**William Morris**

William Morris was one of the most influential voices in Victorian art and architecture, and his influence spread far into the 20th century in the form of the Arts and Crafts Movement that he helped spawn.

Morris was born at Walthamstow, Essex, in 1834, and attended Marlborough School, and later, Exeter College at Oxford University. He had planned to enter the church, but reading the social commentaries of Ruskin and Caryle (among others) led him to the arts instead. While at Exeter he met the artist Edward Burne-Jones, who was to prove a life-long friend.

After graduating from Oxford Morris worked in the architectural offices of George Street, who specialised in the Gothic Revival style, but he soon left to pursue painting under the tutelage of Dante Gabriel Rosetti.

In 1859 Morris commissioned Philip Webb, a friend from Street's office, to design him a new home, Red House in Bexley Heath. The house was to be built in simple vernacular style using traditional materials.

Morris was annoyed that he could find no good textiles and furniture to decorate his new home, so he decided to design them himself. It was a momentous decision. With friends Burne-Jones, Rosetti, and Webb he formed a small firm, later called Morris and Company, to sell the products they designed.

There was a profound social philosophy behind Morris' designing. He was a committed socialist and medievalist who was horrified by increasing mechanization and mass-production in the arts, and he dreamed of reestablishing the values of traditional craftsmanship and simplicity of design. His slogan was that art should be "by the people, for the people".

Under Morris' leadership the company soon made a name for itself as a high quality producer of such diverse items as stained glass, wallpaper, textiles, and furniture, often with a floral or foliage motif. Unfortunately, the cost of producing these quality items by hand meant that they were too pricey for ordinary people. Only the rich could afford the products of Morris and Company, a fact which caused him great distress.

Morris was also a poet, his The Earthly Paradise (1868-70) meeting with wide success. He translated classical and Icelandic works, and wrote romances such as The Well at the World's End.

He was active in radical politics, notably the Democratic Federation and the Socialist Leaguue. In 1890 Morris founded the Kelmscott Press near his last home of Kelmscott House in Oxfordshire. He died at Kelmscott House in 1896.

The ideals generated by Morris' efforts went far beyond the success of his company, however. They gave rise to a whole new interest in the medieval period, the Arts and Crafts Movement, and even such later 20th century ideals as Art Nouveau. Moriss was enormously influential in the late Victorian period as a social reformer and his ideas on the value of simplicity and the importance of the individual craftsperson are still with us today.

**Enlightenment**

Enlightenment was a European intellectual movement of the 17th and 18th centuries in which ideas concerning God, reason, nature, and humanity were synthesized into a worldview that gained wide assent in the West and that instigated revolutionary developments in art, philosophy, and politics. Central to Enlightenment thought were the use and celebration of reason, the power by which humans understand the universe and improve their own condition. The goals of rational humanity were considered to be knowledge, freedom, and happiness.

The Enlightenment was both a movement and a state of mind. The term represents a phase in the intellectual history of Europe, but it also serves to define programs of reform in which influential literati, inspired by a common faith in the possibility of a better world, outlined specific targets for criticism and proposals for action. The special significance of the Enlightenment lies in its combination of principle and pragmatism. Consequently, it still engenders controversy about its character and achievements. Two main questions and, relating to each, two schools of thought can be identified. Was the Enlightenment the preserve of an elite, centred on Paris, or a broad current of opinion that the philosophes, to some extent, represented and led? Was it primarily a French movement, having therefore a degree of coherence, or an international phenomenon, having as many facets as there were countries affected? Although most modern interpreters incline to the latter view in both cases, there is still a case for the French emphasis, given the genius of a number of the philosophes and their associates. Unlike other terms applied by historians to describe a phenomenon that they see more clearly than could contemporaries, it was used and cherished by those who believed in the power of mind to liberate and improve. Bernard de Fontenelle, popularizer of the scientific discoveries that contributed to the climate of optimism, wrote in 1702 anticipating “a century which will become more enlightened day by day, so that all previous centuries will be lost in darkness by comparison.” Reviewing the experience in 1784, Immanuel Kant saw an emancipation from superstition and ignorance as having been the essential characteristic of the Enlightenment.

Before Kant’s death the spirit of the siècle des Lumières (literally, “century of the Enlightened”) had been spurned by Romantic idealists, its confidence in man’s sense of what was right and good mocked by revolutionary terror and dictatorship, and its rationalism decried as being complacent or downright inhumane. Even its achievements were critically endangered by the militant nationalism of the 19th century. Yet much of the tenor of the Enlightenment did survive in the liberalism, toleration, and respect for law that have persisted in European society. There was therefore no abrupt end or reversal of enlightened values.

**George Stephenson**

George Stephenson was born on June 9, 1781, in Wylam, near Newcastle-on-Tyne. His father Robert worked in the Wylam Colliery as a fireman, and the family's cottage was right beside the Wylam Wagonway. This wooden track took wagons from the colliery to the Tyne river for transport.

George was fascinated by machines from an early age. He took evening classes in reading and writing, even after he joined his father as a colliery worker. In 1802 George Stephenson became an engineman, and soon after he married Frances Henderson. Together they had one child, Robert, but Frances suffered from consumption and died in 1806. Stephenson later married twice more.

Stephenson moved to Killingworth Colliery as an engineman, but his fascination with machines continued, and in his spare time he took apart the colliery engines to discover how they worked. So swiftly did he learn that he was appointed enginewright by the colliery in 1812.

Stephenson developed a new safety lamp that would not explode when used near the highly flammable gasses found in the mines.

He also convinced the mine manager to experiment with steam locomotion. By 1814 he developed the Blutcher, which was capable of pulling 30 tons up a grade at 4 miles per hour. His design was the first to successfully use flanged wheels running on rails.

Over the next several years Stephenson built a further 16 engines at Killingworth. The mine owners were so impressed with his accomplishments that they put him to work building an 8 mile railway from Hetton to Sunderland.

Stephenson was hired by the Stockton and Darlington railway to help build the line linking collieries at West Durham and Darlington with the River Tees. With his son Robert Stephenson he formed Robert Stephenson & Company, the first locomotive building company in the world, headquartered in Newcastle. The first locomotive engine produced by the new company, called Locomotion, was finished in the fall of 1825.

The Stockton & Darlington line was officially opened on September 27, 1825. To rapt attention from crowds of onlookers, Stephenson guided the Locomotion along the 9 mile track in just under 2 hours.

Stephenson was hired by other railways, such as the Bolton & Leigh. But his big triumph came in 1829. The proposed Liverpool & Manchester railway directors held a trial to determine which locomotive to use for their railway. The winner also received the huge sum of GBP500.

The contest was held at Rainhill, and of ten engines entered, only 5 turned up and just 3 functioned well enough to take part in the Rainhill Trials. The winner was Rocket, produced by the Stephensons.

Stephenson went from strength to strength. He was chief engineer for the Manchester & Leeds, Birmingham & Derby, Normanton & York and Sheffied & Rotherham railways. He was constantly innovating, constantly improving his engines and the tracks.

He was so successful that he was able to purchase Tapton House, near Chesterfield, in 1838. He invested in coalmines, ironworks, and quarries, and also experimented with animal husbandry and stock breeding.

George Stephenson died at Tapton House on August 12, 1848.

**Isaac Newton**

Isaac Newton was born on 4 January, 1643 in Woolsthorpe, Lincolnshire (25 December, 1642, according to the Old Style calendar). His father, also named Isaac, died before he was born. Isaac's mother Hannah remarried when Isaac was only two years old, and he was left in the care of his grandmother.

He was educated at Grantham Free Grammar School, where he showed no aptitude for study. His mother removed him from school and gave him the task of managing her estate, but at this he also proved unfortunately inept.

He was allowed to return to school, and he must have improved his study habits, for his mother was persuaded to allow him to enter university at Trinity College, Cambridge.

Newton intended to study law, but his taste quickly turned to mathematics. He received his bachelor's degree in the spring of 1665, but then an outbreak of the plague forced the university to close, and Newton returned to his Lincolnshire home.

It was during this time of retreat that the famous incident of a falling apple gave Newton the first glimmerings of the ideas he later developed into his study of gravitational forces.

In the two years he spent in inadvertent exile from Cambridge, Newton made extraordinary strides in mathematics, creating the basis of modern calculus. He wrote De Methodis Serierum et Fluxionum in 1671, though it was not published during his lifetime.

When Cambridge reopened, Newton became a Fellow of Trinity College. His fresh ideas began to circulate among the leading mathematicians of the day. He also delved into astronomy and optics.

He was one of the first to argue that white light is actually composed of many different colours, and he constructed one of the first reflecting telescopes. He donated one of his telescopes to the Royal Society in 1672, and was named a full fellow of the society. Unfortunately, Newton quarreled with several of the leading scientists of the time, and was reluctant to publish his experiments and philosophies.

It was only under the urging of astronomer Edmund Halley (he of Halley's Comet fame) that Newton was persuaded to publish his ideas on physics and astronomy, Philosophiae naturalis principia mathematica (1687). In this work he first laid out his law of universal gravitation. The book provoked a storm of scientific argument and admiration.

Shortly after this he was elected to Parliament as a representative of the university. In 1693 Newton suffered a nervous breakdown, and a few years later he became Master of the Royal Mint. He was elected president of the Royal Society in 1703, a position he held until his death. In 1705 he became the first scientist to be knighted for his work.

Newton remained suspicious of his fellow scientists, and protective of his ideas and his reputation. His final years were given over to a distasteful conflict with Liebniz, disputing who had invented calculus. He went so far as to appoint a supposedly impartial committee of the Royal Society to decide the issue, however, it seems clear that he himself wrote the committee's report in his own favour.

Isaac Newton died on March 31, 1727 (New Style calendar), in London, and he was buried in Westminster Abbey.

**Mayflower**

Mayflower was the ship that carried the Pilgrims from England to Plymouth, Massachusetts, where they established the first permanent New England colony in 1620. Although no detailed description of the original vessel exists, marine archaeologists estimate that the square-rigged sailing ship weighed about 180 tons and measured 90 feet (27 metres) long. In addition, some sources suggest that the *Mayflower* was constructed in Harwich, England, shortly before English merchant Christopher Jones purchased the vessel in 1608.

Some of the Pilgrims were brought from Holland on the Speedwell, a smaller vessel that accompanied the *Mayflower* on its initial departure from Southampton, England, on August 15, 1620. When the Speedwell proved unseaworthy and was twice forced to return to port, the *Mayflower* set out alone from Plymouth, England, on September 16, after taking on some of the smaller ship’s passengers and supplies. Among the *Mayflower’s* most-distinguished voyagers were William Bradford and Captain Myles Standish.

Chartered by a group of English merchants called the London Adventurers, the Mayflower was prevented by rough seas and storms from reaching the territory that had been granted in Virginia (a region then conceived of as much larger than the present-day U.S. state of Virginia, at the time including the Mayflower’s original destination in the area of the Hudson River in what is now New York state). Instead, after a 66-day voyage, it first landed November 21 on Cape Cod at what is now Provincetown, Massachusetts, and the day after Christmas it deposited its 102 settlers nearby at the site of Plymouth. Before going ashore at Plymouth, Pilgrim leaders (including Bradford and William Brewster) drafted the Mayflower Compact, a brief 200-word document that was the first framework of government written and enacted in the territory that would later become the United States of America. The ship remained in port until the following April, when it left for England. The true fate of the vessel remains unknown; however, some historians argue that the Mayflower was scrapped for its timber, which was then used in the construction of a barn in Jordans, Buckinghamshire, England. In 1957 the historic voyage of the Mayflower was commemorated when a replica of the original ship was built in England and sailed to Massachusetts in 53 days.

**Thomas Paine**

Thomas Paine was born on the twenty-ninth of January 1737 at Thetford, Norfolk in England, as a son of a Quaker. After a short basic education, he started to work, at first for his father, later as an officer of the excise. During this occupation Thomas Paine was an unsuccesfull man, and was twice dismissed from his post. In 1774, he met Benjamin Franklin in London, who advised him to emigrate to America, giving him letters of recommandation.

Paine landed at Philadelphia on November 30, 1774. Starting over as a publicist, he first published his *African Slavery in America*, in the spring of 1775, criticizing slavery in America as being unjust and inhumane. At this time he also had become co-editor of the *Pennsylvania Magazine*On arriving in Philadelphia, Paine had sensed the rise of tension, and the spirit of rebellion, that had steadily mounted in the Colonies after the Boston Teaparty and when the fightings had started, in April 1775, with the battles of Lexington and Concord. In Paine's view the Colonies had all the right to revolt against a government that imposed taxes on them but which did not give them the right of representation in the Parliament at Westminster. But he went even further: for him there was no reason for the Colonies to stay dependent on England. On January 10, 1776 Paine formulated his ideas on american independence in his pamphlet Common Sense.

In his *Common Sense*, Paine states that sooner or later independence from England must come, because America had lost touch with the mother country. In his words, all the arguments for separation of England are based on *nothing more than simple facts, plain arguments and common sense.* Government was necessary evil that could only become safe when it was representative and altered by frequent elections. The function of government in society ought to be only regulating and therefore as simple as possible. Not suprisingly, but nevertheless remarkable was his call for a declaration of independence. Due to the many copies sold (500.000) Paine's influence on the Declaration of Independence of July 4, 1776 is eminent. Another sign of his great influence is the number of loyalist reactions to Common Sense.

During the War of Independence Paine volunteered in the Continental Army and started with the writing of his highly influencial sixteen American Crisis papers, which he published between 1776 and 1783. In 1777 he became Secretary of the Committee of Foreign Affairs in Congress, but already in 1779 he was forced to resign because he had disclosed secret information.

In 1787 Thomas Paine left for England, innitialy to raise funds for the building of a bridge he had designed, but after the outbreak of the French Revolution he became deeply involved in it. Between March 1791 and February 1792 he published numerous editions of his Rights of Man, in which he defended the French Revolution against the attacks by Edmund Burke, in his *Reflections on the Revolution in France*.

When he came back to America (1802) back to America, he saw that he was forgotten for what he had done for this country. He continued his critical writings, for instance against the Federalists and on religious superstition.

After his death in New York City on June 8, 1809 the newspapers read: *He had lived long, did some good and much harm*, which time judged to be an unworthy epitaph.

**Alfred Tennyson**

Alfred Tennyson was born on August 5, 1809 in Somersby, Lincolnshire, where his father George was a clergyman. Young Alfred began writing poetry at a very early age, and published his first work "*Poems by Two Brothers*" at the tender age of sixteen.

In that same year of 1827 Tennyson entered Cambridge University, where he befriended Thackery and produced his second collection, "*Poems, Chiefly Lyrical*". He also met Emily Selwood, to whom he became engaged in 1839.

The Selwood family objected to the engagement, partly because of Tennyson's lack of money, and partly because his brother Charles was unhappily married to Emily's sister Louisa.

Tennyson poured his energy into writing, and his "*Poems*" of 1842 made him extremely popular. He let his doctors convince him to give up writing for a time because of his poor health, but the respite was temporary. In 1847 "*The Princess*" was another success, and two years later Tennyson married Emily in a secret ceremony.

When William Wordsworth died, the post off Poet Laureate became available. On the strength of Prince Albert's appreciation for Tennyson's *In Memorium*, he was given the position. One of his most popular and enduring works, *The Charge of the Light Brigade* (1854), was just one of Tennyson's many poems which dealt with famous events in English history.

When Prince Albert died in 1861 Tennyson's epic "*Idyll's of the King*" was dedicated to him. The Idyll's, a retelling of the tale of King Arthur, were immensely popular with readers and equally unpopular with reviewers.

In his later years Tennyson tried his hand at plays, but his efforts were not well recieved. Queen Victoria offered him a baronetcy on several occassions, but the shy Tennyson was not induced to accept until 1884.

Alfred, Lord Tennyson, died on October 6, 1892. To honour his request, his poem "*Crossing the Bar*" is always the last piece printed in any collection of his poems.

**Christopher Marlowe**

Christopher Marlowe was born in Canterbury in 1564, the same year as his great rival William Shakespeare. Though his father was only a shoemaker, Marlowe was educated at King's School and awarded a scholarship to Corpus Christi College, Cambridge. While at Corpus Christi he studied philosophy, history, and theology.

At this point Marlowe disappeared from university, and later speculation was that he was recruited by the government for espionage work. When he returned to Cambridge, Marlowe was refused his M.A. degree due to suspected Catholic sympathies, until the Queen's Privy Council intervened on his behalf.

In 1587 Marlowe left Cambridge again, this time for the life of a London playwright. His first major work, Tamburlaine the Great, was performed in that yea

Christopher Marlowe was a quick-tempered man, quick to anger and quick to make enemies. He spent two weeks in Newgate Gaol in 1589, charged with murder, though he was later acquitted. Although suspected of a variety of crimes ranging from heresy to homosexuality, it seems clear that Marlowe's unknown government connections kept him out of serious trouble.

Marlowe's dramatic career was only to span six short years. In that time he wrote The Jew of Malta, The Tragical History of Doctor Faustus, The Queen of Carthage, Edward II, and The Massacre at Paris. His work ranged from tragedy to historical drama, but he also wrote popular poetry such as Hero and Leander, and The Passionate Shepherd ("Come live with me and be my love; and we shall all the pleasures prove...").

The difficulty in evaluating Marlowe's work is that so few good copies exist. None of his plays were ever properly published. His great contribution to English theatre must lie in his influential use of blank verse in writing his dramatic works. Marlowe was the first to use blank verse in drama, but William Shakespeare soon followed his example to great acclaim.

Christopher Marlowe's death in 1593 was as shrouded in mystery as his life was clouded by controversy. The long-accepted version is that he and a close friend, one Ingram Frizer, dined in a tavern in Deptford. The two men quarreled over paying the bill, and in the fight that followed, Marlowe grabbed Frizer's dagger and attacked him from behind. Frizer managed to wrest the dagger from Marlowe and stabbed the author fatally in the eye.

However, the truth may not be so straightforward. One week before his death, Marlowe's roommate Thomas Kyd was kidnapped and tortured by the Queen's Privy Council into implicating the author as a heretic and an atheist. A warrant was issued for his arrest, but death intervened.

Or did it? Marlowe's companions on his final night had close connections to Francis Walsingham, Elizabeth I's spymaster. Speculation has persisted that Marlowe's death was faked on Walsingham's orders, to put an end to the Privy Council's pursuit of his protege. Even more outrageous theories have surfaced that the well-educated Marlowe was actually responsible for much of the work attributed to Shakespeare.

**Thomas Telford**

Thomas Telford was born near Westerkirk, Dumfries, Scotland, in 1757, the son of a poor shepherd. He apprenticed for a time to a stonemason in Langholm, and worked on the construction of Edinburgh's Newtown, before moving to London in 1782 in search of work. There he helped design and build Somerset House, but later moved to Portsmouth as manager of works at the dockyards.

A patron from Dumfries got him the post of Surveyor of Public Works for the County of Shropshire. In this capacity he was responsible for the construction of the Ellesmere Canal in 1793, and the Severn Suspension Bridge at Montford (1790). This bridge was an engineering marvel, and it helped make his reputation as one of the greatest civil engineers in Britain.

His success led to a government appointment t\o survey the roads in rural Scotland as part of a major transportation improvement scheme. His survey results were accepted and Telford was asked to oversee the construction of some 1,000 miles of roads and 120 bridges – a job which took him over 20 years to complete.

Also in Scotland, Telford worked on dock improvements in Wick, Aberdeen, Peterhead, Leith, and Banff, as well as the Caledonian Canal project linking a series of freshwater lochs with 20 miles of canals.

Telford's engineering horizons were not confined to Scotland; he worked on the Menai Suspension Bridge linking the island of Anglesey with the Welsh mainland, and on suspension bridges, roads, and canals throughout Great Britain.

Telford did not invent the suspension bridge, but he was one of its chief proponents at a time when its use was a matter of debate. Telford himself must have had some doubts about the safety of his own designs, for he was given to lengthy prayers on the days the chains were scheduled to take the weight of the bridge.

His use of the cast iron arch bridge at Craigellachie in Scotland and the Waterloo Bridge in Wales turned structure into a form of art. In 1818 Telford helped found the Institute of Civil Engineers, and he served as its first president.

Thomas Telford died on September 2, 1834 and is buried in the nave of Westminster Abbey, London.

**Channel Tunnel**

Channel Tunnel, also called Eurotunnel, is the rail tunnel between England and France that runs beneath the English Channel. The Channel Tunnel, 31 miles (50 km) long, consists of three tunnels: two for rail traffic and a central tunnel for services and security.

The construction of the Channel Tunnel (the Euro Tunnel), is a great technological feats of the 20th century. In 1986, after almost 200 years of debate and planning, the governments of England and France finally agreed to start building the tunnel.

The tunnel runs between Folkestone, England, and Sangatte (near Calais), France, and is used for both freight and passenger traffic. Passengers can travel either by ordinary rail coach or within their own motor vehicles, which are loaded onto special railcars. Trains can travel through the tunnel at speeds as high as 100 miles (160 km) per hour; the trip takes about 35 minutes.

The often-considered idea of constructing a tunnel under the English Channel was revived in 1986 by the United Kingdom and France. A rail tunnel was chosen over proposals for a very long suspension bridge, a bridge-and-tunnel link, and a combined rail-and-road link, and the project was privately financed by a consortium of British and French corporations and banks; the Anglo-French company operating the tunnel is called Eurotunnel. Digging began on both sides of the Strait of Dover in 1987–88 and was completed in 1991. The tunnel was officially opened on May 6, 1994.

In June–July 2015 the problem of migrants – many of them from eastern Africa – sneaking aboard vehicles on trains in an attempt to immigrate to the United Kingdom reached crisis proportions. During that period at least nine individuals were killed while trying to make their way to England via the tunnel. The United Kingdom and France stepped up security measures to try to deter migrants from attempting the crossing.