GALILEO AND THE CATHOLIC CHURCH

For over three and a half centuries, the trial of Galileo has been an anti-Catholic bludgeon wielded to show the Church as the enemy of enlightenment, freedom of thought and scientific advancement. In the cultural wars of our own day, Galileo has become an all-encompassing trump card, played whether the discussion is over science, abortion, gay rights, legalized pornography, or simply as a legitimate reason for anti-Catholicism itself.

The story of Galileo and the Church is re-told in *Galileo's Daughter* by Dava Sobel (Walker & Company, New York, NY, 1999). The book provides a balanced presentation of the conflict that evolved between Galileo and Church authorities, as well as Galileo's own deep Catholic faith. Readers who expected an anti-Catholic, ultra-feminist manifesto from Galileo's Daughter will be disheartened, or pleased.

Galileo Galilee was born in Pisa on February 18, 1564. The Council of Trent, which confirmed the Church's formal response to Martin Luther's revolt of 1517, had ended the year prior to his birth. It was a Europe where the deadly plague still erupted, and the glories of the Renaissance had succumbed to an unhappy desolation brought on by the breakdown in the unity of Christian culture through Luther's Reformation.

In the midst of this unhappy desolation, the era would see the beginnings of modern science. Contrary to the assorted black legends that have come down to us, most of the early scientific progress in astronomy was rooted in the Church. Galileo would not so much discover that the earth revolved around the sun. Rather, he would attempt to prove with his studies and propagate through his writings the theories of a Catholic priest who had died 20 years before Galileo was born,

Nicholas Copernicus.

The world generally accepted what the senses told and had been taught since Ptolemy (2nd century A.D.), that the earth was fixed and the sun, stars and planets revolved around it. Through mathematical examination Copernicus came to believe that the sun was at the center and the planets, earth included, revolved around it. Pope Leo X (1513-1521) was intrigued by his theories and expressed an interest in hearing them advanced. Martin Luther, calling Copernicus a fool, savaged his theory, as did John Calvin.

For the most part the Church raised no objections to his revolutionary hypothesis, as long as it was represented as theory, not undisputed fact. The difficulty that both the Church – and the Protestant reformers – had with the theory is that it was perceived as not only contradicting common sense, but Scripture as well where it was taught that Joshua had made the sun stand still and the Psalmist praised the earth "set firmly in place."

The myth we have of Galileo is that of a "renegade who scoffed at the Bible and drew fire from a Church blind to reason," as Sobel described it. In fact, "he remained a good Catholic who believed in the power of prayer and endeavored always to conform his duty as a scientist with the destiny of his soul." Galileo heard of the invention of a spyglass that allowed one to see objects that were far away. From this spyglass, Galileo would develop the telescope and turn his eyes toward the exploration of the heavens. In the *Sunspot Letters* (1613) Galileo forcefully argued for a Copernican understanding of the universe and alienated much of the scientific community that upheld the Ptolemaic principles, particularly many within the Church.

In 1616, Galileo traveled to Rome to defend himself. Jesuit Cardinal Robert Bellarmine was a leading figure in the Catholic Counter Reformation. In 1615, Cardinal Bellarmine had

stated his personal belief that the Copernican theory was not viable as it defied human reason. However, he found no reason for it not to be treated as a hypothesis. More important, he noted that if the Copernican theory was ever proven – which he doubted could ever be accomplished – then it would be necessary to re-think the interpretation of certain Scriptural passages. It was a vital point that would be forgotten in 1616 and in the trial of Galileo in 1633.

In February 1616, a council of theological advisors to the pope ruled that it was bad science and quite likely heresy to teach as fact that the sun was at the center of the universe. Cardinal Bellarmine met with Galileo, advised him of the panel's ruling. He explained to Galileo that he could not present his theories on the earth's orbit of the sun as fact. Galileo agreed, but with a crucial misunderstanding. He believed that this ruling still allowed him to present those views as theoretical. Cardinal Bellarmine seemed to share that interpretation. However, the panel's ruling may have been far more forceful, stating that the theory of the earth's orbit should not be raised at all. This would be critical at his trial in 1633.

In 1623, Cardinal Antonio Barberini was elected Pope Urban VIII. Galileo met with the new pope and believed he had secured the pope's permission to continue to discuss the Copernican theory as hypothesis. In February, 1632, Galileo published the Dialogue. He so weighted his argument in favor of Copernican theory as truth – and managed to insult the pope's own expressed view that complex matters observed in Nature were to be simply attributed to the mysterious power of God – that a firestorm was inevitable.

The difficulty that Galileo encountered was that he had no acceptable proof for his belief that the earth revolved around the sun as 17th century science simply was incapable of establishing that in fact. He also appeared to be openly challenging the 1616 edict to which he had agreed. Galileo was

told to come to Rome to explain himself. The trial began in February 1633. It was at this point that a fearful document emerged from the files of Galileo's dossier from 1616. It purported to prove, as Sobel writes, "that Galileo had been officially warned not to discuss Copernicus, ever, in any way at all. And so, when Galileo had come to Urban in 1624, testing the feasibility of treating Copernican theory as hypothetical in a new book, he had in fact been flouting this ruling. Worse, it now appeared he had intentionally duped the trusting Urban by not having had the decency to tell him such a ruling existed. No wonder the pope was furious." Galileo was certainly not aware of the more restrictive notice in his file and in all likelihood an enemy had placed it there. It is doubtful that Galileo was being duplicitous in his understanding that he could discuss the Copernican theory as hypothesis, or that he had purposely misled the pope.

Seven of the 10 tribunal cardinals signed a condemnation of Galileo. His book was prohibited, he was ordered jailed, to publicly renounce his beliefs, and to perform proper penance. The finding against Galileo was from one canonical office, not a determination by the Church that set out a clear doctrinal interpretation. Rene Descartes, the French philosopher and friend of Galileo, noted the censure was not confirmed by a Council or the pope but "proceeds solely from a committee of cardinals." This was disciplinary action, not doctrinal definition in intent. Galileo would continue to have friends and supporters within the Church, including the archbishop of Sienna who would provide him with his residence for part of his "house arrest." However lenient the treatment, the condemnation was unjust. The Church tribunal had handled a bad situation badly. The theologians who interrogated him acted outside their competence and confused the literary nature of Scripture with its theological intent.
Galileo died in 1642. In 1741, Pope Benedict XIV granted an imprimatur to the first edition of the complete works of Galileo. In 1757, a new edition of the Index of Forbidden

Books allowed works that supported the Copernican theory.

The Galileo affair soon entered the mythological corpus of Western secularism as symbolizing the Church as anti-intellectual, anti-science and anti-freedom. The trial is most often portrayed as Galileo the scientist arguing the supremacy of reason over faith; the tribunal judges demanding that reason abjure to faith. The trial was neither. Galileo and the tribunal judges shared a common view that science and the Bible could not stand in contradiction. If there appeared to be a contradiction, such a contradiction resulted from either weak science, or poor interpretation of Scripture. In context, the trial exhibited both faults. Galileo's technology was far too limited at the time to in any way scientifically prove his assertion of the earth's double rotation. At the same time, the tribunal judges were at fault for a literal interpretation of biblical passages and making scientific judgments never intended by the Scriptural authors.

The Galileo case had, of course, been long settled when, in 1981, Pope John Paul II asked a pontifical commission under Cardinal Paul Poupard to study the Ptolemaic-Copernican controversy of the sixteenth and seventeenth centuries. In his report, Cardinal Poupard briefly summarized the findings. Referring to Cardinal Bellarmine's letter of 1615, if the "orbiting of the Earth around the sun were ever to be demonstrated to be certain, then theologians…would have to review biblical passages apparently opposed to the Copernican theories so as to avoid asserting the error of opinions proven to be true. (T)heologians…failed to grasp the profound, non-literal meaning of the Scriptures when they describe the physical structure of the created universe. This led them unduly to transpose a question of factual observation into the realm of faith."