GOTHIC IN EUROPE

CATHEDRAL

The architectural definition of the cathedral was created in Gothic: a basilica-type church with a transept approximately in the middle. The corridor of the presbytery with the crown of the chapels, the facade with a pair of towers of the heavenly Jerusalem, which are increasingly lightened by the construction of reinforced corners, into which the weight is reduced. The facade is divided horizontally from the bottom into a zone of portals, a gallery of kings (an arcade with statues, it can be divided into a zone of empores [arcades leading to the space above the side aisles] and a zone of triforia [a de facto continuous dwarf gallery]) and a zone of windows with a rosette in the middle. The zones run horizontally across the entire facade, including the towers. The half-columns supporting the vault, the so-called buttresses, run continuously along the wall and either end at the columns of the arcade, or transition into a beam pillar and end at the floor. The space between the buttresses is filled with windows, so the masonry is maximally light and reduced to a supporting frame. Above the nave and side aisles there are cross vaults with a cross-section of a broken arch, the vaults are tied, which leads to the alternation of large bundles of buttresses with simple buttresses (buttress = supporting element of the vault). From the outside, the lateral forces are absorbed by the support system. The cathedral has a rich symbolism manifested in the arrangement and decoration (only a third of the sculptural work is visible), it is supposed to represent the Heavenly Jerusalem. The height of the nave gradually increases, the first cathedrals do not have a ratio of the width of the nave to its height of even 1:2, while the top cathedrals tend to have this ratio of 1:2.7. The windows, which were initially covered with an arched vault, have also undergone a change, but later this changed to a broken arch. As cathedrals were huge and expensive buildings, they were often unfinished in various ways, and the second tower was often not completed.

GOTHIC CIVILIZATION

Gothic was accompanied by the first information boom, higher mathematics came through Arabic, construction became more sophisticated thanks to triangulation. Cathedrals used to have cathedral schools, which became classical universities. Cathedral smelters were also established near the cathedrals, which ensured its construction. Smelters had a precise organization and a developed system manifested by stone marks, thanks to which the work of individual smelters can be identified. The cathedral became a symbol of prestige, every city wanted its own.

**Saint Etienne Cathedral in Sens**

**Notre Dame Cathedral in Senlis - 1153**

**Notre Dame Cathedral in Noyon**

**Notre Dame Cathedral in Laon**

**Notre Dame Cathedral in Paris -** 1208. A tied system is also used in the vaulting of the nave, the buttress solution is non-systematic, they are all made to look the same and not disturb the uniform rhythm. It is a five-nave basilica with three portals in the facade, a gallery of kings above them (the origin of the ruling dynasty from the biblical Noah), because cathedrals were also royal churches. Above the gallery of the kings is a rosette divided by stone rods, above it is another gallery and two towers relieved by supporting corner paneled pillars and pairs of transom windows. The outer supporting pillars are oversized, the emporiums replace one row of supporting arches.

Summary – the cathedral in Paris culminates the development of early cathedrals, by omitting the buttresses at the nodal points, the rhythm is unified, but it is unsystematic, as it does not create an ideal skeleton, but remains essentially a Romanesque linked system, supplemented by emporiums – a hidden supporting system.

CLASSIC GOTHIC

**Chartres Cathedral** – the remains of the older Romanesque cathedral are used on the facade, Gothic elements are added to it. The construction of the nave is done in the spirit of Gothic, a four-part vault is used for the vaulting, one field above the main nave corresponds to one field in the side naves (= continuous grass). There is thus a uniform rhythm throughout the church, the four buttresses lying next to each other transition into bundle pillars. The pillars are decorated with naturalistic decor in the shape of leaves. The walls of the interior are divided into a zone of arcades, triforia and windows, so there is a fully developed external support system, which, however, is oversized due to lack of experience. Full-fledged portal systems are also on the fronts of the three-nave transepts. The windows are divided by tracery, so they consist of two narrow windows next to each other and a rosette above them.

The construction of classical cathedrals always proceeded from the axis chapel dedicated to the Virgin Mary. Cathedrals were the only place where all social classes met and were the dominant feature of cities due to their height.

The masonry of cathedrals is reinforced with iron in the form of clamps and built-in chains, if they were only made of stone, they would probably fall. But the durability of the skeleton is proven by the fact that the Reims Cathedral did not fall despite considerable damage and holes in the structure during the artillery shelling during the Second World War.

Cathedrals were extremely demanding to build, usually taking several generations to build. Construction was carried out according to detailed documentation drawn up in pencil on parchment, many of these plans have survived.

**Notre Dame Cathedral in Reims** (Reims, Rhems), 1210, the old church was completely demolished after a fire, the builders were d'Orbay, de Loup, Gaucher de Rhems, sculptural decoration was also part of their work. It is the coronation cathedral of the French kings. Façade - portal zone (in place of the tympanums there are rosettes, sculptural decoration is in vimperce [the space between the rosette and the eaves]), rosette zone and gallery of kings (a full-fledged gallery of kings from Noah to Kapetovka). The interior decoration on the western facade was intended to convey to the newly crowned king that he had just assumed all responsibility for the state and subjects (stained glass and statues of martyrs). The windows have fully developed six-leaf tracery, the bundle pillars also have an advanced form, the pillars and buttresses are decorated with naturalistic leaf. The proportions are close to the top ones, the height already significantly exceeds the width. The support system is already light.

**Cathedral of Notre Dame at Amiens** - 1220-65 - builders Luzarches and two de Cormonti. A complex facade, the zone of portals is presented and has deep vestibules, above them is the gallery of the kings and above them the rosette, everything thus appears more vertical than the classical facade even in higher cathedrals, because the horizontal closure above the rosette is missing. The sculptural decoration is typical (same bodies with drapery, only different heads). The triforium in the presbytery is also glazed. The walls of the side aisle appear richer, each arch of the triforium is composed of three smaller ones, the windows are also double, containing two tracery windows and a tracery above them. The cathedral skeleton system reaches its limits here, the ratio of height and width is 2.7:1, the support system is maximally lightweight. The cathedral is beginning to approach post-classical Gothic.

**The Royal Chapel of Sainte Chapelle in Paris** – a one-nave structure for storing relics imported from the Holy Land, a simple exterior formed by supporting pillars, two floors inside, the lower functioned for less important masses for the court, the upper one is maximally light, the pillars are thin, the stained glass windows are wide. The western facade has a complex rosette, the structure of which is similar in shape to clematis.

**S Pierre in Bauvais cathedral**

**Avignon cathedral**

**GOTHIC IN GERMANY**

**Münster in Strasbourg** - a low nave with a high facade, the presbytery and transept are Romanesque, the Gothic nave does not have classical proportions in order to maintain harmony with the Romanesque part. The facade was originally built with straight-topped towers in the French pattern, later the facade was to be raised by a pair of pointed towers (formed by supporting pillars), of which only one was built. The tectonics of the facade is strongly dominated by verticality, the entire surface of the facade is richly covered with vertical stone decoration.

**Freiburg in Breisgau Cathedral**, 1250-1302

**Cathedral in Magdeburg** – 1209-66, the ground floor is Romanesque with antique Ottonian columns, the emporium is early Gothic, the upper floor with windows is then High Gothic. A significant external support system is missing, all that was needed was to strengthen the corner pillars.

**The Cologne Cathedral** – the highest German Gothic, the first builder was certainly not German Gerard, the floor plan of a classic French cathedral, the presbytery also has a glazed triforium. Rich stone decoration, pointed violets on the tops of the supporting pillars, a tall pointed tower in the facade, the rosette and gallery of kings are missing from the facade, which emphasizes the verticality. The facade towers were completed in 1842-80 based on a Gothic project. Petr Parléř built his career on the construction of the dome, but here only in the form of training.

**Church of St. Crosses**, Swabian Gmünd, 1330-51, Heinrich and Petr Parléřové, arches from late Gothic.

**Frauenkirche, Nuremberg** (Church of the Virgin Mary) – a building commissioned by Charles IV, probably by Petr Parléř. It was supposed to be an exhibition hall of the Roman Empire, above the rich main portal is a stage for displaying jewels and relics.

The **cathedral in Augsburg**, with five naves, was built by Jindřich Parléř, a presbytery inspired by the presbytery of St. Jan Parléř welcomes you to Prague. Adjacent to the dome are two still Romanesque towers.

**ITALIAN GOTHIC**

The ancient tradition still survives here, i.e. large areas of walls. however, Cistercian and sometimes Minorite churches are similar to those elsewhere in Europe. The columns are close to ancient architecture, the churches do not have sharp verticality, the height of the side naves is close to the height of the main nave.

**Minorite Church of St. Francis in Bologna** - vast square bays of the nave arched by six-part cross vaults, small high-placed windows, below them a large empty wall area (in the south it used to be filled with frescoes). Colorful design of the interior, a combination of cut brick and light plaster.

**Church of St. Francis in Assisi** - 1228, the first church of the Minorite order (followers of St. Francis of Assisi) - the church was built on an artificial terrace divided by arcades, the church consists of a lower and an upper church, the lower serves as a crypt. The entire large area of the walls filled with frescoes by Giotto. Franciscans and Capuchins were later formed by reforming the Minorites, their churches imitate the facade of St. Francis of Assisi.

**Siena Cathedral** - 1220-99, high Italian Gothic. The main nave is vaulted with only five square bays of a much raised dome-shaped ribbed vault. The arcades are therefore wide and high, as are the side naves. The masonry horizontally combines light marble and gray limestone, the belfry is loosely and asymmetrically attached to the south side of the church. Above the crossing of the naves and transept is a cupola. The upper half of the facade was created by the sculptor Pizzano, so the halves of the facade do not match in the proportions of the vertical fields. However, they are decorated with mosaics.

**The Duomo in Orvieto**, 1285, built by Arnolfo di Cambio, harbinger of the Renaissance, Gothic vaults are missing in many places (in the naves there is a free roof), thus the vertical vaults and buttresses are lost. The facade (Lorenzo Maitani, 1310) was modeled after the cathedral in Sienna.

**The Church of S. Croce in Florence**, Arnolfo di Cambio, the peak of the development of Italian Gothic. The naves are roofed with a free truss, which, together with the Roman over the arcades, creates a horizontal impression. The space is divided by links in place of buttresses, similar to ancient pilasters.

**Santa Maria del Fiore, Duomo in Florence**, Arnolfo di Cambio, 1296 (triple nave), enlarged trefoil finial 1337 designed by F. Talentino. The planned dome was only completed by Brunellesci in the Renaissance. The church has a huge volume, the main nave, around one hundred meters long, is spanned by only four bays. The arcades are tall and connect the side aisles, creating the impression of a hall. The space is connected horizontally by a cornice, above which only small circular windows could fit. Tectonics is colored by gray limestone on white plaster.

**Campanile of the Florence Cathedral** - decorative tower of a square plan, 1334, Giotto, decorative colored mosaic division.

**Church of Santa Maria Novella in Florence**, F. Talenti, 1350, similar to the Florentine cathedral, only without cornices.

**VENETIAN GOTHIC**

**Church of S. Antonio in Padua**, 13th century, modeled after Sant Marco in Venice, a combination of a Byzantine domed church (four domes above the main nave, two above the nave) and Gothic (presbytery and nave).

Venice stands on an artificial island in the Lagoon, so all buildings had to be light and based on pillars and grates.

**Duomo in Milan** - a stepped basilica, tall huge antiquing pillars of the main nave, the support system has a lot of violets. The building was built by Central European and French architects, the builder wanted to celebrate the ducal title obtained from Charles IV. The complex verticalizing front is independent of internal tectonics.

**The Doge's Palace** - a large building with a Gothic facade that was built gradually - an arcade on the ground floor, above it an arcade of tracery windows, above it a mosaic tile facade. All the local magnates were inspired by the palace and built similar, albeit smaller buildings - e.g. Ca D'Oro.

**CZECH GOTHIC ARCHITECTURE**

Gothic is brought to us by monastic orders - Cistercians, Minorites and Poor Clares. The first Gothic buildings are part of older monasteries.

The Cistercians brought their own finished style (Cistercian-Burgundian Gothic), the order employed its own transported stonemasons.

**The oldest Czech Gothic buildings:**

The chapter house of the **Cistercian monastery in Osek**, the Cistercian nunnery in the sub-convent near Tišnov – 1240, royal foundation, the church used a large cathedral portal (still with Romanesque decor, but with a Gothic tone) and a rosette

**Monastery of St. St. Agnes in Prague** – the cloister identical to Tišnov, only the windows here are already Gothic, there are two with a curved arch and a rosette above them. Church of St. Francis

Summary - in the first Gothic period, church orders, especially the Cistercians, were used in our country, the Gothic came to us influenced by the French cathedral Gothic at the level of the cathedral in Laon and the special architecture of the Cistercian order. The influence of the monarch on the construction is significantly applied.

Subsequently, a new wave of colonization of our territory begins, mainly from today's Germany, royal cities (with their own self-government, special privileges and subordinate only to the king) and castles of the second castle system (small in plan, stone-walled units to consolidate power and manage the territory) are founded.

**ROYAL CASTLE OF THE SECOND CASTLE SYSTEM**

Křivoklát, Zvíkov, Loket

**NOBLY CASTLES**

Czech Šternberk

Jindřichův Hradec

**OTAKARA II'S PERIOD OF INTELLIGENCE**

Cities are also fortified, the Old Town of Prague gets its walls, under Wenceslaus I, the fortifications of the New Town Under Prague Castle, today's Malá Strana, also begin to be built, but the face of the city was not completed until Přemysl Otakar. The so-called Havel town built around the church of St. Havel. It is based on a rectangular floor plan (the foundation was given by the construction of houses along the walls and the shape of the square - market place). Houses were built here with towers (around fifty towers), although this was somewhat of a relic at the time.

The influence of cathedral Gothic seeped into other than basilica layouts, the first indoor churches were created, with all naves of the same height.

The establishment of monasteries spread over the entire territory of the state was primarily intended to weaken the influence of the nobility and, on the contrary, strengthen the power of the monarch, even though the nobles had to agree to the establishment of monasteries on their territory.

**Cistercian monastery in Vyšší Brod**

**PO-CLASSIC GOTHIC**

At the end of the 13th century, the influence of post-classical Gothic begins to significantly prevail.

**Cistercian monastery in Zlatá Koruna**

**Bezděz Royal Castle** - the highlight of the first phase of post-classical Gothic and castle architecture in general is the castle chapel, which is part of the castle's fortifications. The chapel is therefore double-skinned, between the skins there is a defensive corridor. the outer windows are wider than the inner ones with peculiar quatrefoil tracery with points.

**Summary** – the influences of post-classical Gothic are manifested by: overall linearization of architectural morphology; spatial formations; atectonicity of the architectural system, when mass decreases vertically downwards; by the maximum superiority of the architecture system to the individual details, which are thus reduced.

The great expansion of post-classical Gothic is connected with the reign of John of Luxembourg, when large city churches were built in many Czech and Moravian cities, monasteries were rebuilt and many noble houses were built.

**House U kamenného zvonu in Prague**, the current state is only a reconstruction, originally the facade was more richly structured, the niches had sculptural decoration (1310-1330) - the king on the throne, shield-bearers, land saints, the house was therefore probably connected with the monarch (either built directly court, or rebuilt as a gift from the townspeople, apparently Charles IV resided here before the Castle was repaired).