

# Dbq on the scientific revolution

[History](#), [Revolution](#)



The Scientific Revolution and Enlightenment of the 16th and 17th centuries revolutionized thought and learning. Scholasticism and humanism were replaced with rationalism and the scientific method- empiricism. Scientists were aided by funding by some governments, while others could reject findings that conflicted with their authority. Scientists, or philosophers, were both praised and condemned by religious authorities for either glorifying the intellect of God through research or delving into matter of which only the Scriptures had intellectual authority. The society of other scientists allowed them to combine ideas, while women's expected role kept them from succeeding in the same real. All in all, we see that political, religious, and social factors could both aid and hold back the work of scientists. As science was popularized in the Enlightenment, governments found they would gain wealth and prestige through funding and encouraging scientific research. Jean Baptiste Colbert, the financial minister under Louis XIV, knew this well and suggested that they cause " the arts and science to flourish" by establishing " several academies for both letters and sciences." This would increase the " splendor and happiness of the state (Doc 11)." In fact, Louis XIV had visited the French Royal Academy six years before Colbert sent him this letter, as shown in Document 10, showing his consideration for the activities and possible finding of the Academy. Still, political patrons of the sciences had the power to censor or reject the findings of their protégés. One French monk and natural philosopher, Marin Mersenne, told his patron directly in writing: " if you object to anything, I am ready to remove it entirely (Doc 5)." Than said, he went on to assert the validity of his experiments. Mersenne was willing to make his work acceptable to his noble

patron because he needed the funding. Thomas Hobbes, an English philosopher, reasoned that humans were inherently guilty in the state of nature, and that they required a strong leader, a "Leviathan," to create order out of the chaos that would naturally ensue. In his 1668 work, "Leviathan," he reasoned that "few men care what the truth may be, since it affects no one's ambition," but if truth (science) "conflicted with the interests of those who rule... it would be suppressed (Doc 7)." Thus, Hobbes' thinking shows how political patrons or leaders in general had absolute authority even over scientific findings. Scientists and natural philosophers' work was also affected dualistically by religious factors. Many scientists were religious themselves and sought to reconcile their discoveries with teachings of the Church. Early in the period Nicholas Copernicus dedicated his book "On the Revolution of the Heavenly Spheres" to Pope Paul III because the pope's "love of letters and science." He asserted that he believed his "labors contribute even to the well being of the Church (Doc 1)." This is illuminating, considering that many felt his concept of a heliocentric universe to be insulting the human race, God's ultimate creation. Later in the period, a religious German philosopher, Gottfried Leibniz, showed analytically that since "God governs minds," the products of human minds could better enforce the "happiness of the good and the punishment of the evil (Doc 12)." Even a nonscientist theologian, John Calvin, called astronomy an art which "unfold[ed] the admirable wisdom of God (Doc 2)." On the other hand, some religious people felt that science threatened religion. According to Italian monk Ciampoli in Doc 3, Galileo should have "deferred to the authority of those who have jurisdiction over the human intellect in the

matters of the interpretation of Scripture." He wrote this in reaction to Galileo's discoveries and interpretations of light differences on the moon. The monk reasoned that his opinions could lead to the questioning of the Bible, over which Galileo had no authority. In Doc 8 Walter Charleton, not a member of the clergy negated the idea that atoms could be " eternal or self-governing." Only God could control the " creation and arrangement of the atoms." Thus he set boundaries on how far science could go in explaining the universe. Only God could have set it in motion. Finally, scientists benefited from scientific communities within society, while society kept women scientists in the place. In general, science was seen as a benefit to society. Francis Bacon, the founder of empiricism, defined the goal of science as this: " that human life be endowed with new discoveries and powers." A scientist himself, he was probably enamored within this goal. Across Europe scientific institutions and societies sprang up during this era. As a result, scientists were able to work together and share ideas. Henry Oldenbury of the English Royal Society recognized that " philosophy" would be raised to its greatest heights through " friendship among learned men (Doc 6)." The only real negative societal factor shown through these documents was that of gender roles. Women scientists were thought to neglect their households which were where a woman was meant to be. They could not keep up with fashion and just were not appealing to society. Many thought women's minds were inferior to those of men. Those who were neutral on the subject kept them out of societies (scientific organizations) because they were simply too distractingly out of the norm. Margaret Cavendish came across these hardships as she attempted to succeed in natural philosophy. In Document 9

she laments that because she is a woman, she cannot " set up [her] own school of natural philosophy" as she would like. Thus we see that politics, religion, and society could affect the work of scientists in both negative and positive ways, but through it all science prospered.