The brilliant crimes of galileo



The Brilliant Crimes of Galileo Galileo Galilei, was a man truly fit to be called the father of modern science, a man who became a symbol for the war between the Catholic Church and Science. As history shows us that the Catholic Church doctrines was against Galileo's scientific discoveries in astronomy. It was one of the most important battles between religion and science, where faith and reason clashed. The Catholic Church regretted for the crime that had been committed against Galileo after proven his discoveries as facts. But regrets won't redeem what had been done (Axelrode, 2002). This essay will show a brief introduction of this great man. Then, it will discuss about conflict between Galileo and the church, explaining the Copernican theory, which was a heliocentric theory and also was the main issue of the conflict. After that, it will explain why Galileo had to publicly denounce his beliefs on astronomy. Then it will explain how he became the symbol of the war between science and religion. Galileo, while being a student Studied Astronomy. Astronomy was an important subject; it was one of the seven basic subjects that were required from a scholar to finish in order to become a philosopher. Further more the Vatican considered astronomy as an investigation of god's work (Axelrode, 2002). He moved to Padua University, which was privileged by enlightened freedom, freedom to express and discuss one's ideas and thoughts. That is because it had no control from a king or a pope. During his time in Padua he made a lot of scientific discoveries in both pure and applied science. One of his achievements was the improvement of the telescope. At that time telescopes were hard to made, rare to find and had bad quality. Galileo succeeded in making his own and improved telescope. His financial stats have raised by selling his telescope to merchants and the naval arsenal of

Vennesse. It was sold to the naval arsenal so they can spot enemy ships hours before their arrival to the shores (Axelrode, 2002). In 1609 Galileo pointed his telescope to the moon and started sketching what he saw. That was the turn point that started his crimes against the church. The philosophers described the moon as heavenly body but what Galileo saw and observed was not a heavenly body. It was an un-even body, filled with mountains and valleys, an earth like body, which was the opposite of perfection. He then observed another so called "heavenly body", which was the planet Jupiter. He saw what he called then "fixed stars" right next to Jupiter. After few observations he saw that those "fixed stars" have changed their position relatively to Jupiter. He then realized that they were actually the moons of Jupiter. And as the earth's moon revolves around it, so do Jupiter's moons. Galileo now have discovered astronomical bodies that disagree with the idea that heavenly bodies revolve around the earth alone, that magnificent discovery that will lead him to the conflict with the church (De Santillana, 1902). As Galileo pointed out the flaws in the structure of the moon, which the Church considered it to be perfect heavenly structure, and discovered Jupiter's Moons that revolved around Jupiter and not the earth, which contradicts with the Church Ideas that implied that every thing revolves around the earth. By pointing the fallacies of the Church's Ideas, Galileo attacked the Church and it's own foundation that is build upon. Galileo issued his book Sidereus Nuncius that describes his observation made by his telescope that gave the human race a new idea of what the world is. After the book has been published a new interest has aroused in the heliocentric theory, which will be mentioned later. Galileo became more famous. As his reputation was rising so is his arrogance. People were

irritated by his arrogance and because of it he made a lot of enemies (De Santillana, 1902). Galileo Moved to Florence in order to concentrate on researching rather than teaching, as he was swarmed with students back in Padua University, and now he earned the title "philosopher". Galileo was warned that Florence can be strict and he would lose the privileges that he had in Padua University, especially the enlightened freedom, due to the fact of the heavy influence of the church on Florence. Galileo, underestimating the Catholic Church, adopted the Copernicus theory because it was the best explanation for his observations and discoveries. Nicolaus Copernicus is an astronomer who formed from scientific bases the heliocentric theory, which was named later after him by Copernicus theory. The heliocentric theory states that: the earth and all other planets revolve around the sun and the sun is in the center of the system. This theory contradicts with what was believed back then, the geocentric theory. The geocentric theory stated that the earth is at the center of the universe, not moving and all the heavenly bodies revolve around it. Aristotle, Ptolemy, Natural Philosophers, common people and the Catholic Church embraced the geocentric theory. Also the theory agreed with the scripture, unlike the heliocentric theory, which contradicts directly with the scripture (Axelrode, 2002). In the biblical reference, Psalm 104: 5 that says "He set the earth on its foundations; it can never be moved". Also the Ecclesiastes 1: 5 states that "And the sun rises and sets and returns to its place..." and in Joshua 10: 12-14 that states that Joshua said: "Sun, stand still at Gibeon, and Moon, in the valley of Aijalon." All these biblical references seem to indicate for the catholic church that the geocentric theory is the right one., rather than the heliocentric theory (Avalos, 1998). Galileo by announcing his support to the heliocentric theory

aroused a lot of dilemmas. As his fellow colleges and astronomers, driven by their jealousy and evoked by Galileo's arrogance, complained that he was announcing dangerous ideas. He made a lot of enemies. Enemies who made scandals to bring Galileo down. Galileo was a really religious man. He even sent both of his daughters to church. Although he never said that the bible is wrong, he was condemned with heresy and attempt to disproof the bible. He was honest when he said that the bible and scriptures never lies and they are absolute truth. He thought that the bible and the scriptures were simply miss-interpreted and was taken to literarily. He always thought that, if there was a difference between scriptures and science, then the scriptures are just miss interpreted. He just thought that the bible and the scriptures are not a good Astronomy book (Axelrode, 2002). Galileo's enemies had a great chance to poison people thoughts and persuade them to side against the great philosopher. Galileo, trying to defend his ideas, was miss interpreted by the poisoned people and they reported him to the Church as a heretic. Galileo knew the path of heresy, as the inquisition had power to torture and even execute people. As more and more people complained and sent letters to the inquisition, his file grew bigger and bigger (Axelrode, 2002). Cardinal Bellarmine from the inquisition set his eyes on Galileo, as Bellarmine was interested in Astronomy and was fascinated by his telescope. In 1616 Galileo finally traveled to Rome to clear his name and settle all the commotion. Galileo over estimated his ability to persuade and thought that he could persuade and convince the opened minded in his ideas of heliocentric system. As Galileo attempted to convince the church, cardinals and theologians, he used some keywords that were like an alarm for the conservative. Eventually they thought that something had to be done and

Galileo had to be stopped. Galileo wanted to discuss his case with Bellarmine but unfortunately The Holy office of the inquisition had a meeting to vote on the Copernicus theory three days before Galileo's meeting with Bellarmine. The result was eleven to nothing against the Copernicus theory; blinded by their ignorance the theory was considered a heresy. Bellarmine delivered the news to Galileo and ordered him not to hold or defend the Copernicus theory, and if he refused, he was to be silenced (Axelrode, 2002). So Galileo had to leave the Copernicus theory as all of its books were prohibited. Because Galileo was a religious man he never thought of fighting the Church instead he only wanted them to understand his ideas. As Galileo had an opening in changing the church's mind by finding physical proof that the earth moves around the sun, he began searching for a proof that the earth moves. During his search he have discovered what he called Sun Spots, which also contradicts with the church doctrine, as the church considered the sun as heavenly and perfect, but those so called sun spots pointed out the flaws in the sun and implied that it was not perfect. Yet he never found physical proof (De Santillana, 1902). In 1623, a new pope was elected seven years after the inquisition have banned Copernicus theories, and with it a new hope for Galileo to prove his ideas. Maffeo Barberini at the age of 55 was elected and became Pope Urban VIII. The new Pope, who Galileo considered him to be his friend, was a fan of Galileo and have written poem to Galileo. Galileo was happy with the sudden change of circumstances, he traveled to Rome to meet the new Pope. When he met with the pope he mentioned Capricious Theory and what will become of it. The Pope gave him permission to talk about it as long as it was considered a hypothesis (Axelrode, 2002). Now that the Pope had gave Galileo permission to discuss

the capricious theory and lifted the silence that was forced upon him. He started writing his rhetorical masterpiece: Dialogue Concerning the Two Chief World Systems. The Pope asked Galileo to put arguments for and against the heliocentric theory and not to advocate heliocentrism, because if it did advocate it, it would be a great slap to the Church. As advocating heliocentrism would implies that the church is wrong, and by that it would destroy the foundation of the Church, because the Church cannot and will not ever be wrong. He also asked to put his own thoughts in his book. Only the last requirement was actually considered, as the book was a total advocacy. The book was written in Italic, which was the common language, and had three characters, two philosophers and layman. One of the philosopher represented Galileo and the heliocentrism, the other philosopher represented the Idea against the heliocentrism and the layman was neutral. The book formally and generally showed that it equal consideration for both theories but in reality the book favored the heliocentric theory, which it attacked the Geocentric theory and defended the heliocentric theory. It was a direct insult to the Pope, further more adding more fuel to the fire; Galileo put the Pope's view and words in the Character that was against heliocentric theory. Galileo has now made a powerful enemy, The Pope himself (De Santillana, 1902). Pope Urban VIII did not take this insult lightly and Galileo was called to defend himself, as Galileo has attacked the Church indirectly by advocating the theory and attacking the very basic foundation of the church and its principles, for in the Church's eyes Galileo did not try to unravel the undeniable truth of the heleocentic system but the church saw him as a heretic who would attempt to disproof the Church's beliefs and scriptures, thus destroying the Church and denying everything the church

stand for. In 1633 he would sit for trial on a suspicion of heresy. The whole trial was based on two questions": did the cardinal ballemari forbid the Copernicus theory? And was writing the dialogue a violation of Bellarmi orders? Galileo tried to justify his book and his writings, as he never meant to advocacy the Copernicus theory nor insult the Pope, which only one of those statement are really true because anyone who read the book knew that the Copernicus theory had the better and stronger arguments. In the end of the trial Galileo was forced into a position of false humility, denouncing his ideas and his book as errors and fallacies caused by ambition. He was condemned for suspicion of heresy and was impersonated, which later changed to house arrest due to a settlement. The settlement implied that he announce his errors and denying the capricious theory. His book the dialogue was banned and he was Humiliated (Hellman, 1998). Galileo later became a symbol for the battle between science and religion, the two powers that should never clashes. In 1992, Pope John Paul II showed his regret in how Galileo matters were handled. Galileo had a vision of a world that uses its brain to understand what they see with their own eyes. After Galileo incident, the Church would never attack science and it would think twice before it acts against any scientific theories (De Santillana, 1902). Galileo one of the great scientist in history, who used scientific methods to reach scientific facts. He made a lot of discoveries. The discoveries that raised dilemmas that led him to humility and confinement, and much later gave him the honor and respect that he deserved. Galileo using scientific proof and good argument, tried to proof the heliocentric theory. Galileo showed his honest intentions that his aim was not to attack the church only to proof what is scientifically true, as Galileo was a religious man who thought that the bible was true and would

never lies. He implied that if science and religion would have disagreed then it was not because the bible was wrong but only because it was missinterpreted. He believed that science and religion would never clashes. But all of his attempts were to be unsuccessful and he would lose against the church. Due to the Church's ignorance, Galileo's arrogance and his venomous enemies, the church saw Galileo as a heretic who attempts to destroy the church by attacking its own beliefs. Even when Galileo had the golden chance given by Pope urban VIII, he would still lose against the church. Now that Galileo became the father of modern science and the symbol for the war between religion and science, the Catholic Church will never fall the same mistake again and religion will never clashes with science ever again. References Avalos, H. (1998). The Bible and Astronomy. Free Inquiry magazine, Volume 18, Number 4. Retrieved July 18. 2008 from http://www.secularhumanism.org/library/fi/avalos 18 4. html Axelrode, D. Jones, P. (2002). Galileo's Battle for the Heavens. (Available from Macrcom Projects Pty Ltd Eight Miles Plains QLD4112 Australia) De Santillana, G. (1902). The Crime of Galileo. New York: Time Inc. Hellman, H. (1998). Great feuds in science: ten of the liveliest disputes ever. New York: John Wiley & Sons, Inc.