

Some of the factors providing the basis for Industrial Revolution

Secularization: Specifically, modernization involves a process of secularization; that is, it systematically displaces religious institutions, beliefs, and practices, substituting for them those of reason and science. This process was first observable in Christian Europe toward the end of the 17th century. (It is possible that there is something inherently secularizing about Christianity, for no other religion seems to give rise spontaneously to secular beliefs.) At any rate, once invented in Europe, especially Protestant Europe, secularization was carried as part of the “package” of industrialism that was exported to the non-European world. Wherever modern European cultures have impinged, they have diffused secularizing currents into traditional religions and non-rational ideologies.

Encyclopaedia Britannica, 2006, s.v.: ‘modernization’

Empiricism: This is a theory which holds that the origin of all knowledge is sense experience. The term also refers to the method of observation and experiment used in the natural sciences. Often, empiricism is contrasted with rationalism, a theory which holds that the mind may apprehend some truths directly, without requiring the medium of the senses.

<http://skepdic.com/empiricism.html>

The East India Company: It had the unusual distinction of ruling an entire country. Its origins were much humbler. On 31 December 1600, a group of merchants who had incorporated themselves into the East India Company were given monopoly privileges on all trade with the East Indies. The Company's ships first arrived in India, at the port of Surat, in 1608. Sir Thomas Roe reached the court of the Mughal Emperor, Jahangir, as the emissary of King James I in 1615, and gained for the British the right to establish a factory at Surat. Gradually the British eclipsed the Portuguese and over the years they saw a massive expansion of their trading operations in India. Numerous trading posts were established along the east and west coasts of India, and considerable English communities developed around the three presidency towns of Calcutta, Bombay, and Madras.

Calvinism: The most important theological position that Calvin took was his formulation of the doctrine of predestination. The early church had struggled with this issue. Since God knew the future, did that mean that salvation was predestined? That is, do human beings have any choice in the matter, or did God make the salvation decision for each of us at the beginning of time? The early church, and the moderate Protestant churches, had decided that God had not predestined salvation for individuals. Salvation was in part the product of human choice. Calvin, on the other hand, built his reformed church on the concept that salvation was not a choice, but was rather pre-decided by God from the beginning of time. This meant that individuals were "elected" for salvation by God; this "elect" would form the population of the Calvinist church.

The Royal Society: The origins of the Royal Society lie in an "invisible college" of natural philosophers who began meeting in the mid-1640s to discuss the ideas of Francis Bacon. Its official foundation date is 28 November 1660, when 12 of them met at Gresham College after a lecture by Christopher Wren, the Gresham Professor of Astronomy, and decided to found 'a Colledge for the Promoting of Physico-Mathematicall Experimentall Learning'. This group included Wren himself, Robert Boyle, John Wilkins, Sir Robert Moray, and William, Viscount Brouncker. The Society was to meet weekly to witness experiments and discuss what we would now call scientific topics. The first Curator of Experiments was Robert Hooke. It was Moray who first told the King, Charles II, of this venture and secured his approval and encouragement. At first apparently nameless, the name The Royal Society first appears in print in 1661, and in the second Royal Charter of 1663 the Society is referred to as 'The Royal Society of London for Improving Natural Knowledge'.

Quotation from William Tyndale, "A Pathway into the Holy Scripture" (1536?): "These things, I say, to know, is to have all the scripture unlocked and opened before thee; so that if thou wilt go in, and read, thou canst not but understand. And in these things to be ignorant, is to have all the scripture locked up; so that the more thou redest it, the blinder thou art. ... And now, because the lay and unlearned people are taught these first principles of our profession, therefore they read the scripture, and understand and delight therein. And our "great pillars of holy church", which have nailed a veil of false glosses on Moses's face, to corrupt the true understanding of his law, cannot come in. And therefore they bark, and say "the scripture maketh heretics!", and "it is not possible for them to understand it in the English," because they themselves do not in Latin."

<http://www.williamtyndale.com/Opathway.htm>

Tasks:

- a) Choose one of the concepts / items mentioned above and explain in what way they might have helped the Industrial Revolution develop.
- b) Have your class mates explain the impact of the concepts / items they have chosen.
- c) Together, assess the importance of each of these concepts / items.



The Grand Orrery, London, Science Museum (Source: Kulok)