The Church vs Galileo

Last Sunday, in response to a request, I did the first of two sermons on the history of the warfare between science and the Christian religion. That sermon ended with comments about the Polish astronomer Copernicus who rocked the mid-16th century church by denying its doctrine that the earth was the center of the universe and had no motion. There is no doubt that the church would have hounded him without mercy, so he was probably fortunate in dying just as his book appeared. One man, Giordano Bruno, who agreed with Copernicus that the sun was the center of our system and that the earth was only one of several planets moving around it was burned alive for his heresy.

But truth is not killed as easily as a man, and only ten years after Bruno’s death what had been only a theory became a demonstrated fact. On a starry night in 1610, having already discovered that the moon has mountains and valleys and shines by reflected light, a great scientist by the name of Galileo Galilei pointed his newly handmade telescope toward the sky, stared into the eyepiece, and gasped in astonishment: four white spots were clearly visible, floating around a brightly shining planet. Galileo had discovered Jupiter’s four major moons, the first (except for our own) ever seen orbiting a planet. At this moment, nearly four centuries later, a spacecraft named for that famous Italian is orbiting Jupiter, sending back information in ways that would amaze the old astronomer.
The church, so often at odds with science, was already unhappy with Galileo’s conviction that the moon’s light is only reflected sunlight. The Bible, after all, had called the moon “a great light” — how dare Galileo say it was only a reflector. As for Galileo’s support of the Copernican theory that planets move about the sun, Well, said the great church theologian Cardinal Bellarmin, that notion would destroy the whole Christian plan of salvation. If there are planets that move, instead of simply being stars God hangs out for light, then since God makes nothing in vain they must be inhabited, and if they are inhabited, how can they have been saved by Jesus’ coming to die? Within five years, Rome brought Galileo before the Inquisition where he was ordered to reject the idea of a double motion of the earth: that it moves on its axis and that it orbits the sun.

Facing prison, Galileo denounced his findings and promised not to publish them again. Pope Paul V, on his part, solemnly declared the new astronomy false, contrary to Holy Scripture, and not to be taught.

As the great crisis dragged on, a new Pope (Urban) tried personally to show Galileo his errors, while theologians and professors — knowing Galileo was not allowed to defend his discoveries — attacked him viciously. His salary as a professor at the University of Pisa was canceled. A Jesuit priest summed up the official church reaction to Galileo’s claims [163, Father Melchior Inchofer]: “The opinion of the earth’s motion is of all heresies the most abominable, the most pernicious, the most scandalous.....Argument against the immortality of the soul, the existence of God, and the incarnation [of Christ], should be tolerated sooner than an argument to prove that the earth moves.” If Galileo were right about the spinning earth, said another theologian,
“the wind would constantly blow from the east” and “buildings....would fly off with such a rapid motion that men would have to be provided with claws like cats to enable them to hold fast to the earth’s surface.”

Attacked from all over Europe, Galileo begged permission to write a defense. After eight years of considering ways of defusing the controversy while appearing to be humane, the church agreed but imposed a humiliating condition: the preface to Galileo’s defence, written by one of their own and signed by the astronomer, would say his theories were really just imaginative and therefore not truly a threat to the traditional doctrine of the church. The strategy backfired and Galileo won this round, because when the work appeared it met with tremendous success and put new weapons into the hands of those who felt the new science made good sense. The pious preface, seen through immediately as coerced and fraudulent, was laughed at by intelligent people from one end of Europe to another.

Once again the Jesuits and Dominicans and most of the clergy were enraged, and the reigning Pope turned the case over once more to the dreaded Inquisition. A good friend and defense counsel pleaded that Galileo was entirely respectful of the church, and insisted — correctly but unwisely — that “nothing that can be done can now hinder the earth from revolving.” That bit of mild sarcasm got him dismissed from the trial in disgrace, and Galileo was left to face his accusers alone. Threatened with torture and ordered by the Pope to renounce his theory publicly and on his knees, the old man gave in: “I, Galileo, being in my 70th year....abjure, curse, and detest the error and the heresy of the movement of the earth.” On top of that perjury, he was obliged
to swear he would squeal on any other scientist whom he should discover supporting the idea that the earth
actually moves. It is a sad story, and many have wished, sitting in safety and comfort, that the old man had
refused to surrender. But fairness requires imagining that scene: an old man broken with disappointment, worn
out with labor and cares, dragged from Florence to Rome with a threat from the Pope that if he delays he will be
“brought in chains,” and abandoned by the Grand Duke who should have protected him — a man able vividly to
remember the burning of his fellow Italian, Giordano Bruno, in the same city for the same heresy, and to
remember also that only 8 years earlier the Archbishop of Spalatro had died in prison and had his body and his
writings burned in public for heresy. Perhaps Galileo reasoned that his truth would prevail no matter what he
did, in his fear and weakness, to save himself from further pain and suffering.

So he avoided death, but at a price he must have thought too high at times. Exiled from his family, from
friends and colleagues, and from his beloved work he had to see men who defended him severely punished.

When a special commission reported that he was blind and wasted with sorrow and illness, the church —
confident it had won and could afford to show it had a heart after all — gave the dying man a little more liberty,
but under close surveillance. In his final days, Galileo had to hear that the truth he had proved had been
carefully weeded out from universities all over Europe. The true feelings of the church were revealed when
Galileo was spoken of in a scientific paper as “renowned.” The Inquisition ordered that the word be changed to
“notorious,” and theologians continued to launch one attack after another. Here is one example of their logic,
from a religious work dedicated to Cardinal Barberini: “Animals, which move, have limbs and muscles; the earth has no limbs or muscles, therefore it does not move. It is angels who make Saturn, Jupiter, the sun, etc., turn round. If the earth revolves, it must also have an angel in the center to set it in motion; but only devils live there; it would therefore be a devil who would impart motion to the earth.” Imagine knowing what that great mind knew, and having to listen to such nonsense!

Persecution did not end, even with the old man’s death. He begged for burial in the family tomb: the church said No. His friends wanted a monument: “Not,” said the Pope, “for a man who has given so great a scandal to Christendom.” So he was buried apart from family, with no fitting ceremony, no monument, no epitaph. Not until 40 years later did someone dare to write an inscription above his bones, and not until 100 years later did someone else dare to transfer his remains to a suitable place and erect a monument to one of the keenest scientific minds the world has ever known. To protect itself, the church, over the next 350 years, misrepresented the history of its dealings with Galileo and invented theories to blacken his memory until, just a few years ago, it admitted formally that it had been wrong. It took a while!

I caution you to remember something: the scandal of religion’s response to Galileo should not be used to bash the Roman Catholic Church. That embarrassing chapter in the history of Christianity was the result of closed minds, rigid dogma, and too much civil and political power. Most Protestants of the time held the same view of the universe as the Roman church, and given its unity and power would have acted, I am convinced,
exactly the same. As recently as a little over a century ago, through the publishing house of the Missouri Synod of the Lutheran Church, one of their prominent leaders issued a bitter attack on the whole modern system of astronomy. “The Holy Scripture settles the question,” he said. “The earth...stands fixed....” At least by that time, although it was still a hundred years away from a formal apology, the Catholic church new better.

It’s fascinating to read the sequel to the Galileo case. All books teaching his hated belief that the earth revolves on its axis and moves around the sun were put on the Index of books forbidden to Christians by order of the reigning Pope. But the march of scientific truth was inexorable, and from all sides came continued proof that Copernicus and Galileo were right. The most clearheaded Catholics and Protestants slowly realized their cause was lost. In 1757 one of the most enlightened in the long line of popes, Benedict XIV, took up the matter, and the Congregation for the Index secretly allowed the ideas of Galileo to be tolerated, but they still could not bear to admit publicly that the church had made a mistake: when a great French astronomer tried, a few years later, to get the authorities at Rome to take Galileo’s work off the Index of forbidden books, they refused.

And to show how long and foolishly the vengeance against a supposed heresy can continue, an event as late as the Spring of 1829 will do. A great multitude assembled in Warsaw to honor the memory of Copernicus and to unveil Thorwaldsen’s great statue of him. Unlike Galileo, coming along later, Copernicus had only a theory and no telescopes to prove it. He had lived a pious life, beloved for his quiet Christian charity to others. No fault had ever been found with his purely religious belief: he was a canon of the church in one town, and
over his grave had been written the most touching of Christian epitaphs. So, naturally, the people of Warsaw expected a religious service on the day of their celebration of his life. It was understood that this was all arranged, but the procession marched to the church and waited....and waited....and no priest showed up. It turned out that none could be persuaded to come. It had been almost 300 years since this gentle, pious man — one of the noblest gifts of God to religion as well as to science — had published his theory that the earth moves....and he was still under the ban!

So how much did it matter, this closed mind to scientific truth that contradicted ancient religious doctrine? Take one example: the great French physicist Rene Descartes wanted to combine all knowledge into a *Treatise on the World*, and as part of that hope he gave 11 years to the study of anatomy alone. Medicine would have made a quantum leap into the future. But the fate of Galileo robbed Descartes of courage to buck the church: he gave up his great plan forever. If you are ever tempted to want a theocracy, with religion holding supreme power over philosophical and scientific research, consider what the oppression of free thought has cost us: pro-fessors forced to teach that the sun and planets revolve around the earth, that comets are fireballs flung by an angry God, that insanity is demon possession and not an illness, that anatomical investigation of the human body is a sin against the Holy Spirit, that chemistry leads to sorcery, that geology must conform to ancient Hebrew poetry, read literally. Millions of people suffered and died because of superstition that held back research into the causes of disease. In England, inoculation against smallpox was denounced. In Scotland
men opposed the use of chloroform in childbirth because this put aside God’s decree after the Fall that women should suffer. Religion itself suffered from its own bigotry: thousands of thoughtful men and women were driven out of it who might have made it glorious. College students, reading the history we have discussed, decide the church has no relevance, and use their talent and energy elsewhere. As someone said once, about Copernicus and Galileo and Darwin and their kind: the reason churchmen have so often been opposed to light, is that over and over they have mistaken the dawn for a fire — and have been afraid. How could there be a better time to repeat the great maxim of Someone who was not afraid: “You shall know the truth, and the truth shall make you free.”

We accept the idea, gracious God, that to be open to new truth is to risk mistakes, but that to be dogmatic and inflexible is fatal. Keep us curious, and save us through humility, we ask in the name of Christ our Lord. Amen.