

**Antwerp**

Antwerp, a city in present-day Belgium, was a major European trade center during the Renaissance. Goods such as spices, silver, and cloth flowed into its port, making Antwerp (then part of the Netherlands) the central market of Europe. Between 1500 and 1560, the city experienced dramatic growth, with the population soaring from 40,000 to 100,000.

Antwerp's new wealth was not evenly spread. Tension between rich and poor increased as a small group of major merchants and business owners became enormously wealthy. However, the city's large middle class of artisans* and small-scale merchants also prospered during this period of economic expansion.

Antwerp's growth had a profound impact on its culture. Its commercial activities required trained workers, encouraging the development of public education. By the mid-1500s the city had a well-developed school system, with five religious schools and over 150 schoolteachers. More than 40 percent of these teachers were women.

The expanding upper and middle classes increased the size of the market for artistic products and luxury goods. The arts developed into a thriving industry, and Antwerp became a leading exporter of artwork. The city's art and ARCHITECTURE reflected the new styles of the Italian Renaissance. A striking example is the city hall that was built in the 1560s. Antwerp also exported luxury items, especially diamonds. Book production was another major industry. The city's literary culture made it an international meeting place for humanist* authors and scholars.

The Roman Catholic Church dominated Antwerp until the 1520s. At that time, various Protestant groups gained ground. By 1585 Calvinists* controlled the city. However, that same year Spanish troops attacked, causing thousands of Protestants to flee. After that, Antwerp became a major force in the Counter-Reformation, a movement to bring new life to Catholicism. (*See also Art in the Netherlands; Catholic Reformation and Counter-Reformation; Economy and Trade; Printing and Publishing; Social Status.*)

* **artisan** skilled worker or craftsperson



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* **humanist** referring to a Renaissance cultural movement promoting the study of the humanities (the languages, literature, and history of ancient Greece and Rome) as a guide to living

* **Calvinist** member of a Protestant church founded by John Calvin

Architecture

* **classical** in the tradition of ancient Greece and Rome

* **treatise** long, detailed essay

* **Gothic** style of architecture characterized by pointed arches and high, thin walls supported by flying buttresses

* **medieval** referring to the Middle Ages, a period that began around A.D. 400 and ended around 1400 in Italy and 1500 in the rest of Europe

Like other art forms in the Renaissance, architecture drew increasingly on the traditions of ancient Greece and Rome. The revival of classical* forms was strongest in Italy, where the Renaissance began. Several Italian architects produced important treatises* on the principles of architectural design that provided models for others to follow. Northern Europe, by contrast, never completely abandoned the Gothic* styles of the Middle Ages. These survived in modified forms well into the 1600s.

DEVELOPMENT OF THE RENAISSANCE STYLE

The Renaissance style of architecture first emerged in FLORENCE in the early 1400s. It marked a rejection of medieval* styles and a celebration of ancient forms. One pioneer of the new style was Filippo BRUNELLESCHI, who designed the magnificent dome of Florence's cathedral, Santa Maria del Fiore.



ARCHITECTURE

Renaissance architecture took many different forms throughout Europe. Other parts of Italy combined the Renaissance styles that developed in and around Florence with their own local traditions, creating a variety of distinct architectural styles. Italian Renaissance architecture also spread to other areas of Europe, but slowly and unevenly. It took 100 years or more for classical styles to take hold in France, Spain, Portugal, and Northern Europe. In these areas, the Italian styles blended with local traditions and Gothic forms to produce new and original designs. Architects adapted Renaissance styles based on their areas' landscape, climate, building materials, and customs.

Although Renaissance architects copied ancient forms, they had little opportunity to observe the designs firsthand. Few examples of ancient Roman architecture remained intact. Many structures had been destroyed or badly damaged, while others had been rebuilt and modified in later periods. Architects outside Italy had even less access to ancient buildings. Only a privileged few could actually visit the Roman ruins in Italy. Most had to depend on drawings, sketches, and books handed down from master to student.

In 1416 Italians rediscovered *On Architecture*, a treatise written by the ancient Roman architect Vitruvius around 27 B.C. This work offered a great deal of insight into the theory and practice of architecture in ancient Rome. However, Vitruvius had lived before the time of the Roman Empire, when many of the surviving ruins were built. Therefore, the structures that could be studied in Italy were quite different from those described by Vitruvius. Renaissance architects had to rely on imagination to fill in the gaps in their knowledge.

BUILDING STYLES

Although Renaissance buildings varied a great deal from region to region, they shared various common features. This was particularly true of churches because the form of the religious service imposed certain requirements on the shape of the building. Palaces and villas*, by contrast, took on distinct forms that reflected the social and cultural traditions of an area.

* **villa** luxurious country home and the land surrounding it

Church Layouts. A typical European church of the Middle Ages featured a long, narrow central hall, or nave. During the Renaissance architects began to explore the idea of creating churches with a central plan, laid out symmetrically* around a central point. Such a church might take the form of a circle or a Greek cross, with vertical and horizontal arms of equal length. However, such designs did not provide a clear separation between the priest and the congregation. They also did not hold enough people.

* **symmetrical** balanced with matching forms on opposite sides of a structure or piece of art

The tension between these two types of forms is visible in the layout of the church of St. Peter's in Rome. The Italian architect Donato BRAMANTE originally designed the church in the form of a Greek cross topped by a huge dome. However, later architects who worked on the church, including RAPHAEL and MICHELANGELO, altered the plan many



The church of St. Peter in Rome combines traditional forms with elements of classical architecture. This aerial view shows the church's large dome and long central hall, called a nave.



times over the course of construction. By the time the church was completed in the early 1600s, it had stretched to contain a longer nave while still including Bramante's original cross shape. In this way, St. Peter's combined traditional forms with the ideal shapes—circle and square—inspired by classical architecture.

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In France, most architects continued to follow Gothic styles, although they sometimes used classical forms to decorate the outsides of buildings. Spanish architects designed few major churches in the classical style, but they used some new forms to modify old Gothic buildings. During the reign of PHILIP II (1556–1598), Spanish architecture moved toward a simple, classical style quite unlike the elaborate forms then popular in Italy. In the Protestant countries of northern Europe, churches gradually took on a functional auditorium shape. This design reflected the Protestant churches' emphasis on preaching.

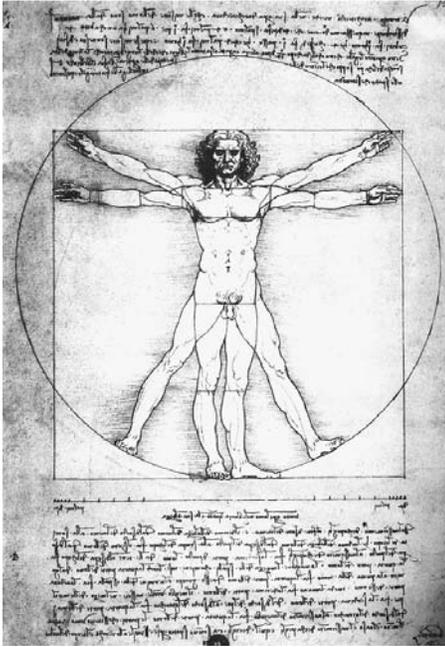
Residential Buildings. The designs of homes—particularly large and luxurious ones, such as palaces and villas—also changed during the Renaissance. In Italy during the 1300s, a typical palace had looked like it was carved out of one rough block of stone. Over time, ancient Roman styles crept into the design of palaces. Buildings such as the Farnese palace in Rome had rooms with elegant frescoes*, courtyards surrounded by columns, and ornamentation both inside and out. Architects developed precise guidelines for how much decoration a dwelling should have based on its owner's social status.

Villas, even more than urban palaces, reflected the goal of re-creating the lifestyles of ancient Rome. Pliny the Younger and other writers from that time had described the magnificent villas of wealthy Romans. The

* **fresco** mural painted on a plaster wall



ARCHITECTURE



Artist Leonardo da Vinci created his famous drawing of the “Vitruvian Man” around 1490. It illustrates the idea of the ancient Roman architect Vitruvius that the human body with outstretched limbs forms a perfect circle and square.

structures that survived inspired Renaissance architects, who let their imaginations run free. Their villas often contained beautiful gardens, artificial caves, courtyards filled with sculpture, and private theaters.

In France, these Roman styles never took hold. The wealthy continued to prefer traditional castles, or châteaux, in the styles of the Middle Ages. One notable architectural feature of French châteaux involved using a combination of brick and stone. This practice, which became popular in the late 1500s, helped blend large new building complexes into existing cities.

Urban Planning. During the Renaissance, architects developed theories about city design. The ruins of ancient Roman buildings provided few clues to the city’s overall layout, so architects relied largely on some written sources, such as Vitruvius. However, the limited information left much to the imagination, leading architects to propose new ideas on urban design.

Two notable examples of Renaissance town planning are the Italian cities of Pienza and Palmanova. These cities use simple geometry and central planning to create a sense of order. Architects tried to apply the same ideas to existing cities, but they had few opportunities to redesign cities on a grand scale. Instead, they focused on the layout of squares and streets, placing major buildings in these areas. In the late 1500s a large-scale urban renewal in Rome transformed the city into a network of public squares and major roads.

ARCHITECTURAL THEORY

In the 1500s and 1600s, various Italian architects attempted to establish the basic principles governing architecture. They explained their ideas in treatises. Some architects looked to the natural world for ideas about the ideal proportions of objects. This approach helped to link architecture to painting, sculpture, and literature, which often tried to imitate nature. Architectural treatises helped raise the status of architecture from a technical skill to an art. They also helped spread ideas about architecture throughout Europe.

The first manuscripts on architecture appeared in the mid-1400s. Many early writers, such as Leon Battista ALBERTI, modeled their works on Vitruvius’s *On Architecture*. Alberti’s *On the Art of Building*, published in Florence in 1486, presented the basic principles of ancient architecture. Alberti copied Vitruvius in using the human body as the model for good design. He defined architectural beauty in terms of the “reasoned harmony of all the parts within a body.”

Most of the early architectural treatises were aimed at scholars rather than practicing architects. One of the first authors to focus on the practical needs of architects was Sebastiano Serlio (1475–1554). He wrote seven easy-to-understand volumes in Italian, illustrated with woodcuts*, that provided a complete program of instruction for architects. The final book dealt with practical problems an architect might face, such as building on a slope.

* **woodcut** print made from a block of wood with an image carved into it