

Unity of Truth -- the Galileo Story

Catholic scientists today

The headline for Zenit (The World Seen from Rome) on May 25, of the year 2000 was "2,500 Scientists Cross Threshold of Holy Door." The story goes on.... "The scientists gathered in the Vatican at the conclusion of the Jubilee celebrations of the world of science... Last evening, the participants and other scientists who arrived in Rome went to the Church of the Holy Spirit in Sassia, a few blocks from the Vatican, to pronounce their 'mea culpa' together for the abuses committed by science, especially during the 20th century, as well as for the prejudices of some believers about the 'legitimate autonomy of science.' This morning the most symbolic event of all took place: thousands of men and women of science... together crossed the threshold of the Vatican Basilica to witness to their faith in Christ and their desire for conversion."

There's something a little curious going on here.... Many people who see the words Catholic and scientist in the same sentence think next of Galileo because there is a sort of myth that Galileo was one of the only Catholic scientists and that the church hates science and scientists beginning with him. Why do so many people buy this idea, this myth when there have been hundreds and hundreds of good Catholic scientists and dozens of really great ones, such as, for example, Lavoisier, Pasteur, Mendel, Nieuwland and LeMaitre?

The background of the confusion

I suggest that this is a piece of nineteenth century propaganda which continues to operate by the following two-step process:

Step one:

First, the story of Galileo's actual encounter with the Church is told in an extremely misleading way. It is a highly complex story... which gets simplified as: Galileo scientifically discovered that the earth orbits the sun. This upset church doctrine... so Galileo was suppressed, or imprisoned, or excommunicated, or tortured, or you name it, by the Church, to make him recant. Or there is an even simpler version of the story: The Bad Church suppressed Good Sci

entist. Now, just so you know: Galileo was *not* tortured, or excommunicated, or imprisoned, though he was placed under a sort of house arrest after his trial; moreover, he did not discover that the earth orbits the sun.

That idea, once considered by the Greeks, was rediscovered by Nicolai Copernicus, a Catholic priest and it was published in 1543 under the auspices of the Catholic Church. Nor did Galileo prove that the earth orbits the sun although he tried. His scientific proofs, though clever, were not compelling, and some of them were wrong.

That's step one of the propaganda myth. Galileo as the scientist suppressed by the church.

Step Two:

Step two sets the Galileo story within a prejudicial history as follows: the history of almost any modern scientific discipline -- as for example, biology, astronomy, physics, or chemistry -- frequently begins with a description of what some Greek philosophers thought about the topic and then jumps straight to Galileo, 1500 years later, and discusses him in connection with the founding of the so-called "scientific method." The history, or myth, then mentions that Galileo was suppressed by the Catholic Church and goes on to discuss the other founders of the discipline. The clear impression left is simply this: that the Church tried to strangle science in its infancy but science escaped and here it is -- and don't let it fall into the clutches of the Church again.

Things we have forgotten

Why did I call this myth 19th century propaganda? Because up until 1750 or so, people were indignant over Galileo's treatment but they understood clearly some things that we have forgotten.

First, Galileo didn't prove that the earth goes around the sun, and at the time every one knew it. He made it seem likely. He certainly continued the destruction of the old Greek ideas, of both Aristotle and Ptolemy (which were different, by the way). Galileo had a lot of somewhat indirect evidence. He tried really hard to prove it. But Tycho Brahe, a Danish Lutheran astronomer had developed a

version of the solar system that still involved a stationary earth and Galileo had offered no evidence against this. Further, he (Galileo) insisted on circular orbits for the planets, a model which had long been known to be incorrect.

Second, it was well known that the Church had supported astronomy for a long time because the Catholic Church had, up to 1756, a more accurate calendar than the Protestants, who had refused to accept the Gregorian reform of the calendar some 170 years earlier. That reform calendar was based upon excellent astronomy done by both Catholics and Protestants. (And Galileo had nothing to do with it; he was sixteen when the Catholics reformed their calendar.)

Third, the myth says he was the lonely scientist, but in fact, there were plenty of other Catholic scientists at work at the time. This picture of the lonely Catholic scientist, Galileo, would have been a big joke if not a nationalistic insult to all the others. Richard Westfall, a member of the Galileo Commission, compiled a list of scientists at work between 1500 and 1700 (that is, in Galileo's times). He has six hundred names on the list. Half of them are Catholic.

Fourth, by 1750, Cassini, another devout Catholic scientist, had produced an optical proof that the earth moved around the sun and this was instrumental in having the work of Copernicus removed from the Index of Prohibited Books in 1756. It was at this time that the Protestants adopted the Gregorian calendar. If you've ever heard of confusion over the date of George Washington's birthday this calendar change is the reason. He was born under the old calendar in 1732 and then it was changed with the subtraction of eleven days (and of course, new rules about leap years). Since then, for the sake of consistency, all dating has been retrospectively changed in accord with the Gregorian calendar. The Russians, by the way, were still using the old calendar in 1917. The Russian Orthodox Church still uses it for liturgical purposes.

What happened?

If we reject the Galileo myth what do we think about the Church's attitude toward science? What has its relationship to sci

ence been? What really happened to Galileo? And, perhaps most important for busy homeschoolers, why should we care about any of this?

I will return to the question of why we should care, but let me say quickly that the modern world is dominated by a scientific culture which has been divorced from God. The consequences have been just what could be expected. Science becomes the highest goal, a god for some people, unstoppable, even if it does something monstrous like human cloning. Those who challenge science as godless are discredited in advance by the Galileo myth. We have nothing to fear in studying our world but a great deal to fear in leaving any area of life to those who are completely godless. We have nothing to fear because God is Truth and Truth cannot contradict truth. God created the world. How He arranged it is a fitting subject for study. As Saint Albert the Great said in the 1200's:

“In studying nature we have not to inquire how God the Creator may, as He freely wills, use His creatures to work miracles and thereby show forth His power: we have rather to inquire what Nature with its immanent causes can naturally bring to pass.”

De Coelo et Mundo

Translated, that means that science is not the study of miracles, supernatural causes, but of natural causes and how much they can do. This, the immanent cause, is what God has already built into the universe. Albert the Great also said, “The aim of natural science is not simply to accept the statements of others, but to investigate the causes that are at work in nature” and further, “Experiment is the only safe guide in such investigations.”

How the Church got into astronomy

Well, those are Saint Albert the Great's views but after all what did the Church really do about science? Well, the church supported science for hundreds of years in an effort to achieve the perfect date for Easter. An accurate calendar was a preoccupation of the Church from around AD 300, when the Church first began to realize that the Julian calendar was flawed, until 1580 when the matter was finally settled.