

# Architecture and Civilization

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## **Abstract**

This essay argues that Architecture is the major bearer of Civilization, over and above written text or actions and deeds. It starts by posing the question: What is Civilization and posits that Civilization is more than energy, will, and creative power. Such a statement is explored throughout major civilization periods: the Middle Ages, the Gothic Period, the Renaissance, the Baroque and Rococo, the 18<sup>th</sup> Century, and the Industrial Revolution from the vantage point of reasons for the rise and fall of civilizations.

Keywords: *civilization, architecture, classicism, perspective representation, and proportion*

## **What is Civilization**

What is civilization? Ruskin said, "Great Nations write their autobiographies in three manuscripts, the book of their deed, the book of their words, and the book of their art. Not one of these books can be understood unless we read the other two, but of the three the only trustworthy one is the last". To me the last is Art and Architecture.

Great works of art and architecture can even be produced in barbarous societies. In fact, the very narrowness of primitive society gives their architecture a peculiar concentration and vitality. The late antique world was full of meaningless rituals, mystery religions that destroyed self-confidence, and that led to exhaustion, the feeling of hopelessness which can overtake people even with a high degree of material prosperity.

Civilization requires a modicum of material prosperity, and confidence in the society in which one lives; a belief in its philosophy, a belief in its laws, and confidence in one's own mental powers. The way in which the stones of Karnak Temple are laid is not only a triumph of technical skill, but shows a vigorous belief in discipline – having had a weight of energy behind them.

People sometimes think that civilization consists in fine sensibilities and good conversation and all of that. These can be among the agreeable results of civilization, but they are not what make a civilization and a society acquire these amenities or eventually become dead and rigid. So, if one asks why the civilization of the Ferrous collapsed, the real answer is that it was exhausted. Likewise, the first invaders of ancient Hekaptah (The Delta of Egypt) became exhausted, too. As so often happens, they seem to have succumbed to the same weakness as the people they conquered. They do not seem to have been particularly destructive; they may have made some quite impressive constructions.

## ***Civilization is more than energy, will and creative power***

Civilization might have drifted downstream for a long time, but in the middle of the seventh century there appeared a new force, with faith, energy, a will to conquer, and an alternative culture: Islam. The strength of Islam was its simplicity. In a miraculously short time – about fifty years – the classical world was overrun and the old source of civilization was sealed off.

The subject of Mediterranean architecture was man, and had been so ever since early Egypt. He is a decorative cipher or hieroglyphic; and in his place are fabulous animals and birds. The sense

of material and the craftsmanship is finer, more confident, and technically more advanced than in the West.

Civilization means something more than energy, will and creative power. Almost the only stone building that has survived from the centuries after the mausoleum of Theodoric is the Baptistry at Poitiers. Although the builders of the Baptistry have tried to use some of the elements of Roman architecture, capitals, pediments, pilasters, they have forgotten their original intention. But at least this construction is meant to last.

The idea that material substances could be made spiritual by art alone belongs to a later phase of medieval thought. And yet this use of art to encase objects with religious value was really an indirect expression of the same state of mind.

## ***The Middle Ages***

In the tenth century, Christian art took on the character it was to retain throughout the Middle Ages. Its decorations were subordinated to philosophical ideas; for instance, in the few remaining sculptures at Clany, there are a series of capitals representing the tones of music. Sculpture and painting in the early twelfth century was self-delighting, and the motive force behind them was simply irrepressible, irresponsible energy. The Romanesque carvers were like a school of dolphins. The Mosaic master produced a piece of self-expression in the mullion of the church of Souillac, which is surely one of the most bizarre and terrifying works of art ever produced in Western Europe before the present century.

The twelfth century art in a sense was the pulling of everything to bits and reshaping it; this complemented the massive stability of its architecture. The royal Abbey of St. Denis had been famous enough in early times, but the part it played in western civilization was due to the abilities of one extraordinary individual, the abbot Suger. He was one of the first men of the Middle Ages whom one can think of as modern.

Suger had a passionate love of art. His work had a philosophic basis that is very important to western civilization. He argued that we could come to understand beauty, through the effect of precious and beautiful things on our senses, and the dull mind rises to truth through that which is material. This was really a revolutionary concept in the Middle Ages. It was the intellectual background of all the sublime works of art of the next century and in fact has remained the basis of the belief in the value of art until today.

In addition to this revolution in theory, Suger's St. Denis was also the beginning of many new developments in practices in architecture, in sculpture, and in painted glass. Owing to its connection with royalty, the church was knocked about during the French Revolution, and then all too thoroughly restored. But one can still see that Suger introduced, perhaps really invented, the Gothic style of architecture; not only the pointed arch, but the lightness of high windows – what we call the clerestory and triforium. "Bright" he says, "is the noble edifice that is pervaded by new light", and in these words anticipates all the architectural aspirations of the next two hundred years. One knows that he introduced the idea of the rose window, and a few pieces of his painted glass are still to be seen at St. Denis. The most striking shows the ancestry of Christ in the form of a tree growing from the side of Jesse; and like so many symbolic – historical subjects of Gothic art, this too seems to have been invented by Suger. Many of his other innovations have disappeared from St. Denis: for example, his porticos with rows of standing figures, now all replaced by columns. And the whole exterior, in its squalid Parisian figures, now all replaced by columns and stained by the fumes of factories, makes no impression of sanctity.

## ***Gothic Architecture***

So much has been written about the Gothic style that one feels inclined to take it for granted. But it remains one of the most remarkable of human achievements. Since the expression of civilized life in architecture, say the pyramid of Sakara, man had thought of buildings as a weight on the ground. He had accepted their material nature and although he had tried to make them transcend it by means of proportion or by the color of precious marbles, he had always found himself limited by problems of stability and weight. In the end it kept him down to the earth. Now by the devices of the Gothic style – the shaft with its cluster of columns, passing without interruption into the vault and the pointed arch – he could make stone seem weightless: the weightless expression of his spirit.

By the same means he could surround his space with glass. Suger said that he did this in order to get more light, but he found that these areas of glass could be made into ideal means of impressing and instructing the faithful far better than wall-painting. This was made possible by means of a resonance, an effect on the senses, that the matt surface of a wall-painting could never have. "Man may rise to the contemplation of the divine through senses".

Chartres is the epitome of the first great awakening in European civilization. It is also the bridge between Romanesque and Gothic, between the world of Abelard and the world of St. Thomas Aquinas, the world of restless curiosity and the world of system and order. Great things were to be done in the next centuries of high Gothic, great feats of construction, both in architecture and in thought. But they all rested on the foundations of the twelfth century. That was the age which gave European civilization its impetus.

High Gothic art in the 12<sup>th</sup> century looks fantastic and luxurious. Behind all the fantasy of the Gothic imagination, there remained, on two different planes, a sharp sense of reality. Medieval man could see things very clearly, but he believed that these appearances should be considered as nothing more than symbolic tokens of an ideal order, which was the only true reality.

## ***Renaissance Architecture***

The fantasy strikes us first and last: In 1430, the Pazzi chapel built by Brunellesco in a style that has been called the architecture of humanism. This happened after the Greek philosopher Protagoras wrote "Man is the measure of all things". Brunellesco's friend and fellow architect, Leon Battista Alberti addressed man in these words: "To you is given a body more graceful than other animals, to you power of apt and various movements, to you most sharp and delicate senses, to you wit, reason, memory like an immortal god".

People sometimes feel disappointed the first time they see the famous beginnings of Renaissance architecture – the Pazzi Chapel and the Old Sacristy of San Lorenzo – because they seem too small. Well, so they are, after the great monuments of Romanesque and Gothic architecture. They do not try to impress us or crush us by size and weight, as all God-directed architecture does. Everything is adjusted to the scale of reasonable human necessity. They are intended to make each individual more conscious of his powers, as a complete moral and intellectual being. They are an assertion of the dignity of man.

The dignity of man. Today those words die in our lips. But in fifteenth-century Florence, their meaning was still afresh and invigorating belief. Gianozzo Manetti, a humanist man of action, who had seen the seamy side of politics nevertheless wrote a book entitled *On the dignity and Excellence of Man*. And this is the concept that Brunellesco's friends were making visible. Round the merchant's church of Orsanmichele are life-size figures of the saints; Donatello's St. Mark, of whom Michelangelo said: "No one could fail to believe the word of such a sincere man" and that

1914 soldier, Donatello's St. George. They show the ideal of humanity that presided over these mandate activities. The grandest of all testimonies to the dignity of man is by another member of the same group, Masaccio, in the series of fresco he painted in the church of the Carmine. What characters they are: morally and intellectually men of weigh the least frivolous of men, they have the air of contained vitality and confidence that one often sees in the founding fathers of a civilization – the one is the Egyptians of the first four dynasties.

Early Renaissance architecture is based on a passion for mathematics, particularly for geometry. Of course medieval architects had designed on a mathematical basis, but it seems to have been of immense complexity, as elaborate as scholastic philosophy. The Renaissance architects used much simpler geometrical figures – the square, the circle, forms which they believed to have some ultimate perfection – and they entertained the idea that these forms must be applicable to the human body: that each so to say, guaranteed the perfection of the other. This idea occurs in the ancient architectural theorist Vitruvius, and it was known to the medieval builders, but they had interpreted it differently. There are dozens of drawings and engravings to demonstrate this proposition, of which the most famous is by Leonardo da Vinci. Mathematically, it is not mere aesthetics, but has some meaning; because the symmetry of the human body, and to some extent the relation of one part to another, do influence our sense of a normal proportion. And philosophically, it contains the germs of an idea which might save us – if we could believe in it: that through proportion we can reconcile the two parts of our being: the physical and the intellectual.

## **Perspective Representation**

The same approach was applied to painting, in the system known as perspective, by which it was thought that with mathematical calculation one could render on a flat surface the precise position of a figure in space. This too seems to have been invented by Brunellesco, whose low-relief sculpture is a kind of painting. Ghiberti's Jacob and Esau on the famous Baptistry doors in Florence shows perspective used to achieve a spatial harmony that has almost a musical effect. Donatello's relief of St. Antony of Padua curing a boy's leg shows the other use of perspective: to heighten by a more intense awareness of space. The Florentines were extremely proud of this invention which they thought wrongly was unknown to antiquity.

Perspective was concerned with the representation of towns. Brunellesco's original exercise represented the piazza in front of the cathedral of Florence, with the Babtistry in the middle, but the pure perspective which have survived represent imaginary towns, architectural harmonies, the perfect setting for social man. Alberti, in his great book on building, describes the necessity of a public square "where young men may be diverted from the mischievousness and folly natural to their age; and under handsome porticos, old men may spend the heat of the day, and be mutually serviceable to one another".

The early Florentine Renaissance was an urban culture, bourgeois. Men spent their time in the streets squares, and in the shops, and these shops were completely public. Passers-by could see what was being done. The Renaissance historian of art, Vasari, when he asked himself why it was in Florence and not elsewhere that men became perfect in the arts, gave as his first answer: "The spirit of criticism, the air of Florence making minds naturally free, and not content with mediocrity".

After the middle of the fifteenth century the intellectual life of Florence took a new direction, very different from the robust civic humanism of the 1430's. Florence had ceased to be a republic in anything but name, and for almost thirty years it was virtually ruled by the extraordinary

character Lorenzo de Medici. He was a politician of genius who could distinguish between the reality of power and its outward trappings. He was not much interested in the visual arts.

This was one of the weakness of Renaissance civilization but of this ancient, rustic civilization there is no record beyond the farm houses, whose noble proportions seen to be the basis of Italian architecture, and when the men of the Renaissance looked at the country side it was not as a place of ploughing and digging, but as a kind of earthly paradise. It is how it appears in the first evolved landscape in Europe. Already awareness of nature is associated with the desire to escape and hope for a better life.

The truth is that the civilization of the early Italian Renaissance was not broadly enough based. The few had gone too far away from the many, not only in knowledge and intelligence, but in basic assumptions. When the two generations of humanists were dead, their movement had no real weight behind it, and there was a reaction away from the human scale of values. Fortunately, they left sculpture, painting, architecture, a message to every generation that values reason, clarity and harmonious proportion and believes in the individual.

The scene has changed from Florence to Rome, a city like a huge compost – a heap of human hopes and ambitions, despoiled of its ornament, almost indecipherable; a wilderness of imperial splendor with only one ancient emperor, Marcus Aurelius. This is no longer a world of free and active men, but a world of giants and heroes.

By 1500 the Romans had begun to realize that they had been built by men. The lively and intelligent individuals who created the Renaissance, bursting with vitality and confidence, were not in a mood to be crushed by antiquity. They meant to absorb it, to equal it, to master it. They were going to produce their own race of giants and heroes.

## **Papal Rome**

The Popes of Rome were men of unusual ability who used their international contacts, their great civil service and their increasing wealth in the interests of civilization. Nicholas V, the friend of Alberti and the humanists, was the first man who saw that papal Rome could revive the grandeurs of pagan Rome. Pope Julius II was able to inspire three men of genius – Bramante, Michel Angelo, and Raphael. He decided to pull down old St. Peter's that was one of the largest and most ancient churches in the western world; he decided to pull it down and put something far more splendid in its place. In his thoughts for the new building he was influenced by two Renaissance ideals. It must be based on perfect forms – the square and the circle, and it must be on a scale, and in a style, that surpassed the grandiose ruins of antiquity. And he called on Bramante to provide a plan. St. Peter was not completed till almost a century after his death.

In the autumn of 1513, soon after the death of Julius, there arrived Leonardo da Vinci. Historians used to speak of him as a typical Renaissance man. This is a mistake. If Leonardo belongs to any epoch, it is the later seventeenth century; but in fact he belongs to no epoch, he fits in no category, and the more you know about him, the more mysterious he becomes. Of course he had certain Renaissance characteristics. He loves beauty and graceful movement. He anticipated the megalomania of the early sixteenth century. He made schemes for diverting the River Arno that even modern technology could not accomplish.

The dazzling summit of human achievement represented by Michel Angelo, Raphael, and Leonardo lasted less than twenty years. It was followed by a time of uneasiness often ending in disaster. For the first time, civilized values were questioned and defied, and for some years it looked as if the footholds won by the Renaissance – the discovery of the individual, the belief in human genius, the sense of harmony between man and his surroundings – had been lost.

H. Gwells once made a distinction between communities of obedience and communities of will. He thought that the first produced the stable societies like Egypt and Mesopotamia, the original home of civilization. The community of will which we call the reformation was basically a popular movement from the Protestants where none of them except one old man, raised his hat. Luther gave them the tool of thought by reading books. But whatever the long term effects of Protestantism, the immediate result were very bad; not only bad for art, but bad for life. The North was full of bully boys who rampaged about the country and took any excuse to beat people up. They appear frequently in sixteenth century German art very pleased with themselves and apparently much admired. All the elements of destruction were let loose. Thirty years earlier Durer had done a series of woodcuts illustrating the Apocalypse. You can say that they express the Gothic side of his nature – because the Apocalypse had been a favorite work of the middle ages. Or you can regard them as prophetic, because they show with terrifying precision the horrors that were to descent on Western Europe, both proclaiming themselves as the instruments of God's wrath. Fire rains down from heaven on kings, popes, monks and poor families; and those who escape the fire fall victim to the avenging sword.

It is a terrible thought of the so-called wars of religion; religion of course being used as a pretext for political ambitions. What could an intelligent, open-minded man do in mid-sixteenth-century Europe? Keep quiet, work in solitude, outwardly conform, inwardly remain free. The wars of religion evoked a figure new to European civilization, although familiar in the great ages of China: the intellectual recluse. Petrarch and Erasmus had used their brains at the highest level of politics. They had been the advisers of princes. Their successor, the greatest humanist of the mid-sixteenth century, retreated into his tower. This was Michel de Montaigne. He was a fairly conscientious mayor of Bordeaux; but he refused to go any closer to the center of power. He had no illusions about the effect of the religious convictions released by the Reformation. "In trying to make themselves angels", he said, "men transformed themselves into beasts".

Such was the egocentric isolation that the wars of religion forced on the most civilized man in the sixteenth century Europe. But there was one country in which, after 1570, men could live without fear of civil war or sudden revenge – England can be called civilized. Certainly it does not provide a reproducible pattern of civilization as does, for example eighteenth-century France. It was brutal, unscrupulous and disorderly. But the first requisites of civilization are intellectual energy, freedom of mind, a sense of beauty and a craving for immortality. As such, the age of Marlowe and Spenser, of Dowland and Byrd, was a kind of civilization. It also produced a fantastic architecture: palaces of glass and stone, rich embroideries of black and white, unmated, vulnerable, intolerably draughty, but designed to give men a free relationship with nature and with each other, which architecture has tried to regain in our own day.

Since the old St. Peter's was pulled down, there is nowhere else in Rome where one gets such a powerful impression of the Christian Church before the barbarian conquests. If one climbs to the roof of Santa Maria Maggiore one can see long straight streets, stretching for miles up and down, and each ending in a piazza containing a famous church – the Lateran, the Trinita dei Monti, Santa Groce in Gerusalemme – and in the piazzas are Egyptian obelisks, symbols of the first civilization and god-directed state which Rome had superseded. This is Papal Rome as it was to remain until the present century, the most grandiose piece of town planning ever attempted.

## ***The Baroque***

The art we call Baroque was a popular art. The art of the Renaissance had appealed through intellectual means – geometric, perspective, knowledge of antiquity – to a small group of humanists. The Baroque appealed through the emotions to the widest possible audience. Later Baroque artists delighted in the huge scale, the restless movement, the shifting lights and

dissolves. The extraordinary thing is that the Baroque Artists did it in bronze and marble, not on celluloid.

Bernini is the only artist in history who has been able to carry through a vast design over so long a period; and the result is a unity of impression that exists nowhere else on so large a scale. He was chosen architect of St. Peter's, and began work on that incredible feat of virtuosity, the bronze baldacchino over the high altar. Yes, if one knows anything about bronze casting, it really is incredible. It involved all kinds of engineering difficulties. Bernini seems already to have foreseen in his imagination what the whole development of St. Peter's would be like, because his work, designed in 1642, is completely in harmony with the great progression of works executed over forty years later.

The architectural language in which northern Europe became articulate in the eighteenth century was Italian Baroque. With its mastery of long curving lines, its controlled elaborations, its perfection of detail, it is remarkably close to the architecture of Borromini. Borromini came from a land of stone-carvers – the Italian lakes that form a boundary with Switzerland – and his style could fit into the craftsman tradition of the Germanic north, a tradition serving a social order that was absolutely the reverse of the centralized bureaucracy of France. It's true that many of the German Princes thought they would like to imitate Versailles. But the formative element in German art did not lie there, but in the multiplicity of regions and towns and abbeys all competing for their architects, and also relying on the talents of their local organists and plasterers.

The creators of the German Baroque – the Assams and the Zimmermans – were families of craftsmen. Zimmerman is German for craftsman. The finest buildings are not palaces, but local pilgrimage churches, deep in the country, like the Fourteen Saints (Vierzehnheiligen). And come to think of it, the great art of the time was religious art. The thought was anti-religious; the way of life ostentatiously profane; it is right to call the first half of the century the age of reason. But in the arts, what did this emancipated rationalism produce? One adorable painter – Watteau, some nice domestic architecture, some pretty furniture; but nothing to set beside the Matthew Passion or the abbeys and pilgrimage churches of Bavaria and Franconia.

The towering polyphony has the quality of Gothic architecture. But then we remember how closely German Baroque, in its use of controlled space to work on our emotions, follows the traditions of Gothic architecture. As seen in a contemporary building, the pilgrimage church of the Vierzehnheiligen, built by Balthasar Neuman, one of the greatest architects of the eighteenth century. He was an engineer and a master of town planning and fortifications. Inside his buildings one is conscious of a complex plan, worked out like the most intricate mathematical problem. But when occasion demanded it, he made use of ornament as lavish and fanciful of the most ebullient Bavarian plasterers. Balthasar Neuman painted decorations in his finest interiors in the Venetian Giovanni Battista Tiepolo which was one of his great buildings.

## **Rococo**

Baroque architecture, however modified in Germany and Austria, was an Italian invention. Baroque first came into being as religious architecture, and expressed the emotional aspirations of the Catholic Church. Rococo was to some extent a Parisian invention, and provocatively secular. It was, superficially at any rate, a reaction against the heavy classicism of Versailles. Instead of the static orders of antiquity, it drew inspiration from natural objects in which the line wandered freely – shells, flowers, seaweed – especially if it wandered in a double curve. Rococo was a reaction against the academic style; but it was not negative. It represented a real gain in

sensibility. It achieved a new freedom of association and captured new and more delicate shades of feeling.

All this is expressed through the work of one exquisite artist, Watteau who died in 1721, and by that date the Rococo style was beginning to affect decoration and architecture. Ten years later it had spread all over Europe, producing a style as international as early fifteenth century Gothic; and not dissimilar in many ways. It was equally an art of small courts, an art of elegance rather than greatness, an art in which religious motives were treated with grace and sentiment rather than a solemn conviction. Rococo even spread in England, although the native good sense of a fox-hunting society prevented its more extravagant flights.

Many buildings of the eighteenth century were erected simply to give pleasure by people who believed that pleasure was important, and worth taking trouble about and could be given some of the quality of art. Many of them were destroyed during the war including the Zwinger at Dresden; the palace of Charlottenburg in Berlin; and the greater part of the Residez at Wüzburg.

Indignant Protestants used to say that Rococo churches were like opera houses – quite true, only it was the other way on. The opera house in the Residenz at Munich, by Cwillies, is exactly like a Rococo church. Opera houses came in when churches went out and they expressed so completely the views of this new profane religion that for one hundred years they continued to be built in Rococo style, long after that style had gone out of fashion. In Catholic countries, not only in Europe but in South America, the opera house is often the best and largest building in the town.

What on earth has given opera its prestige in western civilization – a prestige that has outlasted so many different fashions and ways of thought? Why are people prepared to sit silently for three hours listening to a performance of which they do not understand a word and of which they very seldom know the plot? I think because it is irrational!

## ***The 18<sup>th</sup> century***

In the last quarter of the eighteenth century science was fashionable and romantic. The sensible middle aged man tells that sacrifices must be made in the interest of science, and the thoughtful man on the right who is wondering if this kind of knowledge is really going to do mankind much good.

In the eighteenth century it emerged in a country where civilization still has the energy of newness – Scotland. The Scottish character shows an extraordinary combination of realism and reckless sentiment. The sentiment has passed into popular legend. The Scots seem to be proud of it. Where, but in Edinburgh, does a romantic landscape come right into the centre of the town. It is a matter of historical fact that there were men after the year 1760 who changed the whole current of European thought and life. Joseph Black and James Watt discovered that heat and in particular steam could be a source of power that has changed the world.

In the wealth of Nations Adam Smith invented the study of political economy, and created a social science that lasted up to the time of Karl Marx, and beyond, Hume, in the treatise of Human Nature succeeded in proving that experience and reason have no necessary connection with one another. There is no such thing as a rational belief. Hume, as himself said, was of an open, social and cheerful humor and has made all philosophers feel uneasy. Perhaps till our present day!!

All these great Scotsmen lived in the grim, narrow tenements of the Old Town of Edinburgh, piled on the hill behind the castle. But in their lifetime, two Scottish architects, the brothers Adam had produced one of the finest pieces of town planning in Europe. They invented the strict

pure classicism that was to influence architecture all over Europe – even in Russia. And then, a Scot having popularized neo-classicism; Sir Walter Scott popularized the Gothic Middle Ages and furnished the imagination of the romantically-minded for a century.

The remarkable thing about the frivolous eighteenth century was its seriousness. It was in many ways, the heir to Renaissance humanism, but there was a vital difference. The Renaissance had taken place within the framework of the Christian Church. A few humanists had shown signs of skepticism, but no one had expressed any doubts about the Christian religion as a whole. But by the middle of the eighteenth century serious-minded men could see that the church had become a tied house – tied to property and status and defending its interests by repression and justice. So the eighteenth century was faced with the troublesome task of constructing a new morality, without revelation or Christian sanctions.

Even the architecture is a conscious revolt against the refined, ornamental style of the time. The Tuscan columns, only recently rediscovered in the temple of Paestum, assert the superior virtue of the plain man. In fact the new morality had already inspired a revolution outside Europe.

We must look at a young, under populated country where civilized life still has the freshness of the new and precarious: America. Here on the border territory of the Indian, a young Virginian lawyer elected in the 1760's to build his home. His name was Thomas Jefferson and he called his house Monticello in that wild landscape. Jefferson made it up out of the book of the great Renaissance architect Palladio, of which he is said to have owned the only copy in America. Jefferson was the typical universal man of the eighteenth century, linguist, scientist, agriculturist, educator, town-planner and architect almost a reincarnation of Leon Battista Alberti, even down to love music, the management of horses. Jefferson was not as good an architect as Alberti, but then he was also President of the United States of America, Monticello was the beginning of simple, almost rustic, classicism that stretches right to the eastern seaboard of America, and lasted for one hundred years, producing a body of civilized, domestic architecture equal to any in the world.

Jefferson is buried in the grounds of Monticello. He left instructions for his tomb. On it were to be inscribed the following sentences, and not a word more: "Here was buried Thomas Jefferson, author of the Declaration of American Independence, of the Statute of Virginia for Religious Freedom, and Father of the University of Virginia". Nothing about being President; nothing about the Louisiana Purchase – the Jeffersonian pride and independence that has annoyed a large section of American opinion ever since. But the University of Virginia is still a surprise. It was all designed by Jefferson, and is full of his character. He called it an academic village. There are ten pavilions for ten professors, and between them, behind a colonnade, the rooms of the students, all within reach, and yet all individual: the idea of corporate humanism. Then outside the courtyard are small gardens that show his love of privacy. They are enclosed by serpentine walls which were Jefferson's specialty.

Inside the Jefferson Memorial are quotations from his writing. First the novel, indestructible words of the Declaration of Independence: "We hold these truths to be self-evident; that all men are created equal, that they are endowed by their creator with certain inalienable rights, among these are life, liberty and the pursuit of happiness, that to secure these rights governments are instituted among men". "Self-evident truths".

## ***The Industrial Revolution***

The cathedrals were built to the glory of God; New York was built to the glory of money, gain, the new god of the nineteenth century. So many of the same human ingredients have gone into its

construction that at a distance it does look rather like a celestial city. One sees why heroic materialism is still linked with an uneasy conscience. Most people thought of the application of mechanical power to industry as something to be proud of.

The early pictures of heavy industry are optimistic. In its early ages the Industrial Revolution was also part of the Romantic Movement. Even the workers did not object to it because it was hellish but because they were afraid that machinery would put them out of work. The only people who saw industrialism in those early days were the poets. Blake thought that mills were the work of Satan. It took a long time – over 20 years – before ordinary men began to see what a monster had been created. People were saying that civilization can exist only on a basis of slavery. If one defines civilization in terms of leisure and superfluity, there is a grain of truth in this repulsive doctrine.

This new religion of gain had behind it a body of doctrine without which it could never have maintained its authority over the serious-minded Victorians. The first of its sacred books – printed in 1789 – was the *Essay on the principle of Population* by a clergyman named Malthus, which demonstrated that population, will always increase faster than means of subsistence. In consequence, misery and want were bound to be the lot of the majority of mankind. This depressing theory, which cannot be altogether brushed aside, even today, had been put forward in a scientific spirit. The early reformers' struggle with the industrialized society illustrates the greatest civilizing achievement of the nineteenth century, humanitarian outlook.

The railway engine created a situation that was really new: a new basis of unity – a new concept of space. But architecture is to some extent a communal art – at least it depends upon a relationship between the user and the maker much closer than the other arts. Judged by its architecture in a narrow sense of the word, the nineteenth century does not come off too well. There were many reasons for this. One of them was the enlarged historical perspective which allowed architects to employ a quantity of different styles. For example the Houses look much better in their pseudo-Gothic dress than they would have done in a classical style, an imitation of antiquity, lacking in style and conviction.

The first Iron Age had been a turning point in civilization. In 1801 Telford did a design of London Bridge a single span of iron. It was beyond the technical skills of that time, and in about 1820 Telford did bring off the Menai Bridge, the first great suspension bridge, an idea that combines beauty and function so perfectly that it has hardly been varied, only expanded, down to the present day.

An answer to this aesthetic would have been a visit to the Great Exhibition of 1851; the building of Crystal Palace, was a piece of pure engineering on Brunellesco's principles. It was impressive, and was praised by functionality architects of the 1930s. But inside this piece of engineering was art which was not controlled by any stylistic impulse. The new shapes of the time were based on straight lines – the straight lines of iron girders. The ornamental art exhibited in the Crystal Palace was based on curves, elaborate and purposeless curves, which characterize the luxury art of the preceding century.

## ***Conclusion***

This essay explored some of the reasons behind the rise and fall of civilizations while giving special emphasis to the role of architecture as the major bearer of civilization.

As discussed above, the common factor that underlies the civilizations explored in this essay: the Middle Ages, the Gothic Period, the Renaissance, the Baroque and Rococo, the 18<sup>th</sup> Century, and the Industrial Revolution is the subordination to a particular philosophy whether it was through a

belief in discipline, a quest for stability, the use of perspective, a reliance on mathematics and rationalism, romantic expression, or the idea of corporate humanism.