

ARCHITECTURE FOR THE INDUSTRIAL AGE

HISTORY:

- For much of the 19th Century, architecture was based on **styles from the past**
- When the Industrial Revolution made new materials like **cast-iron** supports available, architects at first disguised them in Neoclassical **Corinthian columns**
- Only in purely utilitarian structures like **suspension bridges**, railroad sheds, and factories was cast iron used without decoration
- Gradually, an awareness grew that new materials and engineering methods demanded a **new styles** as practical as the **Realist movement**

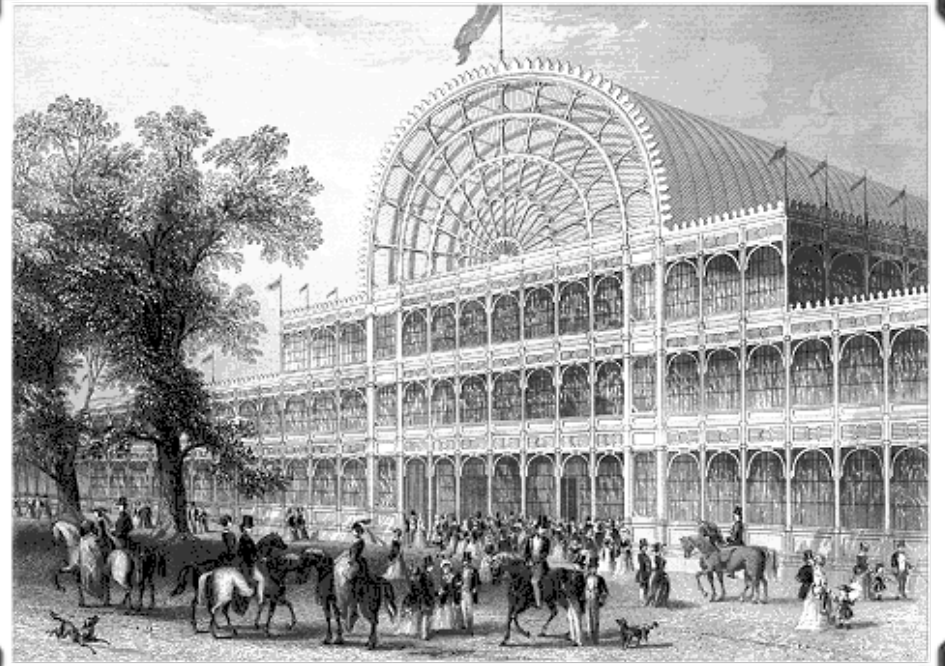


CORINTHIAN COLUMN: A decorative style of column originating from the ancient **Greek and Roman** periods.



The Crystal Palace

- One of the first pieces of architecture to celebrate the new materials of the 19th Century was the Crystal Palace in London England
- The Crystal Palace (1850-51) housed the first **World Fair** in London
- Joseph Paxton, an engineer who specialized in **green houses**, designed the iron and glass structure as a huge conservatory covering 21 acres and enclosing **mature trees** already on the site
- The building was put together in 6 months because machines stamped out the cast-iron material in **pre-fabricated shapes**
- A barrel vaulted transept of multiple panes of glass in an iron skeleton ran the length of the building
- The interior space was **flooded with light**



Joseph Paxton. *The Crystal Palace*, iron and glass, 1850-51, London.

Architectural Terms

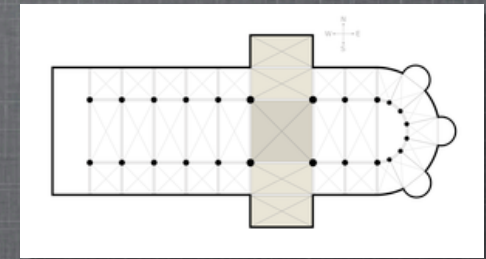


BARREL VAULT:

A series of **arches** placed side by side.

TRANSEPT:

A corridor crossing a larger main corridor.



The World Fair

- More than 14,000 exhibitors from around the world gathered in the Palace's 990,000 square feet of exhibition space to display examples of the **latest technology** developed in the Industrial Revolution
- The origin of a World's Fair is found in the French tradition of **national exhibitions**, that culminated with the French Industrial Exposition of 1844 held in Paris. It was soon followed by other national exhibitions in Europe
- Since 1851, the character of world expositions has evolved. Three rough eras can be distinguished: the era of **industrialization** (1851-1938), the era of cultural exchange (1939-1991), and the era of nation branding (1992-present)

The EIFFEL TOWER

- The use of cast iron spread after mid-century, permitting buildings to be **bigger**, more economical, and fire resistant
- Many buildings with cast-iron façade still stand in New York City today
- After 1860, when **steel** was available, vast spaces could be enclosed speedily
- The **invention of the elevator** allowed buildings to grow vertically as well as horizontally—paving the way for future **skyscrapers**



Gustave Eiffel. *The Eiffel Tower*, iron & steel, 1889, Paris.

- The greatest achievement of engineering and construction of the age was the **Eiffel Tower**
- Built as the central feature of the Paris Exhibition of 1889, at 984 feet it was the world's **tallest structure**
- The tower consisted of 7,300 tons of iron and steel connected by 2.5 million rivets and became a symbol of the **MODERN INDUSTRIAL ERA**

ART
NOUVEAU

CHARACTERISTICS OF ART NOUVEAU

- Art Nouveau, which flourished between 1890 and World War 1, was an **international ornamental style** opposed to the sterility of the Industrial Age
- Art Nouveau relied on **flowering forms** to counter the look of **machine-made** products
- Art Nouveau's trademark **water lily** shape exerted an influence on the applied arts such as wrought-iron work, jewelry, glass and typography
- The architecture, wrought iron and furniture design of Spanish artist **Gaudi**, exemplifies the art nouveau style

CHARACTERISTICS of STYLE:

- Sinuous lines
- Tendril-like curves
- "Flowery" designs



Gaudi – Palau Guell, 1886-1890, Art Nouveau wrought iron grill above the main entrance to the residence in central Barcelona

GAUDI'S ARCHITECTURE

The church of **La Sagrada Família**, is a work on a grand scale which was begun on 19 March 1882 from a project by the architect Francisco de Paula del Villar.

At the end of 1883, **Antoni Gaudí** was commissioned to carry on the works, a task which he did not abandon until his death in 1926. Since then different **architects** have continued the work after his original idea.

The church is a **hybrid** between **Gothic** and **Art Nouveau** forms. The **Mediterranean Sea** was also an inspiration for the interior design.

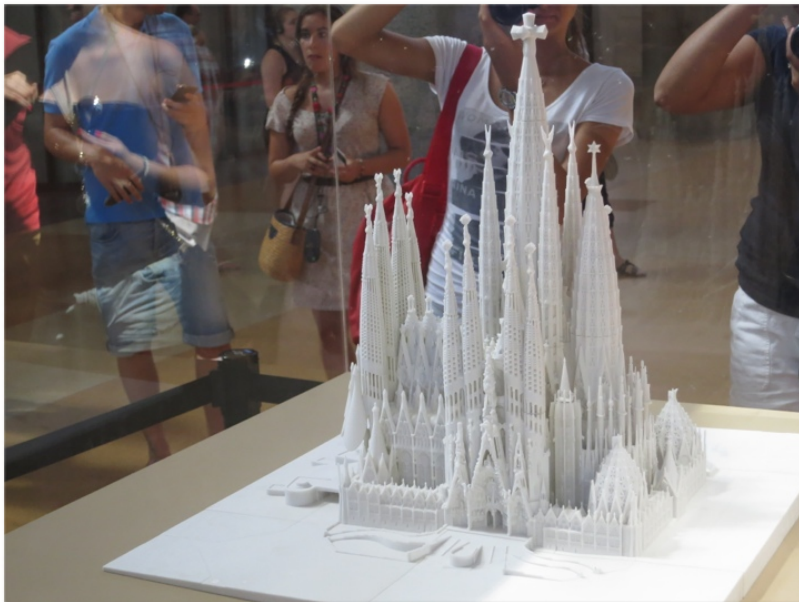
The building is in the centre of **Barcelona**, and over the years it has become one of the most universal **signs of identity** of the city and the country. It is visited by millions of people every year and many more study its architectural and religious content.

The construction is still going on and could be finished some time in the first third of the **21st century** thanks to modern-day **technology**.





VIRTUAL TOUR: http://www.sagradafamilia.cat/sf-eng/docs_instit/vvirtual.php?vv=1



ARTS & CRAFTS

- Countering the growing prestige of Industrialism was the **Arts and Crafts Movement** led by British author and designer William Morris
- Throughout Europe and America, the Arts and Crafts Movement of the late 19th Century influenced decorative arts from **wallpaper**, textiles to book design
- The group advocated a return of the **handcraft tradition of art** (Morris believed design and craftsmanship was compromised by mass production)

WOODBLOCK PRINT:

Carving an image into a piece of wood then rolling ink over the block to create an impression on paper.



William Morris, "*Cray*" chintz, wood block print, 1884.

POSTER ARTS



Henri de Toulouse-Lautrec, *Reine de Joie par Victor Joze*, lithograph poster of 1892.

Art Nouveau appeared in the Poster Arts Movement of the 19th Century and was greatly influenced by the art of Japan, specifically **Japanese woodblock prints**

Artists were especially influenced by the lack of perspective and shadow, the flat areas of strong colour, and the **compositional freedom** in placing the subject off-centre



Hokusai, *The Great Wave off Kanagawa* (神奈川沖浪裏) Woodblock print, c.1829-33.

DRAWING

- Aubrey Beardsley was an English illustrator whose **curvilinear drawings** ideally reflected the Art Nouveau design
- Beardsley **eliminated shading** in his graphic art, contrasting black and white patterns in flowing, organic motifs
- Beardsley was also a **caricaturist** and did some political cartoons
- Beardsley's work reflected the decadence of his era and his influence was enormous and was clearly visible in the work the **Poster Art Movement** of the 1890s and the work of many later-period Art Nouveau artists



Aubrey Beardsley. *The Peacock Skirt*, ink illustration, 1892.

TIFFANY STAINED GLASS

- Louis Comfort Tiffany was an American artist and designer who worked in the decorative arts and is best known for his work in **stained glass**
- Tiffany created stained glass windows, **lamps**, and vases in the art nouveau style (petals and leaves in gleaming colours)
- Tiffany was the son of the founder of New York's famous Tiffany's Jewelers



Louis Comfort Tiffany (Tiffany Studios).
Magnolias and Irises, stained glass, 1908.