

The only things most people know about Galileo are that he dropped things from the top of the leaning tower of Pisa and that after the Inquisition had forced him to deny that the earth went round the sun he murmured 'But it does move' under his breath. One of the first things the slightly better informed learn about him is that he did not make this legendary murmur of defiance. And yet his is one of the names that goes ringing through history, peeling out confidence to all heretics that *if* they are right their ideas will sometime triumph, and tolling a warning to all who use the powers of Church or State to settle ideological battles.

Galileo and the Dogmatists

If Galileo Galilei had merely been 'the father of modern dynamics', the discoverer of the laws governing moving bodies, the inventor of the telescope and microscope, the explorer of the skies who spotted the moons of Saturn and plotted their paths, he would have been one of the world's great scientists and we would all have learnt about him in school. But the Inquisition, in trying to silence him, turned him from one of the great scientists to one of the great men of history.

That it also spread his banned 'Dialogue on the Great World Systems' throughout Europe and set every enquiring person talking about the crime of Galileo, discussing his ideas and buying his books under the counter wherever they were to be found, is just one of the ironies of life which those who rely on censorship or an iron fist to settle their arguments have never to this day been able to understand.

The ten cardinals who met in 1633 in the Convent of Santa Maria sopra Minerva in Rome (it was, very suitably, an ex-temple to the Goddess of Wisdom), to make Galileo kneel before them in the white shirt of a penitent and swear on the Gospels that he would 'altogether abandon the false opinion that the Sun is the centre of the world and immovable and that the Earth is not the centre of the world and moves', thought they had finished with the wretched old man at last. Seventy years old and broken in health, with blindness coming on, he was to spend the rest of his life under house arrest. (Actually, the Archbishop who took charge of him on his release, turned his archiepiscopal palace into something less like a prison than a court, with Galileo holding it, and open house for learned and admiring visitors who flocked there to discuss the theories he had abjured. Which suggests that in some ways witch hunts were pleasanter in those days.)

So far from their having done with him, the World has never done with them since, and almost from that day to this books have continued to be written, retelling the story of that *cause celebre*, by Jesuits trying to justify the trial, by anti-Catholic enthusiasts who saw Galileo as a magnificent heretic, by historians puzzling over the details of the trial—and they are exceedingly puzzling when you look into them. Berthold Brecht, during his exile in America wrote a play on Galileo, in the English version of which Charles Laughton collaborated and acted over there. It is high time it was published and performed here too, in the English version. Brecht's own company from East Berlin performed it at the Paris Festival in 1955, but whether it is in the repertory in East Germany to-day I have been unable to discover.

Latest to join the discussion is an Italian scholar from Rome, Giorgio de Santillana, now a professor at the Massachusetts Institute of Technology, with *The Crime of Galileo* (Heinemann, 30s.). A progressive, and one suspects a Catholic as well, Professor Santillana deepens one's understanding of the oft-told tale, for he fearlessly draws a parallel between the heresy-hunting of the early 17th century and that of the contemporary world, in the American witch-hunt—in particular the Oppenheimer case—and in the conduct of Lysenko's war on the Soviet geneticists. To his credit, as an American, he devotes more attention to the first, but no Socialist can read the account of how the Jesuit and Dominican dogmatists, vying with each other in their determination to be the truest defender of the faith, built up their case

against Galileo and his abominable ideas, and how they got him in the end, without thinking about our own Socialist heresy hunts too.

However, it is no part of Professor Santillana's aim to 'use' the story of Galileo to beat Soviet heresy hunters or the Un-American Committee: rather, because we live in a new age of dogmatism, he enriches our understanding of Galileo. It wasn't so easy for 19th century scholars, in an atmosphere of expanding freedom of thought, to do this. Sometimes one has the sense that they would have preferred Galileo to go to the stake like Giordano Bruno rather than recant; that his abjuration was just a little craven.

To-day we are too well accustomed to the confessions of heretics in court to adopt this high moral tone. Rather we long to know what made them do it. Torture? Sometimes undoubtedly, but we also know how man can stand up to torture. 'Brain-washing?' Sometimes also, but not in the sense that psychiatry-ridden Americans use the term, to explain the conversion of a soldier in Korea to Socialism. 'Brain-washing' cannot work, any more than hypnotism, unless the victim wants it to work. It's a case of 'Lord I believe ... help thou mine unbelief.'

But most potent, surely in these modern heresy trials (and I include the trial of Rajk, for the reality seems to have been heretical ideas and associations, represented as espionage and plotting against the state), is the victim's own belief in the ultimate Tightness of the movement that has put him on trial, disarming him, undermining confidence in his minority views, putting him at the mercy of his investigators. Where the disagreement is political the struggle to keep one's end up is harder, because there is no hard, experimentally provable fact to turn to—the proof of political wisdom may take a generation to appear.

Galileo was in a stronger position here: when he discovered the telescope in 1610, he thought he had the proof, at last made visible, of the truth of the Copernican theory. Top people had only to look through his spy-glass and examine the heavens, and they would realise that what had passed before as 'the way God made things' was simply a stage in man's ignorance of what God had made. What he did not realise was that the whole intellectual and temporal power of the Church was so deeply embedded in the current conception of an unchanging world, the centre of the universe, that he could not challenge the one without upsetting the other.

But—like many an American scientist, and many a dissident Communist to-day—Galileo was never a heretic, in his own eyes at least. He remained to the end of his life a devout Catholic, and after his trial he was for some time crushed by the shame of having been charged with heresy. And for twenty years before the trial, Galileo seems to have been as much concerned with not pushing the Catholic Church into committing itself to a doctrine which scientific knowledge was increasingly disapproving, as with keeping himself out of trouble. 'Be of good cheer, Galileo, come into the open', pleaded the Protestant Kepler. Instead, Galileo continued to make use of every opportunity of hypothetical argument the Church allowed, but refrained from any head-on battle which, he believed, would be as dangerous to his Church as to himself. First he attempted to meet the churchmen on their own ground, arguing that the literal truth of the Bible (one of the key

points they were defending), was just as 'easy to prove' on Copernican as on Ptolemaic theory. How Joshua stopped the sun was pretty hard to prove on either theory, actually, but Galileo tackled the problem manfully, and his explanation—exquisitely Jesuitical as it seems to modern eyes—might have served in an earlier age, when the Catholic Church was not gathering its strength against the Protestant challenge. 'Two camps' in Christendom made life harder for freethinkers everywhere.

However, it wasn't until the election of the 'progressive' Cardinal Barberini as Pope Urban VIII that Galileo again saw a chance of publishing his ideas, his new philosophy which he had been turning over in his mind for forty years, in the 'Dialogue on the Great World Systems'. Ironically, it was this book, published by permission of the Holy Office, after friendly discussions with Urban himself (a scientific amateur and old friend of Galileo), that brought Galileo's downfall. Its publication provoked the fury of the orthodox and the Pope, feeling himself out-smarted and on a spot, turned violently against Galileo and left him to the mercy of the Inquisition. His trial, his abjuration, the burning of his book followed—and yet, although he was seventy by now, and never recovered his health or freedom, in an odd sort of way the trial released Galileo from his own inhibitions. He had tried to stop the Church making a fool of itself. Well, he had failed, and the Church was committed to a doctrine which Galileo knew to be false. His book was burnt, but Galileo lost no time in having a copy smuggled North to be printed in Holland and distributed from there all over Europe. Surviving letters show him engaged in an active and widespread correspondence, in which there is as much to be read between as on the lines.

Such a man, with such a life, so brilliant and so terribly frustrated, might be expected almost inevitably to turn bitter. Not so with Galileo. To the end of his life, as his letters, and those of his friends prove, he remained warm, witty, gay, a lover of nature and of mankind—except for just one sort of man, the preacher of Immutability, of whom he wrote, 'These people deserve to meet with a Medusa's head that would transform them into statues of diamond and jade, that so they might become more perfect than they are'.

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