

Chapter 18

I. AMERICAN SKYSCRAPERS AND AUTOMOBILES: MASS PRODUCTION MEETS INDIVIDUALISM

During the first three decades of the 20th century, America astounded the world with a new kind of scale related to machines and mechanical production. Tall buildings pushed several times above the traditional seven-story height, fragmenting the skylines. At the same time, elevated highways directed to the suburbs broke down the lateral dimensions of the urban fabric.

A. Manhattanism and the Crisis of Capitalism

1. Skyscrapers, structured on steel girders and equipped with high-speed elevators, remain America's most important contribution to architecture.
 - a. Reached maturity as the United States became the world's leading industrial power, post-World War I.
 - b. Dozens of skyscrapers in New York and Chicago, and at least one crowning tower appeared in every major American city.
 - i. Forty-story City Hall Building in Los Angeles.
 - ii. Forty-two-story Cathedral of Learning in suburban Pittsburgh.
 - iii. Fifty-two-story Terminal Complex in central Cleveland.
 - iv. Tower soaring over the Nebraska State Capitol Building.
 1. Designer Bertram Goodhue stripped away historical references from the upper shaft and let the stepped massing and vertical lines of the structure define the building's style.
 - c. Most high-rise projects designed at the beginning of the 1920s still relied on some form of historicist detail to accentuate verticality.
 - i. The winning entry to the 1922 Chicago Tribune Tower Competition carried a crown of flying buttresses in its eight-story neo-Gothic pinnacle.
2. In New York, the convergence of mass transportation, real estate speculation, advertising, deficit spending, and architectural ambitions intensified the growth of a dense, vertical city.
 - a. Municipal authorities imposed the limit of the "floor area ratio" of future buildings to 12:1 and proposed five different prescriptions for the heights of street facades according to the type of street.
 - b. This trend, later called "Manhattanism," was characterized by the step-back of the massing of commercial towers.
 - c. The law imposed setbacks at regular intervals to allow an angle of daylight into the street, resulting in the ziggurat profiles of New York skyscrapers during the 1920s.
3. Architects responded to the 1916 Zoning Law in search of a distinctive New York skyscraper style.
 - a. Raymond Hood designed the American Radiator Building of 1924, which became a model of stepped massing.
 - i. Also designed the 1929 Daily News Building.
 - ii. Only the thirty-four-story PSFS Building in Philadelphia surpassed Hood's functionalism.
 - b. The serrated patterns encouraged by the Zoning Law culminated in the two tallest skyscrapers of the Zigzag Moderne style, the seventy-seven-story Chrysler Building by William Van Allen and the eighty-six-story Empire State Building.
4. At the outset of the Great Depression several of the protagonists of Manhattanism developed their most audacious project, Rockefeller Center.
 - a. Conceived as a set of coordinated buildings with the same kind of civic attention that Saarinen envisioned for Chicago.

2. Wright renamed the country Usonia, short for the United States of North America, and called his affordable houses, Usonian, intending them as the architectural equivalent of the Model-T.
 - a. Insisted on the detached dwelling and the value of American individualism.
 - b. Designed several prototypes that could be assembled by their owners. The First Jacobs House (1936) near Madison, Wisconsin, cost \$5,500, about half the price of a single-family house at that time.
3. In 1936, Wright began construction on his most famous work, Fallingwater.
 - a. Its luxury and extraordinary structural solutions went far beyond Usonian prototypes.
 - b. In Wright's houses, the hearth dominated the core.
 - c. He stacked the broad, buff-colored concrete terraces asymmetrically like three shelves of the rocky surroundings.
 - d. Rarely had a building been so beautifully incorporated with the natural conditions of its site.
4. He established his own version of an educational atelier, Taliesin Fellowship, in 1932 at his farm in Wisconsin.
 - a. He created a winter studio in 1937 at Taliesin West in the open desert landscape of Scottsdale, Arizona.
5. Wright's connection to two Viennese émigrés, Rudolph Schindler and Richard Neutra, proved as stimulating for the younger architects as for the master.
 - a. Schindler's 1926 Lovell Beach House.
 - b. Neutra's 1927 Lovell Health House in the hills above Los Angeles
 - c. Both used cantilevered balconies, anticipating Fallingwater.
6. One of Wright's largest projects, the Johnson Wax Building in Racine Wisconsin, demonstrated his creative struggle between the craftsman's desire to design every aspect of a structure and the effort to work with modern technology.
 - a. Wright created a variation of the Panopticon.
 - b. "Dendriform," or tree-like, columns
 - c. Tubular furniture
 - d. The fourteen-story Research Tower in 1944 upset balance in favor of form.
 - i. Proposed a tower based on the structure of a tree.
 - ii. The inflexible vertical arrangement of the Research Tower proved impractical for scientists.

II. EUROPEAN MODERNISMS: A DIALOGUE BETWEEN FORM AND FUNCTION

"Modern architecture" can mean two different things. In its most general sense "modern" refers to a period of time close to the present. But during the first half of the 20th century, many artists and architects used the same word to signify a break from the past.

- A. Le Corbusier: Machines for Living in and Cities for Machines
 1. Le Corbusier became the most influential Modernist architect of the 20th century.
 - a. In *Towards an Architecture* (1923) he launched a campaign against the academy.
 - b. Ford's methods applied to architecture would yield a "machine for living in."
 2. His life contained many contradictory strains.
 - a. As a design student in the watch-making town of La Chaux-de-Fonds he eagerly read John Ruskin as well as Owen Jones's *Grammar of Ornament*.
 - b. His 1907 Villa Fallet appeared the antithesis of Modernism.

- c. He discovered the monk's cell with a small private garden as "the solution to workers' housing." For the rest of his life he returned to this basic L-shaped unit.
 - 3. Before World War I, Le Corbusier explored the most progressive trends in design.
 - a. From Auguste Perret he learned the structural advantages of reinforced concrete frame construction.
 - b. In Peter Behrens's office he became acquainted with the rational industrial organization of the AEG factories.
 - 4. In Paris he joined the avant-garde painter Amadée Ozenfant in formulating Purism, a critique of the Cubism of Braque and Picasso.
 - a. Experimented with the industrial aesthetic in the 1923 Ozenfant House.
 - 5. Le Corbusier championed reinforced concrete.
 - a. His Domino model inspired Le Corbusier's 1926 design manifesto, the "Five Points of a New Architecture."
 - b. Best fulfilled the "five points" in his most famous house, the Villa Savoye.
 - i. A technical disaster: the house proved impossible to heat and was plagued with severe leaks and humidity.
 - 6. Le Corbusier considered architecture a redeeming mission.
 - a. His ideal vision of society involved collective solutions for urbanism and housing.
 - b. For the 1925 *Exposition Internationale des Arts Decoratifs*, the event that gave the name to the Art Deco style, Le Corbusier and his friends prepared the Esprit Nouveau Pavilion.
 - i. Modernist version of the Carthusian monk's cell.
 - ii. His theory of vertical urbanism increased the density while offering a greater amount of open space.
 - 1. Radiant City, an open fabric of tall buildings in isolated park settings that signaled the "death of the street."
 - 7. Le Corbusier's ideal city became immensely influential two decades later during post-World War II reconstruction.
 - a. His ideas were widely diffused by the CIAM (*Congrès Internationale d'Architecture Moderne*).
 - b. One of his few large projects, the 1947 *Unité d'Habitation* in Marseille, served as reconstruction housing for about 1,600 people.
 - i. While he intended the *Unité* as a model for prefabrication, he gave it many artisan touches.
 - ii. The transverse section of the *Unité* showed its greatest innovation for mass housing: by eliminating a public corridor on alternate floors, the two-story apartments cross over from one side to the other, gaining an increase in natural light and cross ventilation.
- B. The Bolshevik Revolution and Revolutionary Formalism
- 1. Little did Le Corbusier suspect that the new USSR, or Soviet Union, would commission his largest project of the 1920s, the Centrosoyuz Administration Building.
 - a. Few expected the artistic innovations that accompanied the Russian Revolution.
 - b. In its early years, Communism's demand for a "new man" inspired a nascent avant-garde that rode on the tail of political upheaval.
 - 2. Russian architecture before the Revolution lacked modernization.
 - a. The GUM market hall on Red Square in Moscow remained among the few relatively modern constructions.

- b. Previous to the Revolution, the poet Vladimir Mayakovsky instigated a Russian version of Futurism.
 - c. A small avant-garde movement produced two of the greatest innovators toward nonrepresentational, or abstract, art: Kasimir Malevich and Wassily Kandinsky.
 - d. For architects, the ensuing civil war during the Revolution and the uncertain economy led to few commissions. With the state now the majority landowner, the provision of greenbelts and satellite cities seemed more likely.
- 3. The few public works designed immediately after the Revolution insisted on the academic tradition.
 - a. The Soviet government installed new statues to Bolshevik heroes in a similarly conservative style.
 - b. Vladimir Tatlin, founder of Constructivism, attempted to countermand the Revolution's conservative approach.
 - i. Monument to the Third International
 - ii. Although Tatlin's tower went unbuilt, the engineer of GUM, Vladimir Shukhov, constructed a magnificent transmitting tower in Moscow two years later.
- 4. Lenin's minister of culture, Anatoly Lunacharsky, offered support to teachers and students at the new design school, the *Vkhutemas*, founded in Moscow in 1920.
 - a. Two of the school's more influential teachers of Constructivism were women: Lyubov Popova and Varvara Stepanova.
- 5. Western Europe became aware of the Constructivist aesthetic through El Lissitzky.
 - a. He organized exhibitions and publications to promote avant-garde Soviet art and architecture.
 - b. With the help of Dutch architect Mart Stam, El Lissitzky proposed the *Wolkenbügel* (cloud hanger) that was a flattened version of the skyscraper, cantilevering horizontally over a series of four-story shafts.
- 6. The most prolific and individualistic of the Russian avant-garde architects was Konstantin Melnikov.
 - a. Gained international fame in 1925 as the designer of the Soviet Union Pavilion at the Art Deco exhibition in Paris.
 - b. Offered a more dynamic spatial expression of Modernism than the one by Le Corbusier.
 - c. Built six of the thirty Soviet workers' clubhouses in Moscow, which became emblematic of the state's commitment to develop a proletarian culture that could replace the role of churches.
 - d. While building his own house, he created one of the most hybrid formal explorations of the age, a personal manifesto against bureaucratic functionalism.
- 7. Moisei Ginzburg promoted a more functionalist line in his 1928 Narkomfin prototype housing block.
 - a. Apartment buildings had to conform to the *Kommunalka* policy: any apartment of more than one room was to be shared by more than one family. Lofts replaced room divisions.
 - b. The penthouse went to the minister of finance, Nikolai Milyutin, the leading proponent of "disurbanism," the Soviet theory of the linear city.
 - i. Envisioned a development that spread in a scattered fashion along the lines of mass transportation.
 - ii. Proposed a linear city scheme for the new steelworks factory town of Magnitogorsk.
 - iii. The development of Magnitogorsk became central to the First Five Year Plan for industrializing Russia.
- 8. Under Stalin, a new conformist mentality discouraged the impractical, formalist works of Constructivism.

- a. When the major competition of the age, the Palace of the Soviets, was announced in 1931, the shift in taste was already clear.
 - b. The winning project, by Boris Iofan, catered to the official return to academic styles.
 - i. Never constructed, but his Soviet Pavilion at the Paris World's Exposition of 1937 gave a foretaste of its scale and style.
 - ii. The return to realism signaled the suppression of the Soviet avant-gardes.
- C. The Bauhaus: From Expressionism to New Objectivity
1. A socialist revolution occurred in Germany in November 1918; the state crushed the revolt.
 - a. This intense moment of political uncertainty coincided with an explosion of artistic exploration, including the founding of the Bauhaus, a state design school that became the most influential matrix of Modernist design in Germany.
 2. The Spartacus movement attracted numerous architects who joined the *Arbeitsrat für Kunst* (Worker's Council for the Arts) and later the *Novembergruppe*.
 - a. Some members participated in the "Crystal Chain," an exchange of utopian letters.
 - b. Throughout 1919, Bruno Taut theorized on the "Dissolution of Cities," proposing a collectivized version of a rural utopia.
 3. Erich Mendelsohn captured the Expressionist aesthetic in his Potsdam astronomical observatory dedicated to Albert Einstein.
 4. Even Ludwig Mies van der Rohe, known later for his disciplined geometry, participated in this brief season of Expressionism.
 - a. He designed a twenty-story skyscraper for the Friedrichstrasse competition in Berlin, proposing a glass-sheathed shard that in plan looked like three leaves attached to a circular stem.
 - b. In a second design, he imagined a tower wrapped by an undulating curtain wall on a butterfly-shaped plan.
 5. Walter Gropius became the first director of the Bauhaus in Weimar.
 - a. Bauhaus as a first step toward the "cathedral of the future," which many interpreted as the "cathedral of socialism."
 - b. Expressionism dominated the curriculum.
 - c. With the influence of Theo van Doesburg, the Bauhaus moved toward more rationalist formal concepts. Van Doesburg promoted the abstract aesthetic of Piet Mondrian, pursuing the theory in three dimensions.
 6. The first Bauhaus exhibition in 1921 was held at Sommerfeld House in Berlin.
 - b. Made of logs and decorated as a romantic holdover from the Arts and Crafts.
 7. The second Bauhaus exhibition, Haus am Horn, a prototype house built by the school in Weimar in 1923, broke significantly from the past.
 - a. Flat roofs, steel-sash windows, and planar surfaces
 - b. By this time, the Bauhaus faculty included Paul Klee, Kandinsky, László Moholy-Nagy, and Oskar Schlemmer.
 - c. Gifted students, such as Herbert Bayer and Marcel Breuer, became catalyzing members of the design studios.
 - d. Bauhaus posters emulated Constructivism.
 8. The transfer of the Bauhaus to Dessau in 1925 allowed Gropius to design a new Bauhaus Building as a manifesto of Modernism.
 - a. The dynamic pinwheel of its three major wings belonged to Constructivism.
 - b. Breuer designed the tubular furnishings.

9. Hannes Meyer, an instructor in the Bauhaus's first architecture course, became director in 1928.
 - a. Meyer pushed the school away from formal concerns toward a more materialist interpretation of design.
10. The last director of the Bauhaus was Ludwig Mies van der Rohe.
 - a. Just completed his two most lyrical projects.
 - i. The temporary German Pavilion at the Barcelona Exposition of 1929
 - ii. The Tugendhat House in Brno, Czechoslovakia
 - b. Attempted to deflate the political issues at the Bauhaus as the institution came increasingly under attack as the Nazi party gained power.

III. TOTALITARIAN SETTINGS IN MODERN EUROPE: ARCHITECTURE AS PROPAGANDA

While totalitarian governments sponsored censorship, police repression, and terrorist techniques to eliminate the opposition, they projected a benevolent public image. The architects of Fascist Italy and Nazi Germany created grand assembly spaces and monumental public buildings as propaganda.

- A. Italian Fascism: Between Modernism and Totalitarianism
 1. Although Italy fought on the winning side in World War I, its economic and political fabric was devastated.
 - a. Benito Mussolini proclaimed himself dictator, creating the 20th century's first military regime.
 2. Fascism revitalized Italian architecture as a grand frame for Mussolini's exploits.
 - a. Early in the century, Italy produced a single, highly influential, flicker of avant-garde culture with the Futurists.
 - b. Around 1920, Milan hosted another movement in the arts, the *Novecento*, or 20th century, style.
 - i. Giovanni Muzio built Ca' Brütta in Milan: the superhuman scale and inflated classicism of the building became the foundation of the official Fascist style.
 - ii. The *Novecento* style influenced one of the first major Fascist projects begun in 1928, the Foro Mussolini by Enrico Del Debbio.
 - iii. The dictator's biographer and mistress, Margherita Sarfatti had been central to the success of the *Novecento* movement in Milan.
 3. In the late 1920s, the prominent academic architect Marcello Piacentini became the major powerbroker.
 - a. Piazza della Vittoria in Brescia served as the model of Fascist planning and space making.
 - b. While Piacentini borrowed freely from *Novecento* style, he also recognized the innovative work of younger Rationalist architects.
 - i. The Gruppo 7, founded in 1926 in Milan and inspired by Le Corbusier and the Bauhaus, attempted to create an Italian version of functionalism.
 - ii. The Novocomum apartment block in Como
 - iii. The Casa del Fascio built as the party headquarters in Como between 1932 and 1936, presented a stylization of the Renaissance *palazzo*
 4. Italian Rationalism began to push the boundaries of Fascist style after the results of several public competitions.

- a. The new Santa Maria Novella Station in Florence
 5. The Fascists felt ambivalent about cities.
 - a. The regime feared them as dangerous and subversive, but the dictator longed to have the largest city in the world as a point of pride.
 - i. Extended Rome's territory but hoped to reduce large cities.
 - ii. As an alternative to cities, Mussolini built a series of new towns to encourage agricultural resettlement. The most successful of these was Sabaudia: the architecture was consistently Rationalist, while the layout evoked the ideals of Ebenezer Howard's Garden City.
 6. The change in attitude became palpable during the planning of the greatest of all Fascist projects, the World Exposition for Rome (EUR) set for 1942.
 - a. The first schemes in 1937 were reminiscent of Le Corbusier's Radiant City.
 - b. As the plan progressed, the overblown columns and arches of *Novecento* style returned as bombastic signifiers of empire.
 - c. Two major monuments, the Palace of Italian Civilization and the Congress Hall, loomed at either end of the first cross axis.
 - d. World War II put a halt to the planned World's Fair at EUR, leaving a setting of superhuman scale for a phantom empire.
- B. Nazi Germany: Millennial Classicism for the Master Race
1. The future dictator of Germany, Adolf Hitler, was inspired by Mussolini's success. To the Italian formula for totalitarianism, Hitler added maniacal efficiency laced with cruelty and racism.
 2. After the Nazis took power, proponents of academic classicism gained wide support, as did the defenders of *Heimatstil*, the vernacular of the homeland.
 - a. Hitler's cultural policies condemned Modernism.
 - b. However, the Nazi hierarchy seemed more concerned with scale than style, and throughout the decade functionalist projects continued to be built.
 - c. Werner March's Olympia Stadium for the 1936 Olympics in Berlin.
 3. Hitler pursued his ideal architecture in Munich with his favored architect, Paul Troost.
 - a. Additions to Leo von Klenze's Königsplatz
 - b. Troost's widow published the influential book on Nazi architecture *Das Bauen in Neuen Reich*.
 4. Some of the formal ideals of a new nationalist style derived from the National Romantic movement in Scandinavia, such as the Stockholm Public Library.
 5. In 1935, Hitler chose Albert Speer as the new state architect
 - a. The Grosse Strasse in Nuremberg
 - b. A new plan of Berlin, begun in 1938
 - i. Hoped to realize Hitler's dream of the world's biggest triumphal arch and largest dome on a new north-south axis run through the Tiergarten
 - ii. The New Chancellery stood out as one of the few buildings realized for the Berlin plan.
 6. After the Germans invaded Poland in 1939, they had little time for culture.
 - The Nazis used foreign conscripts as forced labor, to build up the eastern defenses of Germany and expanded their system of concentration camps, confining enemies, dissidents, and those considered racially inferior.
 7. The Holocaust perpetrated by the Nazis was the most diabolical instance of genocide.