

A Contentious Intersection:
Galileo and the Roman Catholic Church

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Background

- The Edict of Theodosius in 380 A.D. was the first official intertwining of church and government.
 - Christianity was made the sole legal religion of the Roman empire.
- The fundamental perspectives of the church had been shaken from the Protestant Reformation.
 - Protestant Reformation began in 1517 with the hanging of Martin Luther's *95 Theses*.
 - Reformation challenged the Catholic Church's role as an intermediate and essential entity between people and God.
- Nicolaus Copernicus first introduced the heliocentric theory in his book *Six Books on the Revolutions of the Celestial Orbs* in 1543.
 - The work did not receive any push back from the Catholic Church until 1616.

The Counter Reformation – Galileo's Setting

- The Counter Reformation (1545-1700) was an effort to reestablish the authority of the Catholic Church.
- The Council of Trent (1545-1563) was the first response to the Protestant Reformation.
 - Ultimately, the goal of the Council was to prevent future challenges of the Church's authority.
 - This was accomplished by restricting the laity's exposure to any work not explicitly approved by the Roman Catholic Church.
- The Index of Prohibited Books was established in 1563 to act as a list of works that had been published and determined to be heretical.
 - While the publication of the books could not be stopped, the reading of the books was strongly condemned by the Roman Catholic Church.

The Person of Interest – Galileo Galilei

- 1564: Born as in Pisa, Italia.
- 1581: Began medical degree at the University of Pisa.
- 1585: Left medical degree to pursue study of mathematics and natural philosophy.
- 1589: Appointed Chair of Mathematics at University of Pisa.
- 1589-1592: Wrote *De Motu*, a series of essays that were not formally published, but introduced his fundamental idea that ideas can be empirically tested through experimentation.
- 1592: Took position as a Professor of Mathematics at the University of Padua.

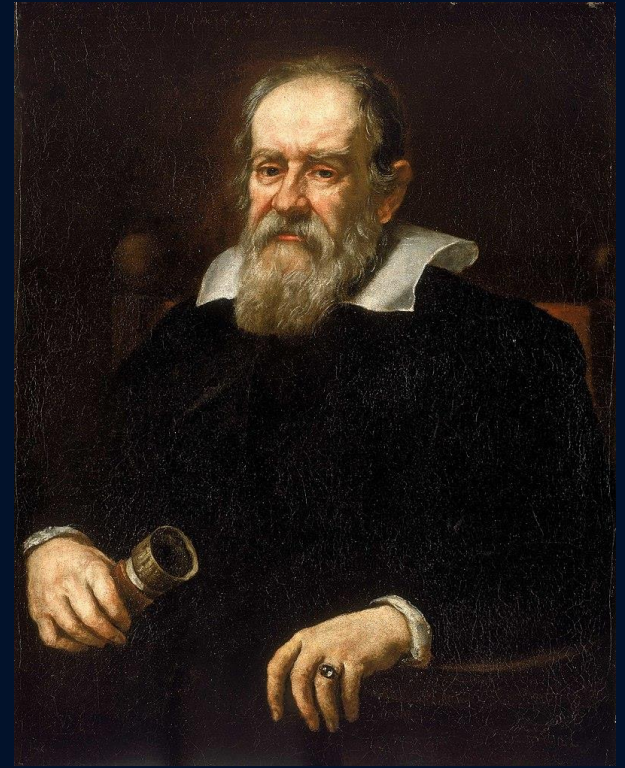


Figure 1: Painting of Galileo Galilei (Portrait of Galileo Galilei, Justus Sustermans, n.d., <https://www.rmg.co.uk/collections/objects/rmgc-object-14174>)

The Initial Dispute – Galileo’s Discovery



Figure 2: Two telescopes Galileo was known to have in his possession. (Encyclopedia Britannica, n.d., <https://www.britannica.com/biography/Galileo-Galilei/Telescopic-discoveries#/media/1/224058/2916>)

- 1609: Galileo began studying the stars with the first functional telescope he constructed.
- Galileo concluded that that the Earth was neither the center of the universe nor completely unique from the other extraterrestrial planets.
 - His conclusions were drive primarily from his observation of the different phases of Venus and mountain ranges on Jupiter’s moons.
- 1612: *Discourse on Floating Bodies* was published articulating these findings that supported the Copernican theory.
- 1616: Pope Paul V had Cardinal Robert Bellarmine issue a formal warning to Galileo to cease the support and promotion of his evidence of a heliocentric theory.
 - Despite defending his work theologically, Galileo eventually submitted himself to the injunction.

The Issue Resurfaced – Galileo’s Dialogue

- With the election in 1623 of Pope Urban VIII, a close friend, Galileo determined it appropriate to revisit the conflict.
- Galileo was given permission to develop a passage to expound upon his findings concerning the heliocentric theory under the following stipulations:
 - The work must clearly articulate the theory as only being a hypothesis.
 - A censor, Niccolò Riccardi, was assigned to monitor his work.
- The *Dialogue* was published in 1632.
 - While Galileo published as a hypothesis, his arguments were so convincing that the laity began to accept the heliocentric theory as truth.
- The Pope interpreted Galileo’s essay as an abuse of the kindness of the church.
 - The opportunity was given was based on his relationship with the Pope.
 - Any attempt at mediation was ignored and the issue was taken to trial.



Figure 3: Portrait of Pope Urban VIII.
(Encyclopedia Britannica, n.d.,
<https://www.britannica.com/biography/Urban-VIII/images-videos#/media/1/619410/118537>)

The Precipice of Contention – Galileo’s Trial

- In 1633, the Holy Office began trial against Galileo.
- Galileo sought to defend himself both scientifically and theologically.
 - The Council of Trent detailed that no believer should stand by a personal interpretation of Scripture.
- Pope Urban VIII pressed Galileo to admit that he had been overtly argumentative in his work and broke their agreement.
 - Galileo eventually confessed that he did present an overly persuasive argument for the heliocentric theory.
 - He claimed it was for vain ambition.
- Galileo was found guilty of suspected heresy and kept under house arrest having to recite Psalms of penitence weekly for three years.
 - Galileo died in his home in Florence while serving his sentence.



Figure 4: The trial of Galileo. (Galileo Galilei before members of the Holy Office in the Vatican in 1633, 1847, <https://www.history.com/news/galileo-copernicus-earth-sun-heresy-church>)



Figure 5: Image of pages from Galileo’s work *Dialogue on the Two Chief Systems of the World*. (Dialogo sopra i Due Massimi Sistemi del Mondo, n.d., <https://galileo.ou.edu/exhibits/dialogue-two-chief-systems-world>)

Conclusion

- The outcome of Galileo's trial with the Roman Inquisition did not contribute to a revolutionary change in the church immediately.
- The establishment of the Observatory of the Roman College in 1774 was one of the first marks of the genuine interest in sciences from the Roman Catholic Church.
- The Vatican officially declared in 1992 that the church had erred in condemning Galileo Galilei for heresy.



Figure 6: Image of the Vatican Observatory and pontifical palace. (Photograph by H. Raab, The pontifical palace in Cetsel Gandolfo, with two domes of the Vatican Observatory on top, n.d., <https://commons.wikimedia.org/w/index.php?curid=69643689>)

Biblical Application

- The intersection of science and religion has historically been tumultuous.
- The perspective that Scripture addresses every facet of life is a valuable orientation held by the Roman Catholic Church.
- Galileo brought light to the fact that understanding of the context and fluidity of the living Word of God is equally important.
- With many interpretations and few explicitly scientific descriptive passages, the Bible acts as a lens through which scientists can understand foundationally that all of creation mirrors the Creator.

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