

# Scientific revolution in the western civilization

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



Thesis statement. The Scientific Revolution became a real break in the development of science. It influenced the development of philosophical and religious thought being the major contradiction and innovation in the seventeenth and eighteenth centuries and had a great influence on the life of educated people of the Western World. 1.

Introduction. This essay is devoted to the scientific revolution in the Western Civilization. In the paper special attention is paid to philosophical and religious thoughts in the connection to scientific thought. 2.

The Scientific Revolution. Despite of the Eastern Europe where the scientific thought did not exist as a notion and the notion of science was replaced by a notion of philosophy, in the Western Europe the power of religion existed controlling all the spheres of state. In the seventeenth and eighteenth centuries there were the first attempts to look at the world in a different way. The word ' philosophy' was used of ' science'.

At that time many people changed their way of thinking looking away from the religion. They used their logic in an attempt to find answers the the most basic questions about life and death, world and universe. In general, science is an attempt to explain the world without the connection to gods. Science looks at the world as an object trying to explain how the Earth moves, etc. Religion, on the contrary, saw the world as a godlike beginning denying all scientific developments. At that time religion united people and was one of the major tools of power.

Theocracy, a power of religion, meant that the church controlled everything in the state and all the scientific thoughts were not excepted, were denied.

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People were punished for their scientific works and innovations. Much time has passed when science became popular and scientific thoughts were published and people could read these books. The scientific revolution started in 1543 when Nicolas Copernicus published his 'De revolutionibus orbium coelestium' (On the Revolutions of the Heavenly Spheres). The publication of this book was followed by Andreas Vesalius's 'De humani corporis fabrica' (On the Fabric of the Human body) [1].

The scientific revolution influenced the development of philosophical and religious thought in the seventeenth and eighteenth centuries [2]. It had a great influence on the life of educated people of the Western World. The discoveries and scientific works of Copernicus, Kepler, Galileo Galilei, Rene Descartes, Francis Bacon, Albert Einstein, Grace Hopper and Newton became a real innovation at that time. The scientific revolution was a solely Western phenomenon. It took lasted about 150 years and entirely changed the previous ways of thinking.

This revolution is associated with natural science and a change in technology. However, scientific revolution was not just one change, but a number of changes in the way of thinking of people in the Western Europe. These changes influenced every aspect of people's life: sculpture, painting, architecture. In the Middle Ages there were taken the first attempts for understanding the physical world in the medieval universities.

The philosophy began from the works of a well-known ancient philosopher Aristotle that had a great influence on people dominating in the Western Civilization (p. 541). Besides, scientific revolution caused changes in two

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main disciplines – astronomy and biology. At that time biology meant the fundamental rules of anatomy and astronomy studies the solar system [1]. The contemporary world and all its innovations appeared owing to the scientific revolution and as a result, the discoveries. Science became a fundamental source of knowledge, the major feature of the contemporary world.

Causes of scientific revolution: The expansion of trade. Merchants undertook sea voyages and had navigational problems. These problems had to be solved and, as a result, there appeared scientific thought and research for finding possible solutions [2]. 1) Medieval Universities. The philosophical talks and ancient philosophers' studies, such as Aristotle and William Ockham, aroused interest and caused the thought. The Renaissance was a period of great cultural development in Western Europe.

It started in the 14th century [2]. Leonardo da Vinci and Plato were interested in Mathematics. Thus, people became interested in this discipline too, because of the influence of great masters. In general, the scientific revolution had several main aspects. They are the following:· experimental method development;· Mathematics and nature connection;· scientific knowledge in practice;· scientific institutions; development. Scientific revolution did not appear at once.

It developed for some period of time. Even though scientific revolution lasted for too long, it revolutionary changed the way people were thinking [1]. The most significant changes occurred in biology (blood circulation study), astronomy (invention of a new universe model), chemistry (discovery

elements of nature) and physics (invention of laws of gravitation and motion). Thus, occurring in the period of the religious thought and power, scientific revolution brought significant changes to Europe and the whole world [3]. The achievement and discoveries of that period of time formed the basis for the present world and all its innovations.

However, the religious thoughts did not lost its importance and influence on people remaining a necessary force in the lives of European people.