind whatsoever proves that the Earth is moving. And if no experiment proves the Earth is moving, then the Earth is not moving!! But Einstein spoke precisely: he said no optical experiment could detect the motion of the Earth through the luminiferous aether.

R. Sungenis: Notice how Mr. Wright presumes to know what I meant and what the audience is thinking. He doesn't know, but it certainly makes a good sound bite.

Wright: Optics works by electromagnetic waves. Light is made of electromagnetic waves. The reason why no optical experiment will prove the Earth moves through the luminiferous aether is, according to Einstein, twofold: One, there is no luminiferous aether, hence there is nothing for an optical experiment to detect. Two, light travels the same speed to all observers, therefore the method of testing the speed of a body moving through the luminiferous aether by comparing differences in the speed of light is doomed to failure. There can be no difference for the measurements of any body, fast or slow, large or small.

R. Sungenis: This is typically what happens in such cases. Mr. Wright is engaging in the fallacy of *petitio principii*, that is, using as proof the very thing one is trying to prove. Here's how it works. Since Michelson's interferometer couldn't find any movement of the Earth around the sun but he and the rest of the world believed in their hearts that the Earth was, indeed, moving around the sun, then they were forced to claim that there was no aether and that light traveled at a constant speed. They had no proof for these two ideas, and that's why Einstein called them "postulates," not proof. But the postulates were soon turned into proof by a world needing some sort of answer to the Michelson experiment; otherwise they would all be bowing to the pope for condemning Galileo and having to admit that the Bible speaks nothing but truth.

As you can see, the whole enterprise is not really science or about science, but the insistence that the Earth, without any empirical proof, must be moving around the sun. This is the fundamental dictum of the modern world which will be used to interpret every experiment, and no room for any other fundamental truth will be allowed. Mr. Wright is obviously one of those people.

Wright: As for non-optical experiments for showing the rotation of the Earth, actually firing a rocket into the sky, and Foucault's pendulum, both make such proofs. In order to dismiss them as proofs, he called them brainwashing, Prof Hill has to dismiss the notion of inertia and Newton's laws of motion, which returns physics to the model of the Second Century.

R. Sungenis: First "firing a rocket into the sky" and "Foucault's pendulum" do not prove the Earth is rotating. Using them as proof means that Mr. Wright doesn't know what he is talking about. Anyone worth his salt in physics knows that, according to modern physics, a rotating space around a fixed Earth will create the same inertial forces as seen in a rotating Earth in a fixed space to move the rocket sideways or rotate the Foucault Pendulum. That Mr. Wright doesn't know this or refuses to accept it shows that he is the one from the "second century," not me.

Wright: Professor Hill than lists all the scientists who believed, before the experiments on 1912 showed that gravity bends light, that the luminiferous aether existed. Bully for them. They all later retracted and climbed aboard the new model.

R. Sungenis: First, the idea that gravity bends light has nothing to do with lumineferous aether. Second, the idea that gravity bends light does not prove General Relativity, especially since General Relativity says that there should be a gradient of bending the farther the star light beam is from the sun, but that is not what is seen. Only bending very near the surface of the sun is seen.

Third, no, they did not all “later retract” their opposition to Einstein. Michelson, for example, was against Relativity theory until his dying day and never accepted Einstein’s claim that there was no aether. The reason was very simple. Every experiment that Michelson performed showed that aether existed, especially the 1925 experiment that showed 97.6% of the aether needed to prove a sidereal rotation. There were many others who rejected Einstein, such as Adler, Appell, Aspden, Assis, Barter, Beckmann, Bergson, Bouasse, Bragg, Brown, Brillouin, Callahan, Cauchy, Champeney, Cullwic, Darboux, Denisov, Dingle, Dingler, Dudley, Duport, Essen, Galeczki, Gehrcke, Graneau, Guillaume, Gut, Hatch, Heaviside, Henderson, Ives, Kantor, Kanarev, Kastler, Kraus, Lallemand, Larmour, LeCornu, Lenard, LeRoux, Levi-Civita, Lodge, Lorentz, Lovejoy, Lynch, Mach, MacMillan, Mackaye, Magie, McCausland, Michelson, Miller, Mohorovičić, Montague, Moon, More, Moulton, Nordenson, O’Rahilly, Painlevé, Phipps, Picard, Planck, Poincaré, Poor, Radakov, Ricci, Rutherford, Sagnac, Seeliger, Selleri, Soddy, Stark, Theimer, Turner, van der Kamp, van der Waals, Weinmann, Weyland, et al., they all discovered the same anomalies, and many of them wrote major critiques against Einstein between the 1920s and 1960s. Even Leopold Infeld, although authoring a book with Einstein in 1938 titled *The Evolution of Physics*, ten years later, when applying Einstein’s formulas to the structure of the universe, writes: “Einstein’s original ideas, as viewed from the perspective of our present day, are antiquated if not even wrong.”⁶⁶

Wright: Professor Harold Hill is lying, of course, and trying to pretend first, that the theory of luminiferous aether is not as dead as the theory of phlogiston, and, second, that the theory of luminiferous aether could somehow save the geocentric model. It could not. The measurements of other heavenly bodies, not just the Earth, shows that light is the same speed to all observers.

R. Sungenis: Obviously, Mr. Wright hasn’t kept up with the literature. Not only did Einstein revive an aether in 1920, quantum mechanics went above and beyond even the aether of Lorentz. In the words of Nobel laureate Robert Laughlin:

It is ironic that Einstein’s most creative work, the general theory of relativity, should boil down to conceptualizing space as a medium when his original premise was that no such medium existed.... Einstein... utterly rejected the idea of ether and inferred from its nonexistence that the equations of electromagnetism had to be relative. But this same thought process led in the end to the very ether he had first rejected, albeit one with some special properties that ordinary elastic matter does not have. The word “ether” has extremely negative connotations in theoretical physics because of its past association with opposition to relativity. This is unfortunate because, stripped of these connotations, it rather nicely captures the way most physicists actually think about the vacuum.

In the early days of relativity the conviction that light must be waves of something ran so strong that Einstein was widely dismissed. Even when Michelson and Morley demonstrated that the earth’s orbital motion through the ether could not be detected, opponents argued that the earth must be dragging an

⁶⁶ Leopold Infeld, “On the Structure of the Universe,” in *Albert Einstein: Philosopher-Scientist*, p. 477.

envelope of ether along with it because relativity was lunacy and could not possibly be right.... Relativity actually says nothing about the existence or nonexistence of matter pervading the universe, only that such matter must have relativistic symmetry.

It turns out that such matter exists. About the time relativity was becoming accepted, studies of radioactivity began showing that the empty vacuum of space had spectroscopic structure similar to that of ordinary quantum solids and fluids. Subsequent studies with large particle accelerators have now led us to understand that space is more like a piece of window glass than ideal Newtonian emptiness. It is filled with “stuff” that is normally transparent but can be made visible by hitting it sufficiently hard to knock out a part. The modern concept of the vacuum of space, confirmed every day by experiment, is a relativistic ether. But we do not call it this because it is taboo.⁶⁷

As for the speed of light being the same everywhere, it isn't even the same on Earth. The GPS satellites prove it. The GPS is similar to a Sagnac experiment. It shows that light beams going in one direction are faster than light beams going in the opposite direction. If it wasn't for the fudging of the GPS computers, the rest of us might know about this skullduggery of Relativists to hide their discrepancies.

As for light elsewhere in the universe, no one has proven that light speed is the same everywhere. It has only been assumed to be so. In fact, it is only Einstein's Special Relativity that claims light speed is constant (and that was because he needed a fixed speed it to make it appear the Earth was not fixed), but Special Relativity only applies to inertial frames (ones that are at rest or moving at uniform speed) and these frames can have no influence from gravity.

The fact is, there are no such frames in the universe, since everything is affected by gravity, so the Special Theory is useless as it stands. According to the General Theory, light is not constant and can travel at any speed, and so can material objects. It comes in handy when Big Bang scientists are trying to have some basis for saying that the universe is “expanding faster than the speed of light.”

Wright: At this point, Prof Hill was reduced merely to snarling and sneering and accusing all scientists, Christian and non-Christian alike, of being a great conspiracy to ignore all evidence pointing to geocentrism, on the grounds that all scientists hate the Bible and will do anything, even sacrifice personal honor and professional reputations, to falsify the evidence.

R. Sungenis: No, not all scientists. It is only the ones who, similar to Mr. Wright, just dismiss the alternative evidence as if it didn't exist and who ridicule their opponents for even thinking that a fixed Earth provides the solution to our perplexing questions. Unfortunately, Mr. Wright hasn't learned that scientists are not angels that dropped out of heaven. Often they are no more honest than used car salesmen. When money, careers and prestige are on the line, the scientist has just as much temptation to fudge the data and the interpretations to what will gain him the most. We already saw the sordid lives of Kepler, Newton, Galileo and Einstein. If Mr. Wright thinks that their immoral lives don't have any effect

⁶⁷ Robert B. Laughlin, *A Different Universe: Reinventing Physics from the Bottom Down*, 2005, pp. 120-121. The two chapters of Laughlin's book that deal with these issues are: “The Nuclear Family,” (pp. 99-116 and “The Fabric of Space-Time” (pp. 117-126). Laughlin can speak so boldly about ether and not be afraid of suffering chastisement because, as one author notes: “...the impression of suggesting an ether theory is carefully avoided, because such can still be career suicide. Only physicists who were established beyond reproach could discuss ether-like aspects openly, like George Chapline, Gerd 't Hooft, Robert Laughlin, or Frank Wilczek, just to alphabetically list a few who did. Today, we finally witness the dams breaking and ever more people dare to ‘come out.’” Sascha Vongehr, “Supporting Abstract Relational Space-Time as Fundamental without Doctrinism Against Emergence,” Nanjing University, China, Dec. 2009, p. 2.

on how they view the world and how they will interpret the scientific data to that end, he lives in a dream world of his own making.

Wright: He says some crackpot scientist proved Michaelson (sic) Morley was wrong, and there motion was detected. Which would seem to prove that the Earth was moving, not that it was standing still. I think Professor lost track of his lies at this point, and did not realize what in the world he was saying.

R. Sungenis: Again, we see the distortion and obfuscation of Mr. Wright. This is a guy who has not once spelled Albert Michelson's name correctly, and by his own admission had never heard of the 1887 Michelson-Morley experiment until he heard my lecture. Be that as it may, I never said anyone proved Michelson-Morley was wrong. Mr. Wright is again saying only what he *thinks* I said instead of what I actually said. What he is probably referring to is what we already covered earlier concerning the fact that Michelson found only one-sixth of the aether he expected to find. This meant that the Earth was not revolving around the sun, but it also showed that aether existed, both facts contrary to Einstein and his Special Relativity theory.

Wright: He then spoke of the Hubble Expansion. At this point, I actually began to feel sorry for him. Hawkins (sic) explains that the Hubble redshift is symmetrical to all observers by using the analogy of a balloon being expanded, and two dimensional men on the surface, seeing only by means of waves that follow the curve of the balloon, from any position on the balloon would see the more remote points on the balloon retreating faster. Which is indeed what we see from Earth, and anyone would see from any point in space. But, no, Professor Harold Hill misunderstood that this was an analogy explaining a fourth dimensional expansion, and thought that Hawkins (sic) was saying he universe was hollow in the middle, and all the galaxies were grouped in a sphere about an empty center. Which makes no sense on any level.



R. Sungenis: Once again, Mr. Wright distorts and obfuscates. He can't even spell Stephen Hawking's name correctly, much less reiterate what I said in my lecture. I never said anything about a "fourth dimensional expansion" or anything about an "empty center." I said exactly what Hawking says. Let me show you from Hawking's own book, *A Brief History of Time*:

At that time most people expected the galaxies to be moving around quite randomly, and so expected to find as many blue-shifted spectra as red-shifted ones. It was quite a surprise, therefore, to find that most galaxies appeared red-shifted...⁶⁸

"Now at first sight, all this evidence that the universe looks the same whichever direction we look might seem to suggest there is something special about our place in the universe. In particular, it might seem

⁶⁸ *A Brief History of Time*, Stephen Hawking, p. 39.

that if we observe all other galaxies to be moving away from us, then we must be at the center of the universe.”⁶⁹

“There is, however, an alternate explanation [to a central Earth]: the universe might look the same in every direction as seen from any other galaxy, too. This, as we have seen, was Friedmann’s second assumption. We have no scientific evidence for, or against, this assumption.

We believe it only on grounds of modesty: it would be most remarkable if the universe looked the same in every direction around us, but not around other points in the universe.”⁷⁰

As we see in paragraphs 1, 2 and 4, Hawking candidly admits that the redshift evidence points to an Earth in the center of the universe but he chooses to reject it because it would make mankind too proud! In place of it, Hawking chooses Friedmann’s interpretation of redshift, which is the “balloon” universe without a center. In this way, all the galaxies could be put on the surface of the balloon, and if the balloon gets bigger and bigger the galaxies on it will expand farther and farther apart creating a redshift between them. Of course, there is no proof for this “balloon” universe and Hawking admits he has no scientific proof against the alternative wherein the Earth is in the center of the universe and thus the center of the redshift dispersion. Leave it to Mr. Wright to obfuscate this issue and make it seem like “Hawkins” was denying that the Earth could be in the center.

Wright: In the whole lecture, and I counted carefully, there was one and precisely one thing he said that was scientifically accurate: the three degree background radiation, thought to be the echoes of the Big Bang explosion, are not homogeneous and symmetrical. But then he fell on his face again by saying this disproved the Big Bang. It merely suggests the Big Bang was not symmetrical, which the fact that matter arose after the universe was no longer opaque after its period of initial expansion, to alert students, already suggests.

R. Sungenis: Mr. Wright obviously doesn’t understand Big Bang mathematics. Unless someone packed the so-called “singularity” so that the explosion would be uneven and pop out unevenly like a well-designed Fourth of July firework, the Big Bang not only requires homogeneity, it needs homogeneity and isotropy in order to explain the randomness it purports to live by. The explosion cannot favor one part of the universe over the other. It must explode evenly throughout the universe. If not, then there are some sections of the universe that are favored or a more likely to gain matter and energy than others, but that speaks of a universe that comes about by design, not by chance. Moreover, homogeneity would not show a center, for if there is a favored location in the universe it suggests there is a center somewhere. But since science has found that the universe is not homogeneous or isotropic but inhomogeneous and anisotropic, it implies a favored placement of what is contained in the universe. This model has been proven by three probes in the last 20 years, COBE in 1990, WMAP in 2001, and Planck in 2013.

In fact, these three probes found that the inhomogeneity and anisotropy is oriented around our Earth’s equator and the Sun-Earth ecliptic, which means there is a 23.5 degree margin into which the microwave energy distributes itself.

But don’t take my word for it. Let’s go right to the man who discovered the Axis of Evil (what mainstream science calls the “CMB orientation around the Earth”), Joao Magueijo:

⁶⁹ *A Brief History of Time*, 1988, p. 42.

⁷⁰ *A Brief History of Time*, 1988, p. 42.

Yet there is more evidence that there could be something wrong with the standard model of cosmology. And it is evidence that many cosmologists are finding harder to dismiss because it comes from the jewel in the crown of cosmology instruments, the Wilkinson Microwave Anisotropy Probe. “It could be telling us something fundamental about our universe, maybe even that the simplest big bang model is wrong,” says João Magueijo of Imperial College London. Since its launch in 2001, WMAP has been quietly taking the temperature of the universe from its vantage point 1.5 million kilometres out in space. The probe measures the way the temperature of the cosmic microwave background varies across the sky.

...because the cosmic background radiation is a feature of the universe as a whole rather than any single object in it, none of the hot or cold regions should be aligned with structures in our corner of the cosmos. Yet this is exactly what some researchers are claiming from the WMAP results.

Earlier this year, Magueijo and his Imperial College colleague Kate Land reported that they had found a bizarre alignment in the cosmic microwave background. At first glance, the pattern of hot and cold spots appeared random, as expected. But when they looked more closely, they found something unexpected. It is as if you were listening to an anarchic orchestra playing some random cacophony, and yet when you picked out the violins, trombones and clarinets separately, you discovered that they are playing the same tune.

Like an orchestral movement, the WMAP results can be analysed as a blend of patterns of different spatial frequencies. When Magueijo and Land looked at the hot and cold spots this way, they noticed a striking similarity between the individual patterns. Rather than being spattered randomly across the sky, the spots in each pattern seemed to line up along the same direction. With a good eye for a newspaper headline, Magueijo dubbed this alignment the axis of evil. “If it is true, this is an astonishing discovery,” he says.

That’s because the result flies in the face of big bang theory, which rules out any such special or preferred direction. So could the weird effect be down to something more mundane, such as a problem with the WMAP satellite? Charles Bennett, who leads the WMAP mission at NASA’s Goddard Space Flight Center in Greenbelt, Maryland, discounts that possibility. “I have no reason to think that any anomaly is an artefact of the instrument,” he says.

“The big question is: what could have caused it,” asks Magueijo. One possibility, he says, is that the universe is shaped like a slab, with space extending to infinity in two dimensions but spanning only about 20 billion light years in the third dimension. Or the universe might be shaped like a bagel.

Interestingly enough, Magueijo concludes by showing how a geocentric cosmology with a rotating universe is one viable solution to the WMAP evidence:

Another way to create a preferred direction would be *to have a rotating universe*, because this singles out the axis of rotation as different from all other directions.⁷¹

Earlier in the article, Chown shows additional implications for WMAP’s discoveries against the Big Bang.

What if the big bang never happened?...“Look at the facts,” says Riccardo Scarpa of the European Southern Observatory in Santiago, Chile. “The basic big bang model fails to predict what we observe in the universe in three major ways.” The temperature of today’s universe, the expansion of the cosmos, and even the presence of galaxies, have all had cosmologists scrambling for fixes. “Every time the basic big bang model has failed to predict what we see, the solution has been to bolt on something new - inflation, dark matter and dark energy,” Scarpa says...

⁷¹ “Did the big bang really happen,” M. Chown, *New Scientist*, July 2, 2005, p. 30.

“This isn’t science,” says Eric Lerner who is president of Lawrenceville Plasma Physics in West Orange, New Jersey, and one of the conference organizers. “Big bang predictions are consistently wrong and are being fixed after the event.” So much so, that today’s “standard model” of cosmology has become an ugly mishmash comprising the basic big bang theory, inflation and a generous helping of dark matter and dark energy.

Chown adds Magueijo’s comment to this conclusion:

Clearly, such a universe would flout a fundamental assumption of all big bang models: that the universe is the same in all places and in all directions. “People made these assumptions because, without them, it was impossible to simplify Einstein's equations enough to solve them for the universe,” says Magueijo. And if those assumptions are wrong, it could be curtains for the standard model of cosmology. That may not be a bad thing, according to Magueijo. “The standard model is ugly and embarrassing,” he says. “I hope it will soon come to breaking point.” But whatever replaced it would of course have to predict all the things the standard model predicts. “This would be very hard indeed,” concedes Magueijo.⁷²

Wright: He makes much ado of the fact that the non-homogeneous temperature spikes in the microwave background radiation fall along our plane of the ecliptic, that is, the plane in which all the planets but Pluto move. Looking on the Internet for exactly one second, I see a theory saying this reading could be caused by non homogeneous temperatures in the Oort (sic) Cloud, which is the possible source of the protoplanetary disk from which the planets arise. I have no idea which theory is correct, or if some additional theory will arise with even more startling results, but I will say that even reading the evidence in the light most favorable to the con man, having the background radiation show distortions in the plane of the ecliptic does not mean that Earth, rather than Jupiter, is the center of the cosmos.

R. Sungeis: Again, we see that Mr. Wright will grasp at any straw he can that will give him an excuse not to have a central Earth as the solution to the data, even when the data strongly suggests that this is the correct solution. It wouldn’t be so bad if Mr. Wright would just admit of the possibility of an Earth-centered CMB, but his prejudiced mind simply will not allow him to give even an inch.

The Oort Cloud is nothing but a theoretical entity that has never been proven to exist, yet not only does Mr. Wright depend on this to allow him an escape from the Earth-oriented solution to the CMB, he doesn’t explain how the Oort Cloud could control all the microwave energy in the universe and make it align with the Earth’s equator and ecliptic. The Oort Cloud, even in its theoretical existence, is a local phenomenon, not a universal one, but the CMB (cosmic microwave radiation) extends to the entire universe (as even Big Bang proponents admit), and thus an Oort Cloud cannot determine what happens outside the solar system.

The reality is, no one worth his scientific salt would claim that the Oort Cloud causes the CMB orientations, and I’ve never come across one peer-reviewed scientist that makes such a claim. What we do know is that several leading cosmologists have gone on record saying that the CMB puts the Earth in a privileged position in the universe since it is the hub for how the CMB distributes itself across the universe. I only need give a few examples:

But when you look at CMB map, you also see that the structure that is observed, is in fact, in a weird way, correlated with the plane of the earth around the sun. Is this Copernicus coming back to haunt us?

⁷² *Ibid.*, pp. 1-3. Chown adds: “Last year they wrote an open letter warning that failure to fund research into big bang alternatives was suppressing free debate in the field of cosmology (*New Scientist*, 22 May 2004, p 20).”

That's crazy. We're looking out at the whole universe. There's no way there should be a correlation of structure with our motion of the earth around the sun — the plane of the earth around the sun — the ecliptic. That would say we are truly the center of the universe...The new results are either telling us that all of science is wrong and we're the center of the universe, or maybe the data is simply incorrect, or maybe it's telling us there's something weird about the microwave background results and that maybe, maybe there's something wrong with our theories on the larger scales.⁷³

Developing the multipole vectors allowed us to examine how the CMB's large-scale features align with each other and the ecliptic – the plane of Earth's orbit around the sun....Not only are the quadrupole and octopole planar, but the planes are nearly perpendicular to the ecliptic....The likelihood of these alignments happening by chance is less than 0.1 percent....Why CMB patterns are oriented to the solar system is not at all understood at this time.⁷⁴

The discovery that the CMB is cosmically aligned to the Earth should make the hair on the back of your neck stand up. It points to the fact that the Earth is at a special place in the Universe and that God wants it to be known. In the source listed below, it is interesting to observe how the writers try to dance around this implication (the elephant in the room) without actually coming out and directly admitting the clear implication of these discoveries. We read for example, "The solar system seems to line up with the largest cosmic features. Is this mere coincidence or a sign post to deeper insight?" "Careful analysis have confirmed these alignments exist. But we don't know whether they are bizarre coincidences or if something more fundamental is at work." As similar "coincidences" from every field of science are piling to the sky for all to see, the only ones who will not see are those who refuse to see.⁷⁵

Wright: The sad thing is that even if I believed every word of his lecture, the looming fact is that he does not prove geocentrism true or even try to do so. Everything he says about Earth being the center of the universe could also be said of Jupiter, or, indeed, any point in space whatsoever.

R. Sungenis: No, that is not true. The only way Mr. Wright could prove such an assertion is if he did a Michelson-Morley experiment on Jupiter (the same way he purports that it has been done with respect to the Moon) and it found that Jupiter, indeed, gives the six-sixths of the fringe-shifting required for Jupiter to be going around the sun. If Jupiter is found to give six-sixths, then it would show that Jupiter cannot be the center and thus confirm that the Michelson experiment done on Earth in 1887 confirms that the Earth is the only motionless object in the universe. Until that is done, Mr. Wright cannot claim Jupiter could be the center of the universe. The only reason Mr. Wright makes such a claim is because General Relativity requires that, mathematically speaking, any point could serve as the center, but that is only because General Relativity, by its very nature, has no way of determining a center in a relative universe.

Wright: But I do not believe a single word. Every experiment or observation that he mentioned which I knew something about, I knew he was lying.

⁷³ "The Energy of Empty Space is not Zero. http://www.edge.org/3rd_culture/krauss06/krauss06.2_index.html

⁷⁴ *Ibid.*, p. 43. See also *Scientific American*, December 9, 2011 article titled "Universal Alignment: Could the Cosmos Have a Point" by Michael Moyer, which makes reference to Huterer's findings, stating: "The universe has no center and no edge, no special regions ticked in among the galaxies and light. No matter where you look, it's the same – or so physicists thought...hot and cold spots speckle the sky....Cosmologists have called it the 'axis of evil.'" Likewise, Federico Urban and Ariel Zhitnitsky state "Similarly, one can employ different vectorial and tensorial decompositions of the multipoles to see that there is a very easily identifiable preferred axis, the cosmological dipole once again; that is, the normal vectors to the planes determined by the quadrupole and the octupole (there are four of them) point all in the same direction, that of the ecliptic and equinox" "The *P*-Odd Universe," University of British Columbia, July 13, 2011, p. 2.

⁷⁵ Lawrence Vescera, Nov. 9, 2007, <http://www.idscience.org/2007/11/09/the-discovery-that-dare-not-speak-its-name/>

R. Sungenis: As we have seen throughout this discourse, Mr. Wright has not provided even one proof that I was lying or that my analysis was faulty. I confirmed my analysis by quoting from the very scientists who ran the experiments and from the scientific commentators of those experiments. They all admit that a geocentric universe is scientifically possible. But most choose not to side with a geocentric explanation out of prejudicial philosophical commitments, not because they have scientific proof against it.

Wright: His outrageous accusations of Galileo being in a conspiracy against the Church or Einstein being a virulent anti-Christian who falsified their results is a dishonorable insult that personally offends me.

R. Sungenis: This just shows us that Mr. Wright is formulating much of his attack based on the fact that he is “personally offended” at my findings. This is not unusual. Since most of the world has idolized both Galileo and Einstein, they are aghast that these two icons were not really the men they are purported to be. When I suggest that it was Galileo and Einstein who were the real “Harold Hills” of modern society, Mr. Wright is “personally offended.” But as is always the case, those who are offended are those who have not studied their lives or the bases for their scientific conclusions very thoroughly.

Wright: The man’s inability to grasp the standard model’s explanation of the Hubble expansion makes me feel embarrassed for him. Not even a school child would make that mistake, and many people have surely corrected him by now, but there is was in his lecture.

R. Sungenis: As I have shown above right from the mouth of Stephen Hawking, there was no mistake. But allow me to expand on that fact so there is no misunderstanding. Let’s hear it from Hubble himself. Here is an excerpt from my book, *Geocentrism* 101:

If, on the other hand, Hubble had proposed that redshifts were not caused by the galaxies receding from Earth but by their different but static linear distances from Earth, this would have forced him to conclude that the galaxies did not decrease in their population at large distances from Earth. For this reason, Hubble rejected the linear theory. What interests us most, however, is the motive for Hubble’s decision – the motive was to keep the Earth out of the center of the universe. As he puts it in his book on pages 50-51:

“Such a condition would imply that we occupy a unique position in the universe, analogous, in a sense, to the ancient conception of a central earth. The hypothesis cannot be disproved but it is unwelcome and would be accepted only as a last resort in order to save the phenomena. Therefore, we disregard this possibility and consider the alternative, namely, a distribution which thins out with distance....The unwelcome supposition of a favored location must be avoided at all costs.”⁷⁶

But choosing a universe wherein the galaxies thin out with distance did not solve Hubble’s problem. Whether the galaxies thinned out or not, if what surrounded the Earth in all directions were galaxies that all exhibited a redshift, this meant the Earth was in the center of the distribution. Otherwise, we would see as many galaxies blue-shifted as red-shifted. As Stephen Hawking put it in his popular book, *A Brief History of Time*:

“At that time most people expected the galaxies to be moving around quite randomly, and so expected to find as many blue-shifted spectra as red-shifted ones. It was quite a surprise, therefore, to find that most galaxies appeared red-shifted...”⁷⁷

⁷⁶ *The Observational Approach to Cosmology*, 1937, pp. 50, 51.

⁷⁷ *A Brief History of Time*, Stephen Hawking, p. 39.

If, as the statistics show, 99.99% of the galaxies are red-shifted from our observation point, Earth, it means the universe is geocentric. Ironically, it means that all the efforts of both Einstein and Hubble only confirmed the ancient worldview of a central and motionless Earth.

So, to keep Earth out of the center, Hubble had to come up with another explanation. The only way to do so, Hubble reasoned, was to eliminate a center altogether and put every galaxy, including the Milky Way in which the Earth resided, on the surface of a balloon-shaped universe that had no center. By analogy, if Hubble could make the universe into a balloon instead of a solid spherical ball, then the universe would have no center, only a surface. This could be accomplished, at least on paper, if they allowed themselves to dispense with Euclidean geometry and employ Riemann geometry, which deals in curves and two dimensions rather than straight lines and three dimensions.

In Hubble's new universe, the galaxies would be expanding away from each other as if they were dots on the surface of a balloon that was being inflated. Hubble explains how this universe would work and why he chose it on page 54 of his book:

"...all observers, regardless of their location, will see the same general picture of the universe...if we see the nebulae all receding from our position in space, then every other observer, no matter where he may be located, will see the nebulae all receding from his position. However, the assumption is adopted. There must be no favored location in the universe, no center, no boundary; all must see the universe alike. And, in order to ensure this situation, the cosmologist postulates spatial isotropy and spatial homogeneity, which is his way of stating that the universe must be pretty much alike everywhere and in all directions."⁷⁸

Today, we often hear cosmologists on popular television shows saying the universe is "isotropic and homogeneous." They do so because it is required of the universe they desire if they want at least some plausible answer for why we see 99.99% of the galaxies with a redshift. An entirely smooth universe (*i.e.*, isotropic and homogeneous) allows no distinguishable place, especially a center point that could be occupied by the Earth. Hubble says much the same on pages 58-59:

"Such a favored position, of course, is intolerable; moreover, it represents a discrepancy with the theory, because the theory postulates homogeneity. Therefore, in order to restore homogeneity, and to escape the horror of a unique position, the departures from uniformity, which are introduced by the recession factors, must be compensated by the second term representing effects of spatial curvature. There seems to be no other escape."⁷⁹

As Hubble admits that he must postulate recession factors and rely on spatial curvature in order keep Earth out of the center, he also admits that these *ad hoc* additions seem artificial and create serious problems, which we will address momentarily. On page 59 he writes:

"To the observer the procedure seems artificial....Now, in testing the relativistic theory, he introduces a new postulate, namely, recession of the nebulae, and it leads to discrepancies. Therefore, he adds still another postulate, namely, spatial curvature, in order to compensate the discrepancies introduced by the first. The accumulation of assumptions is uneconomical..."⁸⁰

Unfortunately, the philosophical biases of the men in Hubble and Hawking's generation do not allow them to accept a central and motionless Earth as the most obvious answer to the astounding telescopic data. The "Copernican" bias drove modern cosmology to its presently-accepted interpretation of Hubble's

⁷⁸ *The Observational Approach to Cosmology*, 1937, p. 54.

⁷⁹ *The Observational Approach to Cosmology*, 1937, pp. 58-59.

⁸⁰ *The Observational Approach to Cosmology*, 1937, p. 59.

data: instead of galaxies being organized around a common center as the evidence plainly showed, they insisted, rather, that the universe is merely a balloon-like surface wherein space is curved. The galaxies are said to lie on this curved surface and are spreading out from each other; and most important, Earth is in one of those moving galaxies, not in the center of the universe, for there is no center to a balloon universe.

As it was for Einstein in 1905 when he invented Special Relativity, any *ad hoc* solution other than an Earth in the center of the universe would be acceptable for modern man. The reason was plain. As Hubble put it in his book: “Such a favored position, of course, is intolerable.”

Essentially, spatial curvature and homogeneity are modern cosmology’s manufactured but necessary ingredients to maintain the Copernican Principle, the presuppositional belief that the Earth is not special and inhabits no special place in the universe. Spatial curvature removes the Earth from the center of a three-dimensional Euclidean universe and puts it on the surface of a two-dimensional hyperspace. As the balloon expands (an expansion that Hubble believed was occurring due to his observation of redshift in all the galaxies), all the objects on the balloon will stay equidistant from one another and no galaxy could be designated as the center. At the same time, modern cosmology would conveniently claim that the universe is “flat,” that is, Euclidean, since we observers are so small compared to the size of the universe that we wouldn’t notice its curvature and therefore it would appear flat to us.

As noted in his book, Hubble also wanted a homogeneous universe. This means that as one looks into the universe, everything will appear to be precisely the same, analogous to homogenized milk that has no cream on top and no lumps in the middle. This is otherwise known as the Cosmological Principle, which then leads to the conclusion that the universe has no distinguished place, and thus no center and no motionless celestial body to occupy a center. It would be the same as if one were in the desert and looked north, east, south and west and saw the same sand in each direction with no distinguishing features.

After Einstein and Hubble presented the foundation for cosmology, all subsequent theories had to be based on a homogeneous and spatially curved universe, otherwise it would necessarily be geocentric. As noted, the amount of curvature needed was calculated by using Einstein’s famous tensor equation, $G = 8\pi T$ and $G - \lambda = 8\pi T$.

Wright: His intelligence-insulting notions of Biblical literalism

R. Sungenis: Yet Mr. Wright claims to be a Catholic. Unfortunately, he is one of the common “cafeteria Catholics” that make up much of the modern Catholic Church. As noted earlier, Mr. Wright doesn’t have a clue to his Catholic patrimony, a patrimony that accepted the literal interpretation of the Bible as the mainstay of exegesis, and the very reason that the Catholic Church adopted the belief in such things as transubstantiation, baptismal regeneration, auricular confession, no divorce and remarriage, etc. She insisted on interpreting the Bible as literally as possible, unless it was not possible to do so. Similar to the fact that he was “personally offended” when I exposed the sordid lives and theories of Galileo and Einstein, Mr. Wright betrays his motivations when he regards biblical literalism as “intelligence-insulting.” It may be the case that Mr. Wright doesn’t even believe the Bible, which is not uncommon for some Catholics today.

Wright: ...and daffy ideas as to what makes atheists skeptical about claims of God merely add the luster of heresy and blasphemy to his shameless dishonesty, freaking science-hating paranoia, and embarrassing stupidity.

R. Sungenis: As we have seen, the only one who has shown “shameless dishonesty, freaking science-hating paranoia” is John C. Wright. Out of the numerous ludicrous examples I could pick out of his paper, anyone who would dismiss the voluminous testimony from modern scientists that the CMB is oriented around the Earth’s equator and the ecliptic in favor of a theoretical Oort Cloud is one who “hates” the scientific evidence that is not in his favor, and is “paranoid” that an interpretation not in line with his preconceived ideas could possibly be true. Such “stupidity” among Catholics is truly “embarrassing.”

Wright: If anyone reading these words gave this man the benefit of the doubt or were impressed by the audacity of his claims, you should please be more wary in the future, and learn something about the basis of how science forms theory. It disturbs me that many an educated man with whom I speak, including at least one real scientist, seems not to know this basic information.

R. Sungenis: We’ve already seen Mr. Wright’s version of “how science forms theory” when he gave credence to the *ad hoc* “length contraction” theory as the best answer to Michelson’s experiment. For Mr. Wright, any *ad hoc* theory that could offer an excuse for not accepting the fact that Michelson’s experiment showed the Earth to be motionless in space will suffice. For Mr. Wright, the Earth is moving around the sun and there is nothing you can say to him that will deter him from that position, since he has chosen it as his fundamental truth around which all the data must be interpreted. Even when you give him credible evidence to the contrary, he will stamp his feet and declare you are “shameless dishonesty, freaking science-hating paranoia, and embarrassing stupidity.”

Wright: Go audit a high school physics course. Read the Almagest of Ptolemy, the Principia of Newton, and Einstein’s papers. I have, and I am no genius.

R. Sungenis: If you read them, don’t read them with the bias and prejudice of Mr. Wright. If Mr. Wright had read them carefully, he would at least have accepted the fact that both Newton and Einstein gave scientific viability to a geocentric universe. But Mr. Wright doesn’t like those parts of Newton and Einstein’s testimony. And since he doesn’t like them, then he can’t be trusted with the evidence from them.

Wright: Or just think about why there is a bulge at the equator of the Earth and a larger such bulge at the equator of Jupiter. If the Earth is motionless, there is no inertia pulling the faster moving matter at the equator farther from the center than matter at the poles.

R. Sungenis: Once again, the scientific testimony, as I have quoted earlier, refutes Mr. Wright’s conclusion. All modern scientists worth their salt admit that a rotating space around a fixed Earth will produce the needed centrifugal force for the Earth’s bulge and the Coriolis force at its poles. That Mr. Wright doesn’t know this (or is pretending not to know it) just shows his incompetence.

Wright: And if stellar gravity or Mach’s principle, and not inertia, explains the bulge of the Earth, how does it explain the bulge of Jupiter and Uranus, whose equators do not lie in the same plane as the equator of the Earth?

R. Sungenis: Again, Mr. Wright shows his incompetence, since the rotations of Jupiter and Uranus will cause a centrifugal expansion at their equators no matter how they are aligned; while the Earth’s is formed by the diurnal rotation of the space around it.

Wright: If Professor Harold Hill had just promoted his crackpot theory without besmirching the names of those who proved opposite theories, I would have retained for him that respect one always give a foe who, equipped with with nothing but a beanshooter and one little bean, faces armies, but who nonetheless stands his ground. He forfeits that respect by stooping to lies and slanders.

R. Sungenis: Again we see that a personal animus against me is the source for much of Mr. Wright's "critique." I understand. It's not easy to accept it when those who you considered icons of society are suddenly exposed for their not so iconic lives.

Wright: I wish the Inquisition were back. Some men deserve flogging for bringing disrepute upon the name of Christ.

R. Sungenis: Perhaps Mr. Wright forgets, but it was the Inquisition that condemned Galileo for his belief in heliocentrism, as well as his belief that the Bible should not be taken literally. This is just another example of the cognitive dissonance among modern Catholics.

Wright: My reader paid the wager immediately and without complaint, for which I thank him.

R. Sungenis: Since the wager was made on whether the lecture could persuade a close-minded man such as John C. Wright, it was a bogus wager.

My suggestion to the one making the wager is to go back and demand that Mr. Wright prove his case by empirical science. Demand that he prove, scientifically, that the Earth is moving, whether revolving or rotating. In my 15 years, no one has been able to do so. Like Mr. Wright, they *think* they know the science, but when all is said and done, they invariably find out they don't. But the main difference between John C. Wright and most of my other opponents is that they at least act like gentlemen in their disagreement.

Appendix 1

Albert Einstein

Everything's Relative: Including Morality

Albert Einstein's biography is one of the more lurid in the annals of science, but most of it has been hidden from the public for many years. Although *Time* magazine named him "Person of the Century,"⁸¹ as a matter of fact, few in modern history have been so thoroughly shrouded in impenetrable media insulation as Einstein. The decease of the executors of his estate, Helen Dukas (d. 1982) and Otto Nathan (d. 1987) precipitated the release of many of Einstein's previously censored personal papers.⁸² In them we

⁸¹ Stephen Hawking, "Person of the Century," *Time Magazine*, December 31, 1999. *Time* lavished praise on Einstein with such phrases as: "first among the century's giants," "its greatest scientific genius," "the person who, for better or worse, personified our times and will be recorded in history as having the most lasting significance," "the world's first scientific celebrity," "the century's greatest thinker," and "the patron saint of distracted schoolkids." Such unqualified admiration for Einstein is quite sacrosanct in the scientific field. In the book *Einstein's Unfinished Symphony* by Marcia Bartusiak (New York, Berkley Books, 2000, p. 4), MIT scientist Rainer Weiss, working on the federally funded LIGO system to test for gravity waves to confirm General Relativity, is quoted as saying: "The worship of Einstein, it's the only reason we're here, if you want to know the truth." Incidentally, Bartusiak's book is titled "Unfinished Symphony" because, of all the LIGO systems built across the world, no one has ever detected General Relativity's "gravitational wave" (*ibid.*, p. 10).

⁸² Helen Dukas had motivation to do so, since she met Einstein in 1928 when Einstein's second marriage [to his cousin Elsa Löwenthal] was rapidly deteriorating, of which Elsa "sought as far as possible to block the subject of infidelity from her mind"

find that, close behind the wire-haired, absent-minded and winsome Dr. Jekyll, there lurked a veritable Mr. Hyde.

Einstein's misdeeds began early in his career. He fathered a daughter out of wedlock with Mileva Marić, although the couple eventually married. They named the child Lieserl, but that is all the attention she would ever receive from Einstein. He persuaded Mileva to give the child to an orphanage so that he could avoid the social repercussions of having an illegitimate daughter. He handled it as a mere business transaction, for he never saw Lieserl face-to-face. As biographer Michele Zackheim explains it:

Einstein scholars have concluded from his September 19 [1903] letter that the couple had decided to put Lieserl up for adoption, based on Albert's concern that the child's registration (or lack thereof) not be a source of trouble for her – or her parents – in the years to come....Apparently, in the end, Albert and Mileva agreed it would be best to pretend that Lieserl had never existed. And so, with a deliberate hand, the short life of Lieserl Einstein-Marić was erased.⁸³

That such callousness wasn't merely an incidental quirk is demonstrated when Einstein later forsook his son Eduard and consigned him to a sanatorium so that he could be relieved of the financial responsibility of Eduard's care and take full advantage of the public funding available. Eduard eventually died in the sanatorium.⁸⁴

Einstein's indifference to his children, however, was overshadowed by the animosity he showed to his wife. According to the divorce papers, Mileva was the victim of physical violence in the marriage, and Einstein's adultery was the final straw that led to the legal separation in 1914 and final divorce in 1919.⁸⁵ As the marriage to Mileva began to deteriorate,

(*The Private Lives of Albert Einstein*, p. 210). Zackheim adds: "Hans Albert suspected they were lovers. His allegation was fortified by the proximity of her room in Princeton – just off Albert's study and down the hall from Elsa's. In addition, Einstein left Dukas more money in his will than any other member of his blood family, as well the net income from his royalties and copyright fees and all his books and personal effects" (*Einstein's Daughter: The Search for Lieserl*, p. 253). Highfield and Carter add: "Dukas became fiercely loyal to her employer: she was liable to attack as 'dung' any biography that dared shed light on Einstein's personal life, and she saw newsmen as her 'natural enemies'" (*The Private Lives of Albert Einstein*, p. 211).

⁸³ *Einstein's Daughter: The Search for Lieserl*, pp. 52-53. Zackheim also concludes from her massive evidence that Lieserl had a severe mental handicap, which helped seal the Einsteins' decision, and that she died at twenty-one months old, on September 21, 1903. Mileva's father was given the task of making sure that no official records concerning her short life remained in any governmental or church repositories (*ibid.*, pp. 276-277). Highfield and Carter describe the situation: "There is no evidence that Einstein and his daughter ever set eyes on one another. For all his apparent enthusiasm after the birth, it seems that his main concern was to free himself of this burden at the earliest opportunity. Lieserl's existence was kept hidden even from his closest friends, and within months she had disappeared from his life without trace. Einstein was never to talk of her publicly, and Lieserl might have been erased from history had it not been for the discovery of his letters to Mileva by the Einstein papers project....The dangers that seemed to preoccupy him were unconnected to the child's illness: his question about registration strongly suggests that she was being surrendered for adoption, and that Einstein was eager to cover his tracks. The lack of any official record of the birth would appear to be a tribute to the thoroughness of the precautions that he referred to. Lieserl's birth posed a threat to Einstein's new start as a patent examiner in Berne. He had gained Swiss citizenship only a year earlier, and the stigma of an illegitimate child would have harmed his prospects...The couple's meager income may have provided another motive for giving the child away..." (*The Private Lives of Albert Einstein*, pp. 88-90).

⁸⁴ Mileva wrote to Albert: "You have here a dear, seriously ill child. Often he asks if his father will come, and with each postponement, he becomes even more morose. He is terribly wounded.' Albert refused to come back to Zurich to see Eduard. And he refused to acknowledge the financial and psychological battles that Mileva had to wage over his care" (*Einstein's Daughter*, p. 190).

⁸⁵ Zackheim writes: "He tended to have a few romances going at once, but after Mileva, he was known to prefer simpler women" (*Einstein's Daughter*, p. 227). Highfield and Carter write: "Einstein was obliged to admit in his legal submissions that he had committed adultery. There were also references to fierce fights between him and his wife, which had made their continued marriage intolerable" (*The Private Lives of Albert Einstein*, p. 188). Zackheim gives the wording of the deposition from Einstein's own hand: "...It is true that I have committed adultery. I have been living for approximately four and one-half years with my cousin, the widow Elsa Löwenthal, and since then I have had intimate relations with her. My wife, the plaintiff, has been informed that I have had intimate relations with my cousin since the summer of 1914" (*Einstein's Daughter*, p. 87). In a related

“Einstein established himself in a bachelor apartment around the corner from Elsa,” his cousin and next love interest, whom he eventually married in 1919, only four months after his divorce.⁸⁶ In one of his more audacious moves, Einstein had actually pleaded with Mileva to allow him to marry Elsa, using as his excuse that Elsa’s daughter “...had to suffer from rumors that have been circulating regarding my relationship with her mother. That weighs upon me and needs to be remedied through a formal marriage.”⁸⁷ If this had been the real motive for Einstein’s pleading, we might be tempted to conclude that he was merely a deranged individual who had lost touch with reality. The real truth is even more sinister and shocking. The thirty-nine-year-old Einstein was actually in a debate with himself whether he should marry Elsa or her twenty-year-old daughter, Ilse, while all along he had been shacking up with Elsa (for the four years prior), and while still married to Mileva. As Zackheim explains:

Albert was not being honest [with Mileva]. By May [1918], he had made it clear that he wanted to marry Elsa’s daughter Ilse. Ilse reported to a friend, Georg Nicolai: “Yesterday, suddenly the question was raised about whether A[lbert] wished to marry Mama or me...A[lbert] himself is refusing to take any decision, he is prepared to marry either Mama or me. I know that A[lbert] loves me very much, perhaps more than any other man ever will, he also told me so himself yesterday...”⁸⁸

In the waning months of his time with Mileva, records made public in 1996 show that Einstein gave her a list of conditions in order for her to remain under his financial care:

- You will see to it: (1) that my clothes and linen are kept in order; (2) that I am served three regular meals a day in my room; (3) that my bedroom and study are always kept in good order and that my desk is not touched by anyone other than me.
- You will renounce all personal relationships with me, except when these are required to keep up social appearances. In particular, you will not request: (1) that I sit with you at home; (2) that I go out with you or travel with you.

incident, the biographers add: “The following day Lisbeth and her mother visited Mileva and found her face badly swollen. It seems that Lisbeth may have been suggesting that Mileva had been beaten. Einstein was a powerful man and, for what it is worth, Hans Albert recalled that when he misbehaved his father ‘beat me up’. It is known that Einstein’s divorce papers – which remain under seal in Jerusalem – refer to violence within the marriage” (*The Private Lives of Albert Einstein*, pp. 153-154; See also *Einstein’s Daughter*, p. 73). After Mileva suspected an affair between Albert and Anna Meyer-Schmid, Albert complained that this “was typical in a woman of such ‘uncommon ugliness,’” adding, “Professor John Stachel says this remark was the first to shock him as he worked through Einstein’s papers after his appointment as their editor” (*Private Lives*, pp. 125-126). Mileva describes herself as “starved for love” as early as 1900 (*ibid.*, p. 128). See also *In Albert’s Shadow: The Life and Letters of Mileva Marić*, pp. 16-17.

⁸⁶ *The Private Lives of Albert Einstein*, p. 172. Yet, Highfield and Carter add: “But there is no evidence that Mileva believed her husband was about to be stolen from her, battered though their marriage was. Einstein...had no plans to leave her. Instead he intended to pursue his affair while remaining her husband. ... He remarked to Elsa ‘But the order is always to pretend. Only when we are born and when we die are we permitted to act in an honest way’” (*The Private Lives of Albert Einstein*, pp. 163-164); “Mileva would remain a virtual invalid for three years after Albert’s decision to end the marriage...” (*In Albert’s Shadow*, p. 19). Prior to his involvement with Elsa, Einstein had a short fling with Paula Einstein, Elsa’s sister, but soon ended the relationship. He then wondered why he had become involved with her, settling for the rationale that “she was young, a girl, and complaisant. That was enough” (*Einstein’s Daughter*, p. 72).

⁸⁷ *Einstein’s Daughter*, p. 85.

⁸⁸ *Einstein’s Daughter*, pp. 85-86. Zackheim adds: “At the top of the letter, Ilse had written, ‘Please destroy this letter immediately after reading it!’” Shortly after Ilse wrote this letter, Albert wrote to Mileva and told her that he had changed his mind about coming to see the boys in the summer. Instead, he had decided to go to Ahrenshoop, a remote village on the Baltic Sea, with Elsa, Ilse, and Ilse’s younger sister, Margot” (*ibid.*, p. 86). Sixteen years later when Ilse lay dying of cancer in Paris at age 34, Elsa asked Albert to go to her bedside but he refused (*A World Without Time: The Forgotten Legacy of Gödel and Einstein*, p. 148).

- You will promise explicitly to observe the following point in any contact with me: (1) You will expect no affection from me and you will not reproach me for this; (2) You must answer me at once when I speak to you; (3) You must leave my bedroom or study at once without protesting when I ask you to go; (4) You will promise not to denigrate me in the eyes of the children, either by word or deed.⁸⁹

Mileva was apparently no fool. A few months after receiving the above letter she moved to Zurich with her children and never returned to Einstein.

Things fared no better for Elsa, the eventual winner of the ‘Elsa versus Ilse’ contest. Einstein persuaded Elsa to divorce her husband, Max Löwenthal, so that the two lovers could marry. But this marriage shortly began to deteriorate due to Einstein’s sexual affairs. According to one biographer, “she told him he could have a woman on the side, but only one at a time,”⁹⁰ and to her dismay, Einstein’s adultery was, indeed, serial.⁹¹ As he had with Mileva, Einstein recast their relationship as one of mere convenience. She died in 1936, nineteen years before Einstein.

It is amazing to read what other scientists say about this part of Einstein’s life. We encounter nothing short of a willful moral blindness to his immoral exploits. For example, Ludwik Kostro, concealing any unethical behavior on the part of Einstein, writes:

His wife and two sons left him soon after that, moving back to Zürich, and it was a shock to him. After she left him, he rented a bachelor flat at 13 Wittelsbach-erstrasse.⁹²

Yet perhaps the reason Kostro writes such a biased description is that he is merely citing one of the chief biographies of Einstein, which is itself a systematic and deliberate attempt to conceal Einstein’s improprieties. The book is *Subtle is the Lord* written by Abraham Pais.⁹³ The mere title implies that Pais set out to idolize Einstein and make it appear as if his theories were divinely endorsed, if not inspired. Although Roger Penrose is honest enough in the Foreword to admit that: “Einstein was certainly no saint,”⁹⁴ his penetration stops there, and following him, Pais fails to mention even one incident of Einstein’s unethical or immoral behavior in his entire 552 page treatise. Whenever accusations of plagiarism surface against Einstein, Pais invariably makes it appear as if Einstein miraculously and coincidentally came to the same discovery by his own independent study. Whenever Einstein is guilty of abandoning his family, Pais invariably makes it appear as if Einstein is a dedicated father who is misunderstood. Whenever Einstein is guilty of adultery, Pais glosses over it and divulges no such improprieties. Instead he makes Einstein’s wives appear as if they are neurotic, referring to Mileva as a

⁸⁹ *London Daily Telegraph*, October 30, 1996; *Einstein’s Daughter*, p. 77. In one of his love letters to Elsa, Einstein wrote: “I treat my wife as an employee whom I cannot fire. I have my own bedroom and avoid being alone with her” (*Einstein’s Daughter*, p. 73).

⁹⁰ From biographer Michael Shara, *Discover*, Sept. 2004, pp. 29-30. Highfield and Carter write: “It has to be said that Elsa was not the only one of Einstein’s female relatives to catch his eye. It appears that, either during this trip or some time earlier, he had also flirted with her younger sister, Paula” (*The Private Lives of Albert Einstein*, p. 148).

⁹¹ Highfield and Carter note: “Einstein joked that he preferred ‘silent vice to ostentatious virtue,’ but there was little that was furtive about his affairs. Either they were conducted in open view, or easy clues were left for Elsa to discover. Another incident...gives the impression that Einstein was eager for his wife to know what he was up to...” (*The Private Lives of Albert Einstein*, p. 209).

⁹² *Einstein and the Ether*, Aperion, 2000, p. 57.

⁹³ Abraham Pais, *Subtle is the Lord: The Science and Life of Albert Einstein*, 1982, 2005. Kostro cites pp. 224, 240.

⁹⁴ *Ibid.*, p. ix.

“difficult woman, distrustful of other people and given to spells of melancholy,”⁹⁵ but never making so much as a suggestion that she might have fallen into such mistrust and depression because her husband was committing heinous sins against her and the family. Pais is not alone in his exoneration of Einstein. Gerald Holton, the Harvard physicist and scientific historian excuses Einstein’s behavior as a mere product of his times. He writes:

You have to keep in mind that in Europe at the time, for a pursued charismatic man, his behavior wasn’t so unusual. Moreover, the letters show that it was generally he who asked to end such [adulterous] relationships.⁹⁶

In addition to his sexual escapades, Einstein was suspected of plagiarism, as well as failing to give scientific credit to Mileva who helped him develop his Relativity theories.⁹⁷ As we noted in Vol. 1, Appendix 2, one of the biggest myths surrounding the aura of Einstein is that he was the inventor of the famous $E=mc^2$ formula. In actuality, there were at least a dozen scientists who had either developed or employed the formula prior to Einstein.

Other instances of Einstein’s outright plagiarism abound. Although Abraham Pais does his best either to minimize or to make these incidents coincidental, the facts speak for themselves.⁹⁸ One of the more notable instances occurs in September 1924. At a meeting of famous physicists Einstein proposed that the community investigate interference and diffraction phenomena with molecular beams. Louis de Broglie, however, had already been working on the idea for quite a while and eventually published a paper on it in November 1924. As it turns out, de Broglie had sent a copy of the unpublished manuscript to Paul Langevin some months earlier, and Langevin had passed it to Einstein, whereupon Pais records Einstein’s reaction that de Broglie’s ideas “seemed quite interesting to him.”⁹⁹ Obviously, Einstein obtained the notion of searching for “interference and diffraction phenomena with molecular beams” from de Broglie’s unpublished paper, but he failed to mention de Broglie’s work to the September 1924 audience of physicists, thus leaving the impression that this was all his idea. De Broglie himself says: “I am certain that Einstein knew of my Thèse since the spring of 1924.”¹⁰⁰ In the face of all this weighty circumstantial evidence, Pais, as he is prone to do in his biography, glosses over them and concludes:

⁹⁵ *Ibid.*, p. 301. Pais complete description of these events is limited to pages 300-301. The reader would simply have no inkling to Einstein’s malice upon reading Pais’ biography.

⁹⁶ “Einstein’s Theory of Fidelity,” *Discover*, October 2006, p. 48. The last of Einstein’s love letters were released in the summer of 2006 which, at the request of his stepdaughter, Margot, was to be initiated twenty years after her death.

⁹⁷ Highfield and Carter note: “As he grew older, Einstein had begun to express some very bitter feelings towards the opposite sex” (*The Private Lives of Albert Einstein*, p. 209). On the accusations of plagiarism, see C. J. Bjerknes, *Albert Einstein: The Incurable Plagiarist*, 2002; R. Carroll, “Einstein’s $E = mc^2$ ‘was Italian’s idea,” *The Guardian*, Nov. 11, 1999; G. H. Keswani, “Origin and Concept of Relativity,” *British Journal of the Philosophical Society*, 15:286-306, 1965; Richard Moody, Jr., “Plagiarism Personified,” *Mensa Bulletin*, 442, Feb.: 5, 2001; *The Private Lives of Albert Einstein*, pp. 108-109.

⁹⁸ Abraham Pais, *Subtle is the Lord: The Science and the Life of Albert Einstein*, 1982, 2005. Pais claims Einstein’s ignorance in many instances: “In 1905, at that time [he was] aware only of Lorentz’s writing up to 1895” (*ibid.*, p. 21); “...in the period of 1902-04...his knowledge of the writings of Ludwig Boltzmann was fragmentary and he was not at all aware of the treatise by Josiah Willard Gibbs” (*ibid.*, p. 55); “In 1905, Einstein was blissfully unaware of the detailed history of Brownian motion. At that time, he knew neither Poincaré’s work on relativity...” (*ibid.*, p. 94); “By a quite remarkable coincidence, Eq. 5.12 was discovered in Australia at practically the same time Einstein did his thesis work. In March 1905 William Sutherland submitted a paper that contained the identical result...” (*ibid.*, p. 92); and claims that Einstein knew nothing of the work of David Hilbert: “Five days earlier, David Hilbert had submitted a paper...which contained the identical equation but with one qualification. Einstein, having learned the hard way from his mistakes a few weeks earlier...” (*ibid.*, p. 257), yet in all these cases Einstein’s work contains other men’s ideas and equations.

⁹⁹ *Subtle is the Lord*, p. 438.

¹⁰⁰ Letter to Abraham Pais from Louis de Broglie, September 26, 1978, cited in *Subtle is the Lord*, p.438.

“Thus, Einstein was not only one of the three fathers of the quantum theory, but also the sole godfather of wave mechanics.”¹⁰¹

Physically speaking, the youthful Einstein was the epitome of strength, vigor, and good looks. But as the years wore on, Einstein became grossly unhygienic, refusing to brush his teeth or even change his clothes. The image of the unkempt, wire-haired professor is not the prop of a Hollywood producer but the symptoms of a man who was losing his grip on life.¹⁰² Eventually, the promiscuous lifestyle of his earlier years may have finally caught up with him. Einstein’s personal doctor, János Plesch, who knew him quite well, concluded that he died of syphilis, demonstrating from the results of the autopsy that the abdominal aneurysm that took his life is always associated with the tertiary stage of syphilis, which can be 25 years or longer from time of onset. Historians Highfield and Carter write that, in an April 18, 1955 letter to his son Peter, Plesch, remarking on Einstein’s sexual escapades, stated:

“Why shouldn’t a healthy and beautiful man have had bad luck in his youthful daredevil days and contracted a lues [syphilis]?” Plesch insisted that Einstein’s symptoms were entirely consistent with the disease, and boasted that in all his years of medical practice he had never once been wrong in tracing an abdominal aneurysm to this cause.¹⁰³

Michele Zackheim’s research reveals the following:

He [Plesch] also insisted that Albert had syphilis, the ‘gentlemen’s disease.’ “In my long medical practice I have found, almost without exception, that abdominal aneurysms which Einstein suffered from are syphilitic in origin. It might, of course, be that Einstein was exceptional in that respect too and that his aneurysm was nonspecific. However, an earlier syphilitic infection is also indicated by the fact that he suffered from extensive secondary anemia attacks... I think the infection was acquired during the interval [between his marriages]... Even though many may shake their heads about this, I am adhering to my thesis.¹⁰⁴

¹⁰¹ *Subtle is the Lord*, p. 438.

¹⁰² *The Private Lives of Albert Einstein*, Robert Highfield and Paul Carter, 1993, pp. 59-217; *In Albert’s Shadow: The Life and Letters of Mileva Marić*, ed. Milan Popović, 2003, pp. 16-27; “Whose Relativity Was It, Anyway?” Patricia Nemo, *College of St. Thomas Magazine*, Spring 1990, pp. 22-25; “Sex-mad Father of Relativity left family out of equation,” *London Daily Telegraph*, Anthea Hall, July 25, 1993; “Relatively imperfect genius,” *Jewish Chronicle*, Monica Porter, August 8, 1993.

¹⁰³ *The Private Lives of Albert Einstein*, pp. 265-266. The biographers add: “It appears that the same thoughts may have been occupying Seelig, for the cause of the aneurysm was a point on which he had been pressing Nathan... One is tempted to wonder whether the possibility of syphilis had occurred to Nathan too. Dr. Harvey has stated that, medically speaking, Plesch ‘had justification for thinking along those lines,’ but added, ‘It is known that tertiary syphilis does cause aneurysms, but not in this location very often’” (*ibid.*, p. 266). Mileva’s letters reveal that in Albert’s reading of the book *Die Sexuelle Frage*, he had underlined the parts dealing with venereal disease. Zackheim notes: “this highlighted passage about venereal disease suggests that Mileva apparently worried about Albert’s sexual life outside their bedroom. Furthermore, Einstein historians believe that Albert frequented prostitutes before he married, and that Mileva may have been aware of it” (*Einstein’s Daughter*, p. 268). “...Janos Plesch, who described his friend [Einstein] as a man with a strong sex drive... ‘in the choice of sex partners he was not too discriminating,’ wrote Plesch... ‘Einstein loved women, and the commoner and sweatier and smellier they were, the better he liked them’” (*The Private Lives of Albert Einstein*, p. 206); “Einstein was also voicing deep misgivings about the institution of holy matrimony. He told Plesch that it must have been invented ‘by an unimaginative pig,’ and...it was ‘slavery in a cultural garment’” (*ibid.*, p. 210). Deborah Hayden’s article, titled “Syphilis in the Einstein Factory,” says that the interest level from other biographers regarding the possibility that Einstein contracted syphilis is practically nil. In order to protect Einstein, most have ignored or ridiculed the suggestion, yet Einstein’s numerous sexual affairs remain an open book. Some doctors claim that abdominal aneurysms are not all caused by syphilis although they admit that many cases are (from a 6-17-05 letter to me from Deborah Hayden on file, used with permission).

¹⁰⁴ *Einstein’s Daughter: The Search for Lieserl*, p. 255. Zackheim adds: “Dr. János Plesch had maintained that Albert contracted syphilis sometime between leaving Mileva and marrying Elsa. But Albert could have contracted the disease prior to 1910, when he began to exhibit active interest in other women. If Albert had contracted syphilis before Mileva became pregnant with Eduard, in November 1909, or even before Lieserl was born, in 1902, he might have passed the syphilis to Mileva, who could have been a

For the record, syphilis is purported to be the impetus for the genius, and often the eventual madness, of many notables in history (e.g., Beethoven, Capone, Dostoyevsky, Goya, H. Hughes, Hitler, Joyce, Lenin, Lincoln, Mozart, Napoleon, Nietzsche, Poe, Roosevelt, Toulouse-Lautrec, van Gogh, Wilde, *et al.*).¹⁰⁵ Whether or not this phenomenon had anything to do with Einstein's fantastic Relativity theories, we do not have enough evidence to make a firm conclusion, but the possibility certainly exists.

On the religious side of things, Mileva and her children converted to Catholicism in 1905, a fact little advertised by the secular press, then or now.¹⁰⁶ The year 1905, of course, was when his Relativity theory was introduced to the scientific community. Unmoved by his wife's religious life, Einstein wrote to his confidante Professor Hurwitz: "They've turned Catholic. Well, it's all the same to me."¹⁰⁷

Einstein was, for all intents and purposes, an atheist.¹⁰⁸ Any notions he had of God were of an entity completely impersonal and uninvolved with human affairs. In one letter he wrote: "The word God is for me nothing more than the expression and product of human weaknesses, the Bible a collection of honorable but still primitive legends which are nevertheless pretty childish."¹⁰⁹ His closest friends and colleagues, such as "the Austrian socialist Friedrich Adler or the members of the 'Olympia Academy' in Berne, Maurice Solovine, Conrad Habicht, and Michel Angelo Besso...For all of them, the ideologies of Marx and Mach replaced the religion of the Bible."¹¹⁰ His path toward allowing science to unseat Scripture and the Church as the ultimate authority for any intellectual endeavor that crossed its domain had begun very early in his life. After receiving instruction at Bavarian schools, which included teaching on the Catholic faith (and in particular the traditional six-day creation), "at the age of twelve...he suddenly became completely irreligious."¹¹¹ Einstein later reflected:

latent carrier. She, in turn, could have passed it to a baby *in utero*. The closer to conception that the mother is infected, the greater the risk of congenital syphilis in the fetus, which can result in a variety of birth defects from skin lesions to a failure to thrive to an enlarged liver and spleen to mental retardation. But with a mother who is a latent carrier, a healthy child can be born between two syphilitic children. Hans Albert, Mileva and Albert's only healthy offspring, was a middle child" (*ibid.*, p. 268). Despite his candidness about Einstein's syphilis, Plesch had written a much softer biography of Einstein, after having discussed its contents with Einstein. In remarking on the book, Plesch tells Einstein: "You can believe me that while I was writing these seven hundred pages, I was laughing a lot about how marvelously we are all trained to lie and how little human beings are allowed to state the truth. Our good Ibsen hit the nail on the head when he said, 'Take somebody's life lie away and you will take away his whole life.' The book is written with this compromise" (*ibid.*, p. 249). Unfortunately, the publisher destroyed the book.

¹⁰⁵ *Pox: Genius, Madness and the Mysteries of Syphilis*, Deborah Hayden, 2003, p. 306f.

¹⁰⁶ *Einstein: The Life and Times*, Ronald W. Clark, p. 139.

¹⁰⁷ *Einstein: Life and Times*, p. 139. When Einstein reached his heyday in the world, Cardinal O'Connell of Boston concluded that Relativity theory "cloaked the ghastly apparition of atheism" and "befogged speculation, producing universal doubt about God and His Creation" (*ibid.* p. 502).

¹⁰⁸ *The Private Lives of Albert Einstein*, p. 18. The authors write: "Einstein's views were atheistic in almost every important respect. He found it impossible to conceive of a personal deity, had no belief in an afterlife and considered morality an entirely man-made affair. His worship of cosmic harmony was genuine; his claims that this was the face of God were at best benign affectation." Highfield and Carter add that Einstein's pupil in Zurich, David Reichinstein, writes of a "Messiah-feeling" unfolding in Einstein's psyche, so much so that "his account contains dark hints that Einstein's arrogance bordered on hubris" (*ibid.*, p. 127). "Einstein was well aware that his harsh attitude disturbed people" (*ibid.*, p. 180). After quoting Einstein's statements: "I'm not an atheist, and I don't think I can call myself a pantheist....I am fascinated by Spinoza's pantheism....I believe in Spinoza's God who reveals himself in the orderly harmony of what exists, not in a God who concerns himself with fates and actions of human being," Max Jammer concludes that Einstein was a "practical atheist" because "there is no difference between there being no God to bother about man, and there being a God who does not concern himself with the fates and actions of human beings" (*Einstein and Religion*, pp. 48-50).

¹⁰⁹ Letter wrote in 1954 to the philosopher Eric Gutkind, which recently sold for \$404,000 at an auction in London (*New York Times*, May 17, 2008, Dennis Overbye). As for his own race, the Jews, Einstein wrote in the same letter: "As far as my experience goes they are also no better than other human groups, although they are protected from the worst cancers by a lack of power. Otherwise I cannot see anything 'chosen' about them."

¹¹⁰ Max Jammer, *Einstein and Religion*, p. 29. Jammer adds: "Some authors assign these ideological influences a crucial role in Einstein's intellectual development and regard them, in particular, as the driving force for his creation of the theory of relativity" (*ibid.*).

¹¹¹ Max Jammer, *Einstein and Religion*, p. 24.

Through the reading of popular scientific books I soon reached the conviction that much in the stories of the Bible could not be true. The consequence was a positively fanatic [orgy of] free thinking coupled with the impression that youth is intentionally being deceived by the state through lies; it was a crushing impression. Suspicion against every kind of authority grew out of this experience, a skeptical attitude towards the convictions which were alive in any specific social environment – an attitude which has never again left me...¹¹²

At another time he said: “It is quite possible that we can do greater things than Jesus, for what is written in the Bible about him is poetically embellished.”¹¹³ Obviously, Scripture’s insistence on an Earth-centered cosmos is one idea Einstein had long ago dismissed as a childish fantasy. This presupposition is noted in an address to Princeton Theological Seminary (a seminary which by this time had become very liberal in its theology, denying the inerrancy of Scripture and the literal interpretation of Genesis to make room for the theory of evolution) to which Einstein stated:

For example, a conflict arises when a religious community insists on the absolute truthfulness of all statements recorded in the Bible. This means an intervention on the part of religion into the sphere of science; this is where the struggle of the Church against the doctrines of Galileo and Darwin belongs.¹¹⁴

Einstein excused his immoral life as mere “stupidities” and blamed God for creating him:

I see only with deep regret that God punishes so many of his children for their numerous stupidities, for which he himself can be held responsible; in my opinion, only his nonexistence could excuse him.¹¹⁵

Yet Einstein would later modify his position:

In view of such harmony in the cosmos which I, with my limited human mind, am able to recognize, there are yet people who say there is no God. But what makes me really angry is that they quote me for support of such views.¹¹⁶

At times Einstein wrestled with the concept of God. In one of his later works he writes:

The idea of God in the religions taught at present is a sublimation of that old concept of the gods. Its anthropomorphic character is shown, for instance, by the fact that men appeal to the Divine Being in prayers and plead for the fulfillment of their wishes. Nobody, certainly, will deny that the idea of the experience of an omnipotent, just, and omnibeneficent personal God is able to accord man solace, help, and guidance; also, by virtue of its simplicity it is accessible to the most undeveloped mind. But, on the other hand, there are decisive weaknesses attached to this idea in itself, which have been painfully felt since the beginning of history. That is, if this being is omnipotent, then every occurrence, including every

¹¹² Max Jammer, *Einstein and Religion*, p. 25. Jammer adds: “An immediate consequence of this change of mind was the fact that Einstein refused to become bar mitzvahed...[which] even liberal Jews regard it as a precept that must be obeyed....As far as we know, Einstein never attended religious service and never prayed in a synagogue or at any other place of worship....Einstein’s last wish was not to be buried in the Jewish tradition, but to be cremated and his ashes scattered, indicating that he disregarded religious rituals until his death on 18 April 1955” (*ibid.*, pp. 25, 27).

¹¹³ Quoted in W. Hermanns, “A Talk with Einstein,” October 1943. Einstein archive 55-285. Cited in *The Expanded Quotable Einstein*, p. 215.

¹¹⁴ Albert Einstein, *Ideas and Opinions*, 1984, p. 45.

¹¹⁵ To Edgar Meyer, a Swiss colleague, January 2, 1915. CPAE, Vol. 8, Doc. 44, *The Expanded Quotable Einstein*, 2000, p. 201.

¹¹⁶ To a German anti-Nazi diplomat and author, Hubertus zu Löwenstein around 1941. Quoted in Löwenstein’s book *Towards the Further Shore*, London, 1968, p. 156. Cited in the *Expanded Quotable Einstein*, p. 214.

human action, every thought, and every human feeling and aspiration is also His work; how is it possible to think of holding men responsible for their deeds and thoughts before such an almighty Being? In giving out punishment and rewards He would to a certain extent be passing judgment on Himself. How can this be combined with the goodness and righteousness ascribed to Him. The main source of the present-day conflicts between the spheres of religion and of science lies in this concept of a personal God.¹¹⁷

This rationale for being an agnostic is ironic, in a way, since the complaint of not being able to combine God's omnipotence with man's free will comes from a man who had little problem combining the hitherto incompatible entities of space and time, energy and mass, inertia and gravity, and matter and antimatter. In fact, Einstein was known for trying to simplify things by combining them, as he sought, although in vain, for his Unified Field Theory. As Einstein himself admits about the methodology:

[Science] seeks to reduce the connections discovered to the smallest possible number of mutually independent conceptual elements. It is in this striving after the rational unification of the manifold that it encounters its greatest successes...¹¹⁸

So why someone who spent his whole life combining incompatible things would suddenly falter when it involved a unification between God's will and man's will, is surprising. Perhaps, with Einstein's apparent fear of being held responsible for his "deeds and thoughts" and having to face the Almighty's "reward and punishment," he is echoing the deepest motives of all men who suppress the evidence of His existence in order to make themselves appear autonomous.

Einstein assured his followers that he, indeed, did not believe in a personal God, and, in fact, had no religious leanings other than, perhaps, the "structure of the world."

It was, of course, a lie what you read about my religious convictions, a lie which is being systematically repeated. I do not believe in a personal God and I have never denied this but have expressed it clearly. If something is in me which can be called religious then it is the unbounded admiration for the structure of the world so far as our science can reveal it.¹¹⁹

¹¹⁷ Albert Einstein, *Out of My Later Years*, 1950, p. 27; and Albert Einstein, *Ideas and Opinions*, 1984, pp. 46-47. In his book *The World as I See It*, Einstein writes: "I cannot conceive of a God who rewards and punishes his creatures, or has a will of the kind that we experience in ourselves. Neither can I nor would I want to conceive of an individual that survives his physical death; let feeble souls, from fear or absurd egoism, cherish such thoughts. I am satisfied with the mystery of the eternity of life and with the awareness and a glimpse of the marvelous structure of the existing world, together with the devoted striving to comprehend a portion, be it ever so tiny, of the Reason that manifests itself in nature" (Citadel Press, translated by Alan Harris, 1956, 1984, originally published in 1934).

¹¹⁸ Albert Einstein, *Ideas and Opinions*, 1984, p. 49.

¹¹⁹ *Albert Einstein: The Human Side*, editors: Banesh Hoffman and Helen Dukas, 1981. In the same source, Einstein is quoted as saying: "I do not believe in immortality of the individual, and I consider ethics to be an exclusively human concern with no superhuman authority behind it." To a child who asked if scientists prayed, Einstein responded: "Scientific research is based on the idea that everything that takes place is determined by laws of nature, and therefore this holds for the action of people. For this reason, a research scientist will hardly be inclined to believe that events could be influenced by a prayer, i.e. by a wish addressed to a Supernatural Being." Einstein had a particular animosity for the Catholic Church. Another book by the same editors, *Albert Einstein: Creator and Rebel*, contains anecdotes that appear to be for the purpose of creating a cult following for Einstein. Other remarks from Einstein about God include: "Everything is determined, the beginning as well as the end, by forces over which we have no control. It is determined for the insect as well as for the star. Human beings, vegetables, or cosmic dust, we all dance to a mysterious tune, intoned in the distance by an invisible piper" (*Einstein: The Life and Times*, p. 422). In 1921 he replied to a Jewish rabbi: "I believe in Spinoza's God who reveals himself in the orderly harmony of what exists, not in a God who concerns himself with fates and actions of human beings" (*Einstein: The Life and Times*, p. 502). More to the point, Einstein writes: "I cannot conceive of a God who rewards and punishes his creatures, or has a will of the type of which we are conscious in ourselves. An individual who should survive his physical death is also beyond my comprehension, nor do I wish it otherwise;

His own reasons for rejecting a personal God are stated quite clearly. Albert Einstein was a humanist who gave no credence to the divine. This is summed up in one short sentence of his: “There is nothing divine about morality, it is a purely human affair.”¹²⁰ He elaborates on this conviction in the following paragraph:

To be sure, the doctrine of a personal God interfering with natural events could never be refuted, in the real sense, by science, for this doctrine can always take refuge in those domains in which scientific knowledge has not yet been able to set foot. But I am persuaded that such behavior on the part of the representatives of religion would not only be unworthy but also fatal. For a doctrine which is able to maintain itself not in clear light but only in the dark, will of necessity lose its effect on mankind, with incalculable harm to human progress. In their struggle for the ethical good, teachers of religion must have the stature to give up the doctrine of a personal God, that is, give up that source of fear and hope which in the past placed such vast power in the hands of priests. In their labors they will have to avail themselves of those forces which are capable of cultivating the Good, the True, and the Beautiful in humanity itself. This is, to be sure, a more difficult but an incomparably more worthy task.¹²¹

All of this, of course, reflects on Einstein’s moral life. Instead of allowing the awe-inspiring complexities of the universe to bring him to the foot of God’s throne in humble submission, science becomes the insulation to keep him away from God, so that in the end Einstein becomes his own god. In 1930 he wrote the following:

When one views the matter historically one is inclined to look upon science and religion as irreconcilable antagonists, and for a very obvious reason. The man who is thoroughly convinced of the universal operation of the law of causation cannot for a moment entertain the idea of a being who interferes in the course of events—that is, if he takes the hypothesis of causality really seriously. He has no use for the religion of fear and equally little for social or moral religion. A God who rewards and punishes is inconceivable to him for the simple reason that a man’s actions are determined by necessity, external and internal, so that in God’s eyes he cannot be responsible, any more than an inanimate object is responsible for the motions it goes through. Hence science has been charged with undermining morality, but the charge is unjust. A man’s ethical behavior should be based effectually on sympathy, education, and social ties and needs; no religious basis is necessary. Man would indeed be in a poor way if he had to be restrained by fear of punishment and hope of reward after death.”¹²²

End

such notions are for the fears or absurd egoism of feeble souls” (*The World As I See It*, Citadel Press, 1956, 1984, p. 5); “The Jewish God is simply a negation of superstition, an imaginary result of its elimination” (*ibid.*, p. 91).

¹²⁰ Albert Einstein, *The World As I See It*, translated by Alan Harris, 1956, 1984, p. 29.

¹²¹ Albert Einstein, *Ideas and Opinions*, 1984, p. 48.

¹²² Albert Einstein, “Religion and Science,” *New York Times Magazine*, November 9, 1930; as originally stated in *The World As I See It*, p. 27. Einstein adds: “Our actions should be based on the ever-present awareness that human beings in their thinking, feeling, and acting are not free but are just as causally bound as the stars in their motion” (Statement to the Spinoza Society of America, Sept. 22, 1932. Einstein Archive 33-291, cited in *The Expanded Quotable Einstein*, p. 209).