How has Roman Architecture Influenced Modern Architecture

Roman architecture had a tremendous influence on modern buildings of the western civilization. The widespread use of columns, domes, and arches is a testament to this fact. This “Buzzle” article explains how this influence can be seen today, and provides examples of some American buildings that display it.

Timeless Beauty!

Taking its inspiration from Roman Architecture, the White House has six Ionic-style columns on its facade. This is because the first ever president to reside there, John Quincy Adams, was the sixth president of the United States. Roman architecture is the perfect example of innovation and experimentation in construction; it gave mankind buildings that had never been seen before, a network of connecting roads which was marvelously executed, and public structures that could be used by people from all strata of society just as equally, which added to their appeal. It was called 'Roman Architecture' from 509 BCE to the 4th century CE, when the Roman Republic was in power. After that, it came to be renamed as the 'Byzantine Architecture'. It thrived greatly during the Pax Romana period, which was a time when there were no invasions or expansions. This period lasted for over 200 years, from 27 BCE to 180 CE.

Roman Architecture - An Overview

Influences

Ancient Roman architecture mainly drew its influence from Greek and Etruscan architecture, and also a little from Egyptian and Persian architecture. For example, it learned the use of hydraulics from the Etruscans, incorporated the obelisk from Egypt in various structures, and even used designs from different regions for the construction of Emperor Hadrian’s Villa.

Building Materials

Roman architecture saw a widespread use of concrete. The architects realized that concrete was not only stronger than marble, but it could also be decorated quite easily by sculpting various shapes on it. An added advantage was that it could be produced
locally, which proved to be a very cost-effective option. Concrete was prepared using a mixture of lime mortar, water, rubble, stones, sand, and a rocky material called pozzolana. This mixture was poured between two wooden frames and allowed to dry. Once it dried, the wooden frames were removed from around it, and these could be reused. The resultant walls were quite strong and durable, and could also be decorated using marble, stucco, and even mosaic. Mosaic became extremely popular in Rome around the 1st century CE, and was used on a large scale in decorating ceilings, floors, and walls of buildings.

**Highlights**

The Romans created many masterpieces and brought architecture to a new level. Some of the main highlights of ancient Roman architecture are listed below.

✦ Construction of a vast and complicated road system is one of the main highlights of this period. The Romans built roads connecting all the cities to each other, and they all led to the capital. This made access to the cities very easy for the rulers.

✦ Construction of huge public places like the public baths was another prominent feature. As these buildings were open to the entire city public, they became quite popular. It was a place where people could get together and interact.

✦ Columns, arches, and domes became quite popular during this time. Various types of pillars were used, and they were decorated in many different designs.

✦ The Romans also built aqueducts, which were never seen before this era. Aqueducts, like pipes, canals, tunnels, etc., were built to provide water, drinking and otherwise, to the public.

✦ Bridges were also introduced during this time. This made it easier for people to travel to other cities safely, now that the danger of wading through the rivers had been eliminated.

**Influences on Modern Architecture**

**Columns**

There are mainly three types of columns: Doric, Ionic, and Corinthian.
Doric, Ionic, and Corinthian Columns (L to R)

In Doric columns, the top is plain, without any decorations. The columns are fluted, which means that they have vertical ridges running down their length. They do not have a decorative base either, and are placed directly on the floor. For example, the columns used for the Federal Hall in New York City.
Ionic columns are slenderer than Doric columns, and also have more number of flutes. They have a stone at the top, that is curled within itself like a scroll on both sides. These columns are not directly placed on the floor like Doric columns, but have a small base. For example, the columns used for the courthouse in Delaware County.
Corinthian columns are the decorative type. The top is ornately sculpted with acanthus leaves. These columns are also fluted. The base for these columns is more elaborate as compared to Ionic columns. For example, the columns used for the Capitol Building, Washington, D.C.
Corinthian Columns, Capitol Building, Washington, D.C., USA

**Amphitheaters and Theaters**

The amphitheaters were arenas where people would gather to watch gladiators fight each other, or fights between wild animals like tigers and lions. The word 'amphi' means 'around' in Greek. Thus, 'amphitheater'
means a 'round theater'. These places were circular and enclosed, and could seat a large number of people at a time. They also had rooms under the seating area where the other participants would wait their turn. The Colosseum was the most popular amphitheater of the time. A present-day example is the one at Carlsbad Cavern National Park located in the Guadalupe mountains.

Roman theaters, on the other hand, were semicircular. The seating area covered half of the orchestra space or stage, which was circular in form. The actors would perform in the orchestra space. The theaters had passageways on both the sides for the actors to come on and go off stage, and there was a tent behind the orchestra space where the actors would wait.
Arches

Arches are tall structures curved at the top. They were first developed in Greece, and were later on incorporated by the Romans into their architecture. In the beginning, arches were built to support the underground drainage systems, but in the Roman era, they were built mostly for inscribing significant happenings. The Arch of Constantine is one of the oldest surviving examples. It is a triumphal arch that was built to celebrate the victory of Constantine I over Maxentius at the Battle of the Milvian Bridge. One example of the use of arches in modern architecture is the interior of the Union Station in Washington, D.C.
Arch of Constantine - Rome, Italy

Union Station, Washington, D.C., USA
Aqueducts

Aqueducts were built by the Romans to channel water into the cities. At times, they would have two or three rows of arches, built one above the other. Water was supplied to households, to the public baths, the fountains, for the purpose of mining or farming work, etc. A sewage system was also built to get rid of all the waste water. The Pont du Gard is one of the popular Roman Aqueducts. Its top portion was used to transport water, while the lower portion was used as a bridge. The Los Angeles aqueduct has taken its inspiration from this structure. Also known as the Owens Valley Aqueduct, it supplies water to the city of Los Angeles.
Bridges

Bridges also made the use of arches to support massive weight on them. They were built over rivers that did not have any means to be crossed. This helped to strengthen the access network between cities even more. The Targus Bridge in Alcántara is one of the oldest examples present today. It is made of granite, and has arches that are over 30 meters long each. The Robert Street Bridge in Minnesota, which runs over the Mississippi River, has multiple arches, which are inspired by Roman construction.
Domes

Domes allowed the Romans to build vaulted ceilings without crossbeams. The domes also proved to be very useful in making ceilings for large spaces, like the public baths. The ceiling of the Pantheon is a huge, elaborate dome with a circular opening in the middle known as the oculus, or the eye of the dome. A very good example of adoption of the dome into modern architecture is the capitol building's roof.

Dome and Oculus of the Pantheon- Rome, Italy

Dome of Capitol Building (outside view)- Washington D.C, USA
Bathhouses

Bathhouses were a place where people could go to relax and socialize. These contained pools, fountains, cold rooms, libraries, hot rooms, etc. These structures would be lavishly decorated from the inside, with domes, columns, marble, mosaics, sculptures, etc. The Baths of Caracalla is the second largest Roman public bath ever to be built. It was built during Emperor Caracalla’s rule, and the construction began in 211 CE, ending in 216 CE. People from all strata of society could enjoy the facilities of this bath. Many invaluable sculptures were used as a part of the decorations to make the place more exquisite. Spas are good examples.
Baths of Caracalla - Rome, Italy

Ozark Bathhouse - Hot Springs, Arkansas, USA
The preceding examples go to show just how influential ancient Roman architecture has been on the modern era buildings in America. Many aspects of this architectural style have become a foundation for the designs that have been used on the modern buildings. The unparalleled beauty and innovative construction methods that the Romans brought with them are timeless.