Galileo and the Church

History 110-04

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The topic of this paper is the scientific theories of Galileo and how the development of those theories effected the church. Galileo Galilei was an Italian scientist who is most famous for his support of Copernicanism. Copernicanism supports the idea that the earth and other major planets revolve around the sun. In trying to teach others about Copernicanism, Galileo went against the views of the church and began to change how people viewed the world.

Galileo’s journey into the idea of Copernicanism began in October of 1604 when a supernova, a new star, was confirmed. The appearance of this new star was significant to Galileo because it proved to him that Aristotle’s theory was wrong. Aristotle said that “no change could take place in the heavens, because everything in them was made of a perfect and unalterable substance”[[1]](#footnote-1). The appearance of a new star confirmed for Galileo that change could occur in the heavens and he announced publicly, for the first time, that he favored the Copernican view and intended to refute the earth-centered theory.[[2]](#footnote-2)

Galileo was working to refute the earth-centered theory and to do this he needed a way to study the planets and stars. In 1609, he created a telescope using a magnifying lens and a long tube.[[3]](#footnote-3) Using his newly invented telescope, Galileo made many discoveries about the stars and planets. Some of these discoveries included finding that there were spots on the sun, that the Milky Way consisted of millions of separate stars, and that the moon’s surface was covered with mountains and craters.[[4]](#footnote-4) However, his most influential discovery was his discovery of the four moons of Jupiter. By discovering that Jupiter had four moons that revolved around it and not Earth, Galileo had more evidence to back up his theory that the planets revolved around the sun and not the Earth.

After making all these new discoveries Galileo decided to publish his findings. In 1610, he published a book called *Starry Messenger* that discussed his findings. Copies of Galileo’s book sold out within 6weeks of it being published. Galileo’s book was not only well received in Italy but also in countries as far away as China.[[5]](#footnote-5) He dedicated his book to Grand Duke Cosimo and personally sent him a copy of the book and a superior telescope.[[6]](#footnote-6) The Grand Duke thanked Galileo by selecting him to be chief court mathematician and philosopher. He also granted Galileo “a position at the University of Pisa with no teaching obligations so that Galileo could study and publish full-time”.[[7]](#footnote-7) Not everyone in Europe had the same positive reaction to Galileo’s work. Many Italian philosophers insisted that Galileo was seeing illusions in his lenses and that only direct vision could fully grasp reality. Others, like fellow professors Cesare Cremoni and Giulio Libri, refused to even look through a telescope.[[8]](#footnote-8)

Galileo moved to Florence in September of 1610 for family reasons, but he also continued his research while in Florence. While he was living in Florence he charted the phases of Venus and the motions of the moons surrounding Jupiter. In March of 1611, Galileo went to Rome with the intent of publicizing his discoveries with the Catholic Church. When Galileo arrived in Rome, “he was welcomed by the cardinals; endorsed by the College Romano, the central Jesuit Institution; given an audience with Pope Paul V; and introduced to Cardinal Maffeo Barberini” [[9]](#footnote-9)(the next Pope). After being welcomed in this manner, Galileo did not expect to encounter much resistance to the publication of his findings. Instead, the Roman Catholic Church warned him against promoting his views as anything more than hypotheses.[[10]](#footnote-10)

Galileo was greatly saddened by the church’s refusal to accept the Copernican view, so towards the end of 1615 he went back to Rome looking for permission to argue Copernicanism and his loyalty to the church. He was warned against going back to Rome, but went despite these warnings to try to promote his discoveries. While in Rome Galileo was accused of going against the scripture by promoting Copernicanism. At this time, he did have the support of some people like provincial Paolo Foscarini. He publicly supported Galileo and attempted to help prove that his theories did not go against scripture. By publicly supporting Galileo, he earned himself a letter from Cardinal Robert Bellarmine, the “Master of Controversial Questions”. In Bellarmine’s letter he addressed Galileo and Foscarini’s beliefs in hypotheticals (the way that the church was comfortable discussing them). He stated that supporting Copernicanism was “a very dangerous thing, not only by irritating all the philosophers and scholastic theologians, but also by “injuring our holy faith and rendering the Holy Scriptures false”.[[11]](#footnote-11) Bellarmine’s entire letter was in support of the Roman Catholic Church and warned Forscarini against publicly promoting the views of Galileo.

On February 23, 1616 the Holy Office called for a vote by the theologians. This vote determined that Copernicanism was an “absurd” and “foolish” contradiction of the Holy Scripture.[[12]](#footnote-12) Following this vote, the Pope instructed Bellarmine to meet with Galileo. The purpose of their meeting was for Bellarmine to inform Galileo to not “hold, defend, or teach” Copernicanism.[[13]](#footnote-13) Galileo and Bellarmine had this meeting on February 26, but the meeting was unofficial because the minutes of their meeting were never signed. Since the minutes were never signed, Galileo asked Bellarmine for a record of the meeting in writing. Bellarmine responded to Galileo’s request with a letter that stated that Copernicanism went against the scriptures but had no mention of Galileo not being allowed to “hold, defend, or teach” Copernicanism.[[14]](#footnote-14) On March 5, 1616 the Holy Office instituted the final result of their vote by banning all books teaching Copernicanism.

Galileo gave up his cause from late 1616-1624 to attend to personal matters. However, in 1624 there was an improved political climate due mostly to the arrival of the new Pope. In the fall of 1624, Galileo began writing another book, *Dialogue*.[[15]](#footnote-15) He finished his book in April of 1630 and took it to the pope’s censor in Rome to be checked before he could publish it. There were minor changes that Galileo needed to make to his book so he returned to Florence to make the revisions. The plague struck Italy after Galileo had returned to Florence so after making his revisions his book was published in Florence instead of in Rome. Galileo’s book was an instant success, but it angered many theologians. They told the Pope that Galileo was making a mockery of him, which led to the Pope ordering “a three-man commission to reexamine *Dialogue*”.[[16]](#footnote-16) After reexamination, the commission stated that Galileo had violated his 1616 instructions and the Pope became furious. He ordered that all stores were to stop selling *Dialogue* and that Galileo was to be brought to Rome to be put on trial despite his bad health from the plague.

Galileo went through a lengthy trial that determined that he had held “true a false doctrine taught by many, namely, that the sun is immovable in the center of the world, and that the earth moves”.[[17]](#footnote-17) On June 22, at the Church of Santa Maria Sopra Minerva, Galileo was sentenced for his crimes. His sentence “required him to give up Copernican thought, to recite seven penitential psalms once a week for three years, and to remain imprisoned at the will of the Holy Office”.[[18]](#footnote-18) In 1633, Galileo was sent to Arcetri to live under house arrest for the duration of his punishment. Galileo wrote his final book *Two New Sciences* while he was under house arrest and it was published in 1638, four years before he died.[[19]](#footnote-19) Through the publications of his books, his fight to teach Copernicanism and his great effort to make Copernicanism accepted Galileo helped to change the way people viewed the world.

Bibliography

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5. Timothy Ferris, *Galileo* (California: Greenhaven Press, Inc., 2001), Clarise Swisher ed., 88 [↑](#footnote-ref-5)
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9. Ibid, 21 [↑](#footnote-ref-9)
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