



The Scientific Revolution: Its Classical and Christian History with Dr. Ted Davis

Lecture 18: Galileo & the Roman Catholic Church: A Clash of Personalities, Not “Warfare” of Religion and Science

Outline:

Galileo & the Roman Catholic Church: A Clash of Personalities

- No story in the history of science is more famous than that of Galileo, who was tried by the Roman Inquisition after he had written a book advocating the new astronomy of Copernicus. But the real facts of his story are much less well known—and it is very important to understand them. Otherwise, his story can too easily be misinterpreted as an example of the “warfare” of science and religion.
- At the height of his fame, Galileo’s enemies (and he has many) are making trouble for him. Some want to use their influence to persuade the Roman Catholic Church to examine Galileo’s Copernican beliefs—are they really consistent with the Bible?
- Some examples of Biblical texts relevant to the motion of the earth:
 - The sun also rises, and the sun goes down, and hastens to his place where he arose. —Eccles. 1:5
 - The Lord reigns, he is clothed with majesty; the Lord is clothed with strength, wherewith he has girded himself: the world also is established, that it cannot be moved. —Psalm 93:1
 - Who laid the foundations of the earth, that it should not be removed forever. —Psalm 104:5
 - Then spake Joshua to the LORD in the day when the LORD delivered up the Amorites before the children of Israel, and he said in the sight of Israel, Sun, stand thou still upon Gibeon; and thou, Moon, in the valley of Ajalon.
 - And the sun stood still, and the moon stayed, until the people had avenged themselves upon their enemies. Is not this written in the book of Jasher? So the sun stood still in the midst of heaven, and hasted not to go down about a whole day. —Joshua 10:12-13
- Cosimo’s mother, Christina of Lorraine, who retained the title of Grand Duchess after her husband’s death, hears this gossip and wants to know more. She and Cosimo’s wife host a late morning meal and conversation at their winter palace in Pisa, in Dec 1613. Philosopher Cosimo Boscaglia from the University of Pisa is there; he strongly opposes the Copernican view.



- Galileo is not there, but his disciple and friend, the Benedictine monk Benedetto Castelli, is there. Castelli had just been appointed professor of mathematics at Pisa a few weeks earlier. Castelli tells Galileo about this conversation, and Galileo is concerned.
- A few days later Galileo writes back, detailing his views on astronomy & the Bible. Copies of this letter circulate; he deceitfully pretends that some are slightly altered by his opponents. In mid-1615 Galileo writes a longer version, in the form of an open letter to Christina.
- Eventually it was published in Latin & Italian (1636) and later in English (1661).
- Copies of the letter begin to circulate, and some of Galileo's opponents urge the Church to investigate whether the Copernican theory is acceptable to the faith. In 1616, a leading Catholic scholar is put in charge of a committee to study the question: Roberto, Cardinal Bellarmine
- Bellarmine was a gifted preacher, a great Jesuit theologian, and the Church's top defender against Protestant claims about religious authority and biblical interpretation. In matters of biblical interpretation, he had often followed Augustine, distinguishing between literal and figurative language in the Bible; he was not a rigid literalist.
- However, in the heated climate of the Reformation, he did not want to question the received interpretation of those texts related to the sun and the earth—especially when there was no proof of the Copernican view. He cited the Council of Trent (1545-1563), which forbade Catholics from interpreting the Bible contrary to the unanimous opinion of the Church Fathers.
- Bellarmine presented his position in a letter to an important priest, Paolo Foscarini, who had just published a biblical defense of Copernican astronomy.
- Bellarmine's committee decided to ban Foscarini's book in 1616, when some passages in Copernicus' book were censored.
- Given that all commentators had always interpreted the Bible in terms of geocentrism, Bellarmine told Foscarini, there was real danger in taking a figurative approach to the relevant texts. Even though astronomy might not be a matter of faith by virtue of the subject, the words had still been spoken by the Holy Spirit, through the authors of scripture, and therefore astronomical passages in the Bible are a matter of faith, by virtue of those who have spoken. For example, it would be just as heretical to deny that Abraham had two sons, as to deny the Virgin Birth, "for both are declared by the Holy Ghost through the mouths of the prophets and apostles.
- Galileo is concerned; he goes to Rome on his own initiative, to see whether he can influence the outcome. He fails to persuade Bellarmine's committee not to act prematurely, before all the evidence



is in and the scientific argument is settled. The committee orders that Copernicus' book is "suspended until corrected"—a few sentences must be altered, to make the idea of the earth's motion purely hypothetical, but the book is allowed to be read if this instruction is carried out. This instruction to censor the book was obeyed fairly well in Italy, but not elsewhere.

- Galileo actually marked his own copy of Copernicus accordingly—whether at this point or later, is not known. He was not put on trial at this time, but he was told privately by Bellarmine that “the doctrine attributed to Copernicus ... is contrary to Holy Scripture and therefore cannot be defended or held.”
- Galileo has plans to write a big book, comparing the old and new world pictures, but he sets those plans aside for awhile. Then, in 1623, an old friend from Florence, Maffeo Barberini, becomes Pope Urban VIII.
 - Galileo writes a new book, not about astronomy, and dedicates it to the Pope, who is very pleased. Galileo goes to Rome and has conversations with the Pope for a week in the Vatican Gardens. We don't know what they said, but we can hazard a guess or two from what transpired later.
 - Galileo thinks he now has permission to write his big book about astronomy, but clearly he and the Pope had quite different ideas about exactly what that book would say. Galileo intends to write a one-sided, pro-Copernican book, showing that the earth really moves, but the Pope apparently thinks the book is going to be a balanced account of competing theories, endorsing the earth's motion only as an abstract mathematical hypothesis rather than as a real physical truth. Galileo proceeds to write the book, in the form of a Platonic “dialogue” with 3 speakers
 - One speaker, “Salviati,” represents Galileo; he wins all the arguments and voices the best jokes.
 - One is a neutral friend, “Sagredo”
 - The third, named “Simplicio” (the simpleton), loses all the arguments, is often lampooned, and clearly speaks for the Pope—at the end of the book, he voices an argument that the Pope had told Galileo to include.
 - This gets Galileo into very hot water!
 - A key papal advisor, Melchior Inchofer, thinks that Galileo treats all those who disagree with him as “mental pygmies.”
- When the Pope sees the book, and the way in which Galileo has apparently made fun of him, he is enraged. He believes that his old friend has betrayed him, by treating the earth's motion as a demonstrated conclusion rather than an unproved hypothesis. He also believes that Galileo has been deceitful, by failing to tell the censors about the instructions given him in 1616. He orders the Inquisition to bring Galileo down to Rome and charge him with vehement suspicion of heresy.



- Galileo clearly made a dreadful mistake—was it an honest mistake, was he stupid, or just arrogant? We may never know for sure.
- The trial itself is a complicated story, but the bottom line is this: Galileo is found guilty. He is forced to abjure his opinions and sentenced to house arrest for the rest of his life in his villa at Arcetri, in the hills outside Florence & near the convent where his daughter lives.
- He is also required to say the seven penitential psalms weekly, for three years. However, his daughter, Suor Maria Celeste, is allowed to do this for him, but she dies a few months later.
- The whole affair is full of personalities and politics. With more restraint on the Pope's part and more humility on Galileo's part, there probably would never have been a trial. The ideas being debated involved science and religion, but this is not an example of the “warfare” of science and religion. Galileo saw himself as a faithful Catholic; the church never opposed any proven fact; and **the real debate was between different Christian views on how to interpret the Bible.**
- Despite the facts, Galileo is very often depicted in simplistic, heroic terms that pit enlightened science vs backward Christianity.