Chapter 15

I.   AFTER THE REVOLUTION: THE IDEOLOGICAL USES OF NEOCLASSICISM

Beyond questions of style, what made neoclassicism different from earlier classical revivals was its social and technical context. Both the French Revolution and the Industrial Revolution gave classical architecture new motivations. The emancipatory prospect of the first favored a universal architecture accessible to all, and the economic demands of the second required expedient assembly and standardization.

A.   "Utility Circumscribes Everything": From Durand's Rationalism to Nationalism
   1.   Napoleon exported the discourse of the French Revolution to the rest of Europe through aggressive military campaigns.
      a.   The new emperor's aggrandizement overturned the last residues of feudal order, opening the way for modern states to take hold.
      b.   Napoleonic code of law guaranteed the rights of all citizens.
      c.   Architecture became a topic of public interest.
   2.   In 1794, the French Revolution suppressed Colbert's Royal Academy of Architecture, favoring a new school, the École Polytechnique, devoted to the design of public works.
      a.   Jean-Nicholas-Louis Durand proposed a new formula: economy–simplicity–convenience.
      b.   Durand objected to the role of "character," or a building's emotional impact.
      c.   He reduced all types and forms to a series of standardized parts that fit into a basic proportional grid, creating a universal matrix that simplified the modular systems of the Greeks and Romans.
   3.   Durand's utilitarian method exerted wider influence beyond France, particularly in Prussia.
      a.   Karl Gotthard Laghans's Brandenburg Gate shows how much German architects had absorbed the lessons of French architecture.
      b.   Langhans joined David Gilly as co-director of royal works, and Gilly founded Berlin's first architecture school.
   4.   Karl Friedrich Schinkel attempted to complete some of Gilly's unfinished projects.
      a.   Traveled to Rome and Sicily to gain firsthand knowledge of ancient buildings, producing cold, analytical drawings of panoramic scenes.
      b.   After the Napoleonic wars, he served as the city architect of Berlin for two decades. His buildings constructed during this time, frequently completing the work of Gilly, include the following:
         i.   Neue Wache
         ii.   the Schauspielhaus
         iii.   Berlin's first museum, the Altes Museum
      c.   Preached a message similar to Durand's dictum that "utility is the fundamental principle of all building" but nonetheless pursued a less dogmatic approach to design.
   5.   In Munich, the capital of the new state of Bavaria, Leo von Klenze played a similar role to Schinkel.
      a.   The Glyptothek museum for plaster casts of famous ancient sculptures.
      b.   Von Klenze, along with a rival court architect, Friedrich von Gärtner, began creating a series of iconic buildings for state and municipal institutions inspired by the great works of ancient Greece and the Italian renaissance.
      c.   Munich acquired an Athenian-style propylaia, an imitation of Palazzo Farnese, a copy of the Loggia dei Lanzi, and a portico inspired by Brunelleschi's Foundling Hospital.

6. Ludwig I's eighteen-year-old son ascended to the throne of Greece and sent Leo von Klenze and Friedrich von Gärtner, active in Munich, to make proposals for the new capital in Athens.
    a. Between 1840 and 1880 Athens acquired a dozen neoclassical buildings for modern institutions.

B. Neoclassicism as Institutional Style: The British Isles
    1. After England established its union with Scotland in 1707 and added Ireland in 1801, the British Isles became known as the United Kingdom and soon emerged as the dominant economy of the world.
        a. British military and maritime strength prevailed over Napoleon in 1815.
        b. Despite such power, the public architecture of the British Isles appeared unsubstantial.
    2. The leaders in the major cities of London, Dublin, and Edinburgh began to commission orderly classical envelopes for institutional settings.
        a. William Chambers defined the use of classical architecture for public buildings in later 18th-century Englandl his combination of Piranesi's rustication and Jacques-François Blondel's pedimented front with cupola made the Somerset House the definitive statement on institutional architecture in 18th-century London.   .
        b. Chambers' chief rival in London was Robert Adam.
            i. Created an original style by combining and imitating rather than copying classical models.
                i. Garden façade at Kedleston Hall
                ii. Osterley Park
                iii. Adelphi Terrace
                iv. Register House and the University in Edinburgh
            ii. The generation that followed Adam in Edinburgh pursued a more orthodox classicism, aspiring to replicate Athens.
        c. In London, John Soane succeeded Chambers and Adam as the greatest interpreter of Classicism.
            i. Emerged as a public tastemaker with his lifetime project for the Bank of England, begun in 1788.
            ii. He used his own house on the square of Lincoln's Inn Fields (the Soane House) to teach about form, space, and iconography.
            iii. London's major public buildings, such as William Wilkins's National Gallery and Robert Smirke's British Museum, went to the next generation of architects trained by Soane.

C. American Classicism: The Correct Style for Democracy
    1. Around 1800, professionals began to work regularly in Boston and Philadelphia. The new nation realized some of the most striking of neoclassical landscapes of the age, including the new capital of Washington.
    2. Charles Bulfinch (1763–1844) of Boston established the first American architectural practice after the conclusion of the war.
        a. State House in Boston
    3. Benjamin Henry Latrobe (1764–1820) brought a new level of professionalism to American architecture.
        a. Richmond state penitentiary
        b. Bank of Pennsylvania, which established the temple type as an appropriate form for American banks
        c. Baltimore Cathedral

4.   Thomas Jefferson
    a.   The challenge to improve American taste while building the new republic.
    b.   Jefferson taught himself about architecture through the treatises of Palladio and Gibbs, and his knowledge matured while serving as ambassador to France from 1785 to 1789.
       i.   The new Virginia State Capitol building in Richmond was inspired by the Maison Carrée.
       ii.   University of Virginia: Jefferson's orderly rural setting for the school reflected the same physiocratic philosophy that inspired Ledoux in the planning of Chaux.
    c.   In 1785 he convinced Congress to enact the National Land Ordinance, resulting in the Continental Grid between the Appalachians to the Mississippi River.
5.   The plan of Washington, D.C., appeared as the stunning exception to orthogonal design.
    a.   Washington appointed Major Pierre-Charles L'Enfant.
       i.   His 1791 plan for the capital evoked the great geometric gardens of the age of absolutism, such as Versailles, with diagonal avenues crisscrossing a basic grid.
       ii.   The American capital's plan surpassed the princely ambitions of Baroque capitals such as Berlin and St. Petersburg.
       iii. The ideological implications of its bold hierarchy, however, appeared in contradiction to the egalitarian intentions of America's nascent democracy.
    b.   The White House and the Capitol Building were both designed by amateur architects, James Hoban and William Thornton.
    c.   During Jefferson's administration, he ushered in Latrobe as the surveyor of public buildings, to improve the White House, the Capitol Building, and the Naval Yard.
    d.   Latrobe's influence continued through the work of his former assistant, Robert Mills.
       i.   Treasury Building
       ii.   Washington Monument

II.   THE GOTHIC REVIVAL: ANTIMODERN AND PROTO-NATIONALIST

The variety of medieval revival styles that took hold in mid-19th-century Europe corresponded to a desire to recuperate the lost crafts and values of a simpler and more humane premodern society.

  A.   Medievalism: Idealizing the Other Past
    1.   Goethe's early celebration of a nonclassical style signaled the awakening interest in medieval architecture in Germany, France, and England during the first half of the 19th century.
      a.   German intellectuals after the fall of Napoleon championed Gothic style as a form of resistance to the neoclassical projects of the French.
      b.   The Gothic revival took root in Germany. The Cologne Cathedral epitomized this revival. Its completion in 1880, coinciding with the formation of the modern German state, established it as the symbol of the newly unified nation.
    2.   A stronger movement for the Gothic revival emerged in England, with similar nationalist undertones.
      a.   A concerted movement for the neo-Gothic took root in the 1830s
      b.   Tireless propaganda efforts of Augustus Welby Northmore Pugin

<ol type="i" start="1">
Juxtaposed images of premodern and modern life to show the greater harmony of medieval cities, dominated by Church institutions, compared to modern factory towns
Built more than twenty Catholic churches during the 1840s.
"No features about a building which are not necessary."
Rebuilding the Houses of Parliament.
Charles Barry, designer of the Palace of Westminster; insisted that Pugin have complete control of the decorative details.
Richard Upjohn, an expatriate British architect who fully ascribed to Pugin's principles, completed Trinity Church on Wall Street in New York in 1846.

<ol type="a" start="3">
The Camden Society in Cambridge and the Oxford Movement of High Anglicans shared Pugin's zeal for Gothic style. The Camden Society commissioned William Butterfield to design All Saints, Margaret Street.
The influential art critic John Ruskin shared the Ecclesiologist's conviction that the votive nature of Gothic ornament strengthened community.
<ol type="i">
Proposed a Gothic revival as a program of social reform.
Believed in the ethical superiority of medieval architecture.
Inspired the designers of the University Museum in Oxford.

<ol start="3">
Many of the most important public buildings of the Victorian age were produced in neomedieval styles.
<ol type="a">
Alfred Waterhouse designed Manchester's City Hall of 1868.
George Edmond Street wrote pamphlets to influence the briefs of public buildings. He ultimately rebuilt the Law Courts, one of the largest public buildings in London.
Neogothic style reached its maximum diffusion in the works of George Gilbert Scott, whose office produced hundreds of projects.

<ol type="A" start="2">
European Revival Styles in India: The Gothic Raj

In India, the British sponsored a series of impressive public buildings, first executed in neoclassical styles and later in neo-Gothic, to represent their claim as Raj, or rulers.
The colonists invariably preferred racially segregated cities.
<ol type="a">
At their first town of Madras, a walled fortress protected the "White Town," from the "Black Town."
In Calcutta, the company sponsored a series of classical buildings and monuments in the "White Town."
<ol type="i">
A Doric town hall by Colonel John Garstin accompanied the Ochterlony Monument.
The sprawling Government House by Charles Wyatt stood out as the most conspicuous building of early colonial Calcutta.

In Bombay, Colonel Thomas Cowper, prepared a Doric temple front for Bombay's town hall in 1820.
After the imperial government took formal control of the colony, it sponsored a series of grand projects. Rather than Doric temple fronts, however, they opted for neo-Gothic pinnacles.
<ol type="a">
Public Works Office
George Gilbert Scott designed three buildings for the university
Victoria Terminus

British colonialists were not alone in using revival styles in Victorian India.
<ol type="a">
The Maharaja of Jaipur engaged Colonel Samuel Swinton Jacob as his engineer for a series of public works.
Albert Hall Museum

C. The French Invention of Architectural Heritage
   1. The onset of industrialization prompted feelings of alienation from the past.
      a. Pragmatic and utilitarian attitudes rapidly changed the landscape, obliterating many historical contexts.
      b. This inspired the concept of architectural heritage and generated theories of restoration for the preservation of built artifacts.
   2. During the 1830s in France, the battle for the conservation of historic buildings, especially those of the medieval past, came to public attention through Victor Hugo.
      a. *The Hunchback of Notre-Dame* abounded with architectural observations and moralizations about the role of great buildings.
      b. Inspired the French state to create an agency for architectural heritage in 1830 to catalogue and review the condition of the country's significant monuments.
   3. Whereas the English fantasized about a return to tradition as a means of redeeming society from the effects of industrialization, the French considered historic monuments as icons of the past, distinct from the processes of modern life.
      a. This difference became clear in their contrasting opinions about how to restore historic buildings.
         i. The Gothic revival in France did not lead to new buildings in historic styles, but rather to intervening on old buildings to make them whole and more convincingly Gothic.
      b. Eugène-Emmanuel Viollet-le-Duc (1814–1879) made aggressive restorations of medieval monuments.
         i. Carcasonne
         ii. Notre-Dame
         iii. His theories of a new structural rationalism greatly affected younger designers.
      c. Henri Labrouste came closer to Viollet-le-Duc's ideal with his library, the Bibliothèque Sainte-Genviève.

III. THE NEW IRON AGE: THE SPREAD OF METAL AND GLASS TECHNOLOGIES

The industrial revolution introduced large quantities of iron and glass into buildings, materials often shipped from faraway foundries.

A. Industry in the Service of Commerce: From the Arcades to the Crystal Palace
   1. Iron became a desirable option, as a light, strong, and relatively fire-resistant material.
   2. The first nonindustrial uses of ferro-vitreous structures that combined iron and glass appeared in commercial settings and garden hothouses in France and England during the early 19th century.
      a. The Halle au Blé
      b. The *passages*, or arcades
         i. By the mid-19th century, Paris had more than 150 arcades.
         ii. Galerie Vivienne
   3. The Parisian arcades generated copies throughout Europe and the Americas.
      a. Providence, Rhode Island, as early as 1828
      b. The Passage St. Hubert in Brussels
   4. Arcades began to lose their economic importance in the 1860s with the appearance the first department stores.
      a. The Au Bon Marché store built by Boileau

5. The arcades built in newly unified Italy during the 1870s introduced a greater scale, becoming triumphant symbols of a new secular society.
    a. The Galleria Vittorio Emanuelle II in Milan
    b. The second solution for the ten sheds of Les Halles, the central wholesale market in Paris adjacent to the Halle au Blé, finally broke from this reliance on masonry exteriors.
6. The idea for completely transparent, iron and glass structures originated in England.
    a. John Claudius Loudon created the two-tiered dome of the Palm House at Bretton Hall in 1827.
    b. Joseph Paxton built the Great Conservatory at Chatsworth.
    c. Paxton also designed the Crystal Palace, the most innovative ferro-vitreous structure of the century.
        i. Embodied the utilitarian spirit of modern industry, built without masonry, almost exclusively of standardized components of iron and glass.
        ii. New construction methods and materials engendered a new aesthetic.

B. The Architectural Response to Railways
    1. The Crystal Palace proved too radical to have an immediate impact on architecture.
        a. Architects desired to gain the structural advantage of iron skeletons but feared their insubstantial appearance.
    2. England's most daring ferro-vitreous buildings accompanied the advent of new infrastructures for the railways.
        a. The first railway for a steam-driven engine, a 40 km course used for the transport of goods, began in 1825 between Stockton and Darlington.
        b. Five years later a 60 km passenger line opened between Liverpool and Manchester.
    3. To keep the tracks on a relatively flat course required the leveling of hills, digging of tunnels, and bridging of vales. George Stephenson assumed heroic status for his ability to overcome natural obstacles.
    4. Stephenson established the world's first proper train station at Crown Street Station in Liverpool, in 1830.
        a. Sponsored London's first example of the type, Euston Station, opened in 1837.
        b. Hired a classically trained architect, Philip Hardwick (1792–1870), to design the station for his Birmingham to London line.
    5. While the station hall evolved into a highly decorated type, the train shed became one of the most functionalist.
        a. King's Cross Station (1851) by Lewis Cubitt (1799–1860) proved one of the only stations to blend the façade and the shed into an organic composition.
        b. St. Pancras Station in London exhibited the most extreme disjuncture between its components.
    6. The greatest advances in iron construction commenced with Stephenson's long-span bridges for his railways, especially the Britannia Bridge over the Menai Straights.
    7. Isambard Kingdom Brunel (1806–1859), took greater risks.
        a. Thames Tunnel, the first underwater tunnel in the world
        b. Box Tunnel near Bath
        c. Paddington Station
        d. Royal Albert Bridge

8. Gustave Eiffel started his career designing an iron railway bridge with web trusses in Bordeaux in 1858.
    a. World's tallest structure, the Eiffel Tower
    b. His diagrammatic type of structure prepared the way for the consummate work of web construction, the Forth Bridge near Edinburgh.
9. Most of the great bridges of the first age of the railways traversed rural settings.
    a. John Augustus Roebling built his first internationally recognized suspension bridge in the wilderness near Niagara Falls in 1852.
    b. He began construction of the Brooklyn Bridge, which was completed by his son (Washington Roebling) and daughter in law (Emily Warren Roebling) in 1883.
10. The quality of the Brooklyn Bridge, functional yet representational, raised infrastructure to the highest art of the new Iron Age.