

## Response to Russell Grigg on “The Galileo Twist”

<http://creation.com/the-galileo-twist>

The Galileo ‘twist’ by Russell Grigg, M.Sc.(Hons)

**R. Grigg:** Over two millennia ago, Aristotle (384–322 BC) taught that the earth was the centre of a ‘perfect’ universe in which the movements of the stars were circular and never ending. Ptolemy (AD 2nd century) expanded these ideas into what became known as the Ptolemaic system (see box). Then in the 16th century, Copernicus (1473–1543) postulated as a better explanation that the earth and planets revolved around the sun.<sup>1,2</sup> In the 17th century, Galileo (1564–1642), with his telescope, was able to carry out repeated and repeatable observations which refuted Aristotle and Ptolemy, and supported Copernicus. For example, he observed that the sun had spots which moved across its surface, showing that the sun was not ‘perfect’ and it itself rotated; he observed the phases of Venus, showing that Venus must orbit the sun;

**R. Sungenis:** Not quite. Ptolemy simply didn’t know how far away the celestial bodies were, and because of that problem, he left six variables in his model, one of which allowed his deferents to increase in size once we knew the celestial distances. Ptolemy’s model was actually more accurate and less complicated than Copernicus’ and it used less epicycles.

**R. Grigg:** and he discovered four moons that revolve around Jupiter, not the Earth, showing that the Earth was not the centre of everything.

**R. Sungenis:** Moons revolving around Jupiter have nothing to do with whether the Earth is the center of the universe. Geocentrist allow for both moons to revolve around planets and planets to revolve around stars. The exception is the Earth, which can serve as the universe’s center of mass about which everything else will revolve.

**R. Grigg:** In 1618, he observed three comets pass effortlessly through Ptolemy’s crystalline spheres (in which the planets and stars supposedly moved around the Earth), showing that these spheres must be imaginary.

**R. Sungenis:** Not relevant. Copernicus believed in the crystalline spheres and perfect circles of Aristotle, yet he was a heliocentrist.

**R. Grigg:** The heliocentric (from Greek helios = sun) or Copernican system opposed the views of the astronomer-philosophers of the day, who earned their livelihood by teaching Aristotle and Ptolemy, and so were biased against change.

**R. Sungenis:** This is a judgment based on motives that you have no evidence or proof for.

**R. Grigg:** They therefore either ignored, ridiculed, destroyed, or hostilely opposed Galileo’s writings.

**R. Sungenis:** Not at all. Galileo simply had no proof for his model. What he believed was proof would be laughed out of science classrooms today.

**R. Grigg:** Many Church leaders allowed themselves to be persuaded by the Aristotelians at the universities that the geocentric (earth-centred) system was taught in Scripture and that Galileo was contradicting the Bible.

**R. Sungenis:** No, they weren't merely "persuaded by the Aristotelians." The belief that Scripture taught geocentrism is as old as the Jews who wrote the Hebrew Bible. The Fathers of the Church and the medieval theologians after them also believed Scripture teaches geocentrism. Aristotelianism was not even added to the issue until Aquinas in the 13<sup>th</sup> century saw that Greeks who believed in geocentrism followed Plato and Aristotle, and those who believed in heliocentrism followed Pythagoras and Aristarchus.

**R. Grigg:** They therefore bitterly opposed Galileo to the extent of forcing him on pain of death to repudiate his findings.

**R. Sungenis:** Galileo was never threatened with death. He was allowed to live in a palatial residence at the cost of the Vatican. At the end of his life, Galileo voluntarily renounced heliocentrism.

**R. Grigg:** This was because: 1. The Church leaders had accepted as dogma the belief system of the pagan (i.e. non-Christian) philosophers, Aristotle and Ptolemy, which had become the worldview of the then scientific establishment.

**R. Sungenis:** No, the Church leaders never based "dogma" on the beliefs of Aristotle or Ptolemy. They based it on what Scripture plainly taught, as is evident by what all the Church Fathers stated in their exegesis of Scripture. Ptolemy merely had the best model of the day.

**R. Grigg:** The result was that Church leaders were using the knowledge of the day to interpret Scripture, instead of using the Bible to evaluate the knowledge of the day.

**R. Sungenis:** No, they did so because the Bible did not teach heliocentrism. The Bible never says the earth moves. It always says the sun and stars move. The Bible never says the earth revolves around the sun. It always says the sun revolves around the earth.

**R. Grigg:** 2. They clung to the 'majority opinion' about the universe and rejected the 'minority view' of Copernicus and Galileo, even after Galileo had presented indisputable evidence based on repeatable scientific observations that the majority was wrong.

**R. Sungenis:** No, as noted above, Galileo provided no proof of a heliocentrism. Neither the tides; the phases of Venus or moons revolving around Jupiter prove heliocentrism.

**R. Grigg:** 3. They picked out a few verses from the Bible which they thought said that the sun moved around the earth, but they failed to realize that Bible texts must be understood in terms of what the author intended to convey.

**R. Sungenis:** This assumes that YOU know what the authors intended, but you don't. Your argument is anachronistic.

**R. Grigg:** Thus, when Moses wrote of the ‘risen’ sun (Genesis 19:23) and sun ‘set’ (Genesis 28:11), his purpose was not to formulate an astronomical dictum. Rather he, by God’s spirit, was using the language of appearance so that his readers would easily understand what time of day he was talking about.<sup>3</sup> And it is perfectly valid in physics to describe motion relative to the most convenient reference frame, which in this case is the earth. See the sub-article Sunspots, Galileo and heliocentrism.

This plain meaning (the time of day) is perfectly satisfied by the language of appearance and does not demand the secondary deduction that it is the sun itself which moves. Indeed, this is exactly the same thing that scientists do today in weather reports when they give the times of ‘sunrise’ and ‘sunset’. They are using the language of appearance, and using the earth as the reference frame. A convenient figure of speech does not invalidate science; nor does it invalidate the Bible.

**R. Sungenis:** But that doesn’t prove anything. If you use figurative language yet claim to believe in heliocentrism, why could not the ancient peoples also speak in figurative language about the sun rising and setting yet, in the final analysis, believe in geocentrism? They didn’t believe that the sun actually rises or sets (since it is only with respect to the horizon that it does so) but that it revolves around the earth.

**R. Grigg:** Likewise verses such as Psalm 19:6 and 93:1, which the writer(s) clearly meant to be poetic expressions, were given a literal meaning.<sup>4,5</sup>

**R. Sungenis:** How do you know they were merely “poetic,” and even if they were poetic, how do you know that the Psalmist did not also attach historical or scientific truth to them? Just because it has a poetic style does not mean it is devoid of historical truth. You are simply reading into the Psalmist your biased perspective. Many Psalms that are Messianic are written in the same poetic style that the Psalmist wrote of the cosmos, yet Christians hold the Messianic psalms as accurate history and prophecy of the future.

**R. Grigg:** Today we live in a world where most of the scientific establishment is heavily biased in favour of naturalism (the belief that everything can be explained by natural causes) and long ages. The scientific establishment propagates this belief system by claiming that everything in the universe originated in a big bang, and that all things are the result of evolution over billions of years. Indeed, many astronomers, scientists and teachers today have built their careers and earn their livelihood by teaching these theories.

However, these ideas, like Ptolemy’s, although ingenious and possibly plausible to atheists, are loaded with complications and contradictions, and are simply wrong.<sup>6</sup>

**R. Sungenis:** And so is the heliocentrism that follows the tenets of the Big Bang. Heliocentrism has no credible explanation for all the interferometer experiments between 1881 and 1960 that showed the Earth was not moving through space at 19 miles per second. Every so-called proof of heliocentrism (e.g., stellar parallax, stellar aberration, Foucault pendulum, gravity, the seasons, etc) have all shown to be fallacious.

**R. Grigg:** At the same time there is a minority of scientists, the creationists, who hold the opposing view that the Bible provides a better explanation of how the universe and life came into existence—created directly by God—and that the evidence from design, the fossil record, information theory, etc., is what one would expect if this is so. All such evidence, like Galileo’s, is ignored, ridiculed, concealed, or hostilely opposed by the establishment.

**R. Sungenis:** But you are ignoring all the scientific evidence that refutes heliocentrism and supports geocentrism. In fact, you didn't even want to know about it, since when James Phillips approached you on permitting us to respond to your article, you said no. As far as the Bible is concerned, you are in a hermeneutical dilemma. If you use the Bible to support creationism based on a literal interpretation of Genesis 1 and the Psalms when they speak of creation, why do you refuse to interpret these same books literally when they speak of geocentrism? If you read all of Genesis 1 literally (instead of merely interpreting verses 15-31 literally), it teaches that the Earth came first and that the sun and stars came later and were placed around the Earth as time keepers. The Psalms support this by adding that the Earth does not move, either diurnally or annually.

**R. Grigg:** And once again many Church leaders have allowed themselves to be persuaded by the 'science' taught at the universities; they get around the atheistic part by telling all that the big bang, billions of years, and evolution are all compatible with Scripture. This inevitably leads them to oppose the minority (creationist) view.

**R. Sungenis:** But you, as you demonstrated above, do the same by depending on Galileo's "science," and avoid all the other science that refutes Galileo.

**R. Grigg:** This is because: 1. Such Church leaders have accepted as dogma the belief system and philosophies of non-Christian (i.e. pagan) scientists, like Charles Darwin, Richard Dawkins, Stephen Jay Gould, et al. Thus, like their 17th century predecessors, they are using the 'knowledge' of the day to interpret Scripture, instead of using the Bible to evaluate the knowledge of the day.

**R. Sungenis:** But you do the same with the geocentric issue. The Bible says that the Earth does not move, but you use the "knowledge of the day" to interpret geocentrism out of the Bible.

**R. Grigg:** 2. They cling to the majority opinion and reject the minority view, despite the fact that there are many observations that uphold a young age and speak against an old age of the earth and universe,<sup>7</sup> and there is no experiment that any evolutionist has ever done (much less a repeatable one) either to observe or to confirm the theory of evolution.

**R. Sungenis:** And there is no scientific experiment ever performed that shows the Earth is moving, yet you believe science has shown otherwise.

**R. Grigg:** 3. They explain away the Genesis record of creation as myth or they introduce long ages into the account, but they fail to realise that Genesis, too, must be understood in terms of what the author intended to convey.

**R. Sungenis:** But if you believe the author of Genesis "intended" to teach a literal creation account of six days, why do you say he didn't intend to teach a central Earth that doesn't move when the biblical texts, literally interpreted, all show he did intend it that way?

**R. Grigg:** Thus, a plain reading of the text shows that Moses' purpose was not to set down a collection of myths or camp-fire stories, as is often claimed; nor are the days of Genesis 1 meant to be a metaphor for something else like long ages, or a simplistic way of explaining billions of years to a primitive culture.<sup>8</sup> Rather, the text shows that Moses wrote Genesis as a literal account of the history of the world from the beginning of creation to the arrival of the Hebrews in Egypt.

**R. Sungenis:** If so, then you should not confuse Day 1 with Day 4 or try to say that Day 4 came before Day 1. Day 1 is clear that the Earth came first and had light before the sun and stars were created. Anything other than that is not the literal account of history that Moses gave us.

**R. Grigg:** This is an interesting ‘twist’ on the Galileo situation. Back then, the Church leaders said that Bible verses which were written in poetic format and meant to be poetry should be taken literally; today they are saying that Bible passages which were written as prose and meant to be literal history should be taken as poetry!

**R. Sungenis:** You are doing the same with the Bible’s cosmological passages.

**R. Grigg:** The real lesson. No, creationists are not making the same mistake as the the Church did in the 17th century, i.e. claiming that the Bible says something which is contrary to fact.

**R. Sungenis:** But heliocentrism is not a “fact.” You believe it is a fact only because someone told you it is a fact, but you have never studied the matter yourself.

**R. Grigg:** But the Church, by and large, still is! The Church has not learnt the lesson of history and still insists on taking a popular worldview as its authority, instead of upholding the Bible and allowing it to be its own interpreter.

**R. Sungenis:** You do the same with the Bible on geocentrism.

**R. Grigg:** Although the Church leaders of Galileo’s day mistakenly thought that the Bible supported a geocentric system, there was nothing intrinsically atheistic in the notion that the earth moved.

**R. Sungenis:** No, if it is a fact that the Bible teaches geocentrism and someone denies that it teaches geocentrism, that would be akin to denying that the Bible says that Jacob had twelve sons. In other words, it is a direct repudiation of an historical fact inspired by the Holy Spirit, and is as damnable as any other attempt to undermine the Bible.

**R. Grigg:** Furthermore there are no other doctrines that depend on the relative motions of the earth and the sun.

**R. Sungenis:** Not directly, but certainly indirectly, as noted above.

**R. Grigg:** By contrast, the theory of evolution is an atheistic explanation of origins and is the justification for the anti-God system of secular humanism which pervades society today.

**R. Sungenis:** No, since theistic evolutionists say that God brought the universe into existence by evolution, so evolution isn’t necessarily atheistic.

**R. Grigg:** It also makes God the author of death and suffering.

**R. Sungenis:** Not necessarily, since the death and suffering of man didn’t begin until man sinned. The suffering and death of animals is not an issue.

**R. Grigg:** Furthermore Christians who do not accept the Genesis account as literal history and the days of Genesis as literal earth days need to explain away a host of other Bible passages and doctrines, e.g. the

green plants being the food of the animals before the Fall (Genesis 1:30), the Sabbath Commandment (Exodus 20:9–11), Jesus’ teaching that God made man and woman ‘at the beginning’ (Matthew 19:4), Jesus’ teaching about marriage based on a literal first man and woman (Matthew 19:3–9), Paul’s exposition of the gospel based on the fact that Adam was literally the first man (Romans 5 and 1 Corinthians 15), etc.

**R. Sungenis:** Yes, but you also have the same problem, since you do not interpret the first half of Genesis literally, as it is written.

**R. Grigg:** Thus the lesson from Galileo is not that the Church should not oppose the theory of evolution, but rather that it should, because science has not proven evolution; rather evolution is contrary to proven science and opposes the plain Word of God.

**R. Sungenis:** No, the real lesson from Galileo is that the Holy Spirit was behind the Church to condemn heliocentrism since Scripture does not teach it; the Fathers did not teach it; the medievals did not teach it, and, in fact, science (true science) does not teach it.

**R. Grigg:** The Ptolemaic System: According to Ptolemy, the sun, moon, planets, and stars all revolved around a fixed earth in a series of hollow, inter-nesting, crystalline spheres. This is called a geocentric or earth-centred system, and is known as the Ptolemaic system.

There were some problems which Ptolemy’s geocentric system did not fully explain, notably the to-and-fro motion of the planets across the sky, as seen from the earth. He therefore postulated a number of mechanisms that were ingenious and initially plausible, but ultimately impossibly complicated and scientifically wrong. For example, each planet was said to move in its own small curve called an epicycle, while all the epicycles moved around the earth in larger circles called deferents. Return to text.

**R. Sungenis:** Ptolemy did not intend his model to be a mirror image of the celestial motions but only a computing device to estimate their movements. His model worked very well. His invention of the equant was, in fact, the same thing as Kepler’s invention of elliptical orbits. As for epicycles, every system has “epicycles,” but they often go by different names in modern science (e.g., Fourier analysis) but they are essentially the same.

**R. Grigg:** [Ed. notes: The article by Dr Thomas Schirmmacher, *The Galileo Affair: history or heroic hagiography*, *Journal of Creation* 14(1):91–100, 2000, shows that ‘Contrary to legend, Galileo and the Copernican system were well regarded by church officials.

**R. Sungenis:** Not really. The pope who encouraged Copernicus to publish his book was very liberal, but he was followed immediately by a conservative pope who condemned Copernicus’ book and put it on the Index of Forbidden Books, and the same was done to Rheticus’ book on heliocentrism. Galileo was told from the get-go that he was on the wrong track by Church officials (e.g., St. Robert Bellarmine and Pope Paul V).

**R. Grigg:** Galileo was the victim of his own arrogance, the envy of his colleagues, and the politics of Pope Urban VIII. He was not accused of criticising the Bible, but disobeying a papal decree.’

**R. Sungenis:** Although Galileo was arrogant, politics had nothing to do with either his condemnation or the condemnation of heliocentrism. Pope Paul V (1616) and Pope Urban VIII (1633) made it crystal clear in their declarations that Galileo and heliocentrism were to be condemned because: (1) they contradicted Scripture and (2) they contradicted the unanimous consent of the Church Fathers.

**R. Grigg:** See also Dr Danny Faulkner's article Geocentrism and Creation and other articles under Astronomy and Astrophysics Q&A]

**R. Sungenis:** Danny Faulkner's article on geocentrism is full of erroneous data and conclusions and does not address the core issues, but that is not something we can address in this dialogue.

#### Related articles

[Geocentrism and Creation](#)

[Galileo Quadricentennial](#)

[Astronomy Q&A](#)

#### References and notes

1.His book *De Revolutionibus Orbium Coelestium* (On the Revolutions of the Celestial Spheres), published in 1543, challenged Aristotle's (and thus also at that time the Church's) teaching that the earth was the centre of all change and decay, and that around it were the changeless heavens. Return to text.

2.In the Copernican system the earth and planets circle the sun, with the earth taking one year to do so; in the Ptolemaic system the sun, planets, and stars are all required to circle the earth every 24 hours. A huge problem with the latter system is that the nearest star, Proximus Centauri (also known as Alpha Centauri

C), is 4.3 light years away, so that if this star circled the earth every 24 hours, its speed would need to be nearly 10,000 times the speed of light (and much greater speeds would be needed for the more distant stars). Return to text.

3. Similarly, Joshua was using the language of appearance in Joshua 10:12–13. For a discussion on this miracle, see my article Joshua's long day: Did it really happen—and how? *Creation* 19(3):35–37, June–August, 1997. Return to text.

4. Psalm 19:4–6 metaphorically describes the sun as coming forth from a tent in the heavens, and also personifies the sun both as a bridegroom and as a strong man running a race. One would have thought that even the inflexible literalists of Galileo's day might have allowed the writer of this Psalm to have meant it to have had a poetical meaning. Return to text.

5. In Psalm 93:1, the phrase 'the world also is established, that it cannot be moved' needs to be read alongside v. 2, '[God's] throne is established of old', where the same Hebrew word [kown = 'established'] is used and has the meaning 'set up', 'stable', 'secure', 'enduring', 'confirmed', etc., not 'immobile' or 'stationary'. Likewise the Hebrew word for 'moved' (v.1) is used in Psalm 16:8, 'I shall not be moved', meaning that the writer would not stray from the path of the Lord, not that he was rooted to any one spot. Return to text.

6. For example, the exponents of the big bang fail to say where the energy originally came from, where the laws of science came from, and what it was that 'quantum fluctuated' before there was anything there to fluctuate, and so on—see *What about the big bang?* and *If God created the universe, then who created God?*. Molecules-to-man evolution is contrary to the principles of thermodynamics, as well as to the law of biogenesis (life comes only from life), the fossil record, and much more. Return to text.

7. See, for example, John Morris, *The Young Earth*, Master Books, Arizona, 1994, and *Evidence for a young world* by Russell Humphreys. Return to text.

8. Top-flight Hebrew academics, e.g. Professor James Barr of the University of Oxford, are unanimous that the plain meaning that the Hebrew text is intended to convey is that 'creation took place in a series of six days which were the same as the days of 24 hours we now experience'. (See *Six days? Honestly!*) Return to text.