

# Lecture Notes for Architecture & Urban Design 10B

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## 1 Traditions, Old & New

Because the printing press hadn't been invented until the 15th century, knowledge of architecture spread very slowly.

One of the earliest texts we've found on architecture was *De architectura*, written by Vitruvius in Rome around 30 BCE. Its rediscovery in 1540 was very exciting for people who idolized Roman architecture, but it didn't have any pictures. Because styles had evolved over time, that meant a lot was lost in translation. The Roman style set a long-lasting precedent for how to design buildings, but people were eager to break it.

The people who were seen as "qualified" and educated enough to know which rules to break became known as architects.

Meanwhile, in China, the Qing dynasty began when Manchurians invaded Beijing without destroying the city, so the Chinese architectural style became their own. One example is the Mukden Palace Complex in Shenyang, China (1625-1783). An iconic part of that style is **Dougong**, a traditional structural motif made of ornate interlocking wooden brackets, usually just below the roofs.

The Manchurian people also brought their own traditions – for example, 8 was considered an important number in their culture, so they made the Shenyang Imperial Palace to be an 8-sided building which uses the red & gold paint (and dougong) they saw in existing Chinese buildings.



Meanwhile, the Moghul Empire (1526-1707) had its capital in Agra, and one of the most important buildings there was the Red Fort, which used red sandstone from nearby, as well as domes and arches and other decorations used in Iran. Since the Moghul Empire was ruled by conquerors from central Asia, they had to build defensive fortifications, but they also wanted to use Indian architectural styles so they don't appear as outsiders. One of the Indian motifs they used in the Red Fort was **chhatri**: the semi-open, domed pavilions seen at the top left and top right of the picture below.



That same building also used Iranian stylistic elements, such as **iwan**: an entryway enclosed on 3 sides, usually vaulted with a pointed arch. You can see an iwan at the entryway to the Red Fort in the image above. They also used these mosque-like elements for the Taj Mahal. The Taj Mahal was a real mashup of Indian and Iranian styles – for example, minarets are very common in mosques, and the Taj Mahal places chhatri atop the minarets.

## 2 The Catholic Baroque

The Byzantine Empire fell in 1453, and after that, the Catholic church gained a lot of power. They took advantage of “indulgences” (donations to the church in order to absolve your sins so you are more likely to get into Heaven) in order to raise money for fancy buildings.

Just like with Ninomaru Palace, the large Baroque buildings built by Catholics were used to demonstrate authority and strength. They often take a long time to build though, like the Saint Peter’s Basilica in Vatican City (1506-1626). Because of that, the styles change during the time it’s being built.

Previously, buildings were made by guilds members and other laborors, but Saint Peter’s Basilica was one of the first large projects to be led by architects who had a clear vision, but even still, the final product was very different from the initial plan. Initially, they planned to use a “Greek cross”, then started trying to use a “Latin cross” instead, and then extended the entrance even more.

One influential building from a similar time was the protestant church in Westerkerk, Amsterdam, called the Hendrick de Keyser (1620-1631). It used exposed brick, dark brown, relatively simple arches, and no stained glass. It still looks pretty fancy, but by the standards for churches at the time, it was considered very muted and humble. This challenged the authority of the catholic church.

The catholic church’s response was to develop the Baroque style. It wasn’t just an architectural style, but also included styles of music and fashion that became part of the counter-reformation.

**Baroquism** is a 17th and 18th century stylistic movement in art, music, and architecture, characterized by elaborate and highly expressive ornamentation.

The modern motto used to describe the philosophy of Baroquism is “more is more”. Baroque buildings were extremely ornate and detailed to the point of feeling cluttered. On the inside, they were even more ornate and colorful, with paintings and gold all over the ceilings.

Baroque churches began to include large plazas which emphasized the scale/importance of the church, and the plazas were also practical for events with lots of people. In terms of urban design, this was sort of

a revival of Roman styles. In the Baroque period, people also began using a street layout called **trivium**, which features 3 straight roads converging on a single building or open space. City planning demonstrates that there is a central authority, who can command for entire streets to be demolished and rebuilt.

As with any architectural movement, once the rules are established, people are eager to break them. For example, the Church of San Carlo alle Quattro Fontane (1638-1646) in Rome, shown below, distorted the roofs and arches that were typically used in Baroque buildings.



Meanwhile, in Spain, the “reconquista” (722-1492) was the military reconquering of Muslims by Christians. Because of the mixing of cultures, the newly formed Spanish empire was heavily influenced by Muslim architecture, which they brought to the Americas. In 1521, Spanish colonizers defeated the Aztecs in Tenochtitlán. Tenochtitlán was built on an elegant grid system with aqueducts and other nice infrastructure, which the Spaniards liked, but they tore down the old temples and built Mexico City on the ruins, while keeping the overall structure, as well as some of the buildings and infrastructure.

The **Laws of the Indies** were a series of 150 Spanish ordinances that dictated the layout of their colonial cities. Notably, they were required to use a rectangular grid with a central plaza called the *plaza mayor*. Despite saying they were “civilizing” the “savages”, many of those ideas were taken from the natives and rebranded as a uniquely Spanish style.

**Mestizo Baroque** is an umbrella term for various hybrids of Baroque European and indigenous arts and architectures found throughout the Spanish colonial Americas. It developed much later than the Baroque style in Europe, because of the physical distance from Europe, weaker economy (than Europe), and reluctant workforce.

A famous example of the Mestizo Baroque style is the San Lorenzo de Carangas, in Potosí, Bolivia (1548-1744), shown below.



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