

Bacon was the first to realise the historical significance of science and its methodology and the role it could play in human life. He attempted to give the new scientific movement the impetus and direction it needed to develop by analysing and defining the general methods of science and showing the way in which they could be applied.

Bacon was a philosopher. He began by exploring the possibilities of experimental methods, saying he wanted to be the Columbus of science. In 1605 he published his first book, *The Progress of Learning*, one of the earliest popular books explaining his insights.

In 1620 a part of his major work, *The Great Revival of Learning*, was published, a book that remained unfinished at the time of his death. Bacon divided the book into six parts.

The Introduction, or *The Progress of Scholarship*.

*A Treatise on the New Instruments*, is primarily an analysis of the scientific method and is the most complete part of the book.

It was originally intended to be an encyclopaedia of artisanal learning and experimental facts. The fourth part, which has not been found, deals with how to use the new method to analyse facts.

Discusses past and present scientific theories.

Discusses the new philosophy of nature, with a final synthesis of hypotheses distilled from various facts and existing scientific theories.

Bacon only got as far as the second part of this book. But he had a great influence on both seventeenth-century England and eighteenth-century France. In this work he proposed a theory of scientific understanding based on observation and experimentation, which became known as the theory of induction.

Bacon believed that scientific understanding of nature and technological control went hand in hand, and that both were the result of applying the scientific method. Bacon attached great importance to the inventions of printing, gunpowder and the compass. He used these three inventions as examples to prove that modern man was much more knowledgeable than the ancient Greeks. Bacon said:

"The new scientific method, which thus promotes the development of science and technology, requires, in the first place, to go in search of new principles, new operating procedures, and new facts. Such principles and facts may be found in technical knowledge as well as in experimental science. When we have understood these principles and knowledge, they lead to new applications both technically and scientifically."

Bacon asked James I to issue an order to go and gather knowledge in various areas. He believed that gathering together a large number of facts was the first requirement of his method, and that with an encyclopaedia six times as long as Pliny the Elder's *Natural History*, he could explain all the phenomena of nature.

Bacon's view of the scientific method was based on experimental qualification and induction.

He took a distrustful attitude towards the mathematical and deductive methods used in the scientific method. Bacon only had his original ideas on the methods he advocated, but these original ideas were not immediately applied either. It was not until the nineteenth century that Bacon's qualitative-inductive approach was taken seriously due to the development of evolutionary theory in geology and biology.

In evaluating Bacon's methodology, Marx said:

"Science is the science of experimentation, and the method of science consists in organising sensible materials by rational methods; induction, analysis, comparison, observation and experimentation are rational methods and important conditions."

In applied science, Bacon was interested mainly in the techniques of craftsmen and the process of industrial production, and thus he was called "the philosopher of industrial science".

Bacon was also an essayist. He published in 1624 "the essays" the essays, the writing is very beautiful, is worth reading the masterpiece. There are many famous sentences in it:

The reading of history makes a man wise, the reading of poetry makes a man spiritual, mathematics makes a man circumspect, physics makes a man profound, ethics makes a man solemn, and the science of logic and rhetoric makes a man eloquent; and all things learnt make a man's character.

Truth is the product of time, not of authority.

To organise your time wisely is to save it.

The phrase "scientia potentia est" (or "science is power"), meaning "knowledge is power," is usually thought to be from Bacon.

John Locke (English: John Locke, 29 August 1632 - 28 October 1704, FRS) was a renowned English philosopher, one of the most influential Enlightenment philosophers, and widely described as the father of liberalism[6][7][8]. In intellectual theory, Locke, along with George Berkeley and David Hume, is listed as a representative figure of British empiricism, while Locke also made important contributions to the theory of the social contract. He developed a theory that differed from Thomas Hobbes' state of nature, asserting that a government can only be justified in ruling if it obtains the consent of the governed and guarantees the people's natural rights to life, liberty, and property. Locke believed that a social contract could only be established when the consent of the governed was obtained, and if that consent was lacking, then the people had the right to overthrow the government. John Locke divided the powers of the state into legislative, executive, and external powers and advocated the separation of legislative and executive powers and the unity of executive and external powers; the legislative power was the supreme power of the state.

Locke's ideas had a huge impact on the development of political philosophy in later generations and is widely regarded as the most influential thinker and liberal of the Age of

Enlightenment. His writings also greatly influenced Voltaire and Rousseau, as well as many Scottish Enlightenment thinkers and American Founding Fathers. The American Declaration of Independence was also influenced by his classical republican and libertarian ideas [9].

Locke's theory of philosophy of mind is often regarded as the founder of modernism's "ontology" and theory of the self, and influenced the later writings of David Hume, Jean-Jacques Rousseau, and Immanuel Kant, among others. Locke was the first philosopher to define the concept of the self in terms of a continuous "consciousness", and he also proposed the hypothesis that the mind is a "tabula rasa". Unlike Descartes or Christian philosophy, Locke believed that man is born without memory or thought.