

Preservation of Modern Architecture: The Beginning

Modern architecture defined design in the twentieth century and continues to influence that which has followed, and its preservation is as crucial as that of the architecture of any previous period deemed historically significant. As modern architecture increasingly becomes part of the continuum of architectural history and its buildings experience threats that range from material to functional obsolescence, not to mention demolition due to abandonment and lack of appreciation, concern for its preservation has grown. It is important to look at the development of the protection of the twentieth-century built fabric in order to determine the most appropriate way to continue to approach these buildings.

Modern Architecture: A Concise Overview

The history of modern architecture is complex both intellectually and visually and has been the subject of extensive scholarship. Defining some of its specific characteristics will set the stage for a more comprehensive overview and provide a foundation

for the formulation of a sensible preservation policy and approach.

A progressive atmosphere pervaded the Western world in the early twentieth century, stimulated by the opportunities engendered by advanced industrial production. This forward-looking generation in Europe, scarred by the devastation of World War I, embraced modern architecture, seeking to improve its quality of life through the buildings and spaces of the workaday world. Through Le Corbusier's five points, the Bauhaus, and the dialogue in such organizations as the Congrès International d'Architecture Moderne (CIAM, or the International Congress of Modern Architecture), architectural theory and built examples of the early modern movement during the interwar years were defined by strong convictions concerning social values and aesthetic objectives. The advancement of technology was seen not only as an

1-1 Pittsburgh, Pennsylvania. Gateway Center. General view. This urban redevelopment project, today considered a success, was one of the first in the US. Sponsored by the Equitable Life Assurance Society, it was begun in 1950 and consisted of multiple new buildings designed by the firm Eggers & Higgins as well as a Hilton Hotel designed by William B. Tabler. In Point State Park, which was developed at the same time, the outlines of Fort Duquesne, one of Pittsburgh's earliest settlements, were made visible in the ground as seen in the photo.



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opportunity to create a new style with few or no references to the past, but also as a tool for creating more, improved, and healthier living and working environments accessible to and affordable for everyone. Visually, the plain white boxes associated with the early modern movement—with their flat roofs, walls constructed out of concrete or concrete block with stucco, and their steel strip windows—were a distinct stylistic break from the load-bearing masonry and wood buildings of the past. They were also the visual starting point for subsequent developments, as reflected in many buildings and building typologies that, with their design simplicity, lack of ornament, spatial clarity, new ways of using materials, and abundance of light pouring through large windows, became in many people's minds synonymous with modern architecture. In the years following the early modern movement, modern architecture, with its links to social improvement, aesthetic change, and technological innovation, translated into a visible sign of modernity that redefined the built fabric throughout Europe and in parts of the Americas, Asia, and Africa.

In the United States, the social and aesthetic elements of modernism were present as well and inspired many of the housing and design pioneers of the 1930s, but it was its economy of construction and functionality, directly linked to a desire to provide services and amenities to the greatest number of people, that helped modern design gain influence in the government-sponsored building programs during the New Deal. With the beginning of World War II, both the US government and private developers employed these concepts to rationalize the use of modern architecture to confront the overwhelming demand for industrial facilities and related housing generated by the war effort. While construction virtually ceased in Europe during the war, in the US experimentation with new materials and streamlined production processes evolved into innovations that found applica-

tions in the postwar period. Increased prefabrication predominated and was employed in everything from demountable warehouses to housing for war-industry workers. Although some regarded such hastily constructed buildings as flimsy, a need to work together toward common goals and to maximize resources both during and directly after the war made the acceptance of new ideas and the new style possible.

With the end of World War II, modern architecture became mainstream, and its ascendance continued, to the point of near worldwide omnipresence by the end of the century. It found applications not only in residential architecture but also in a wide variety of other building types, including public buildings like schools, town halls, and libraries, as well as corporate structures, all generally categorized and visually recognizable under the umbrella of the International style, a term which itself became widely accepted. In Europe, the destruction wrought by air and artillery bombing devastated historic cities on a scale never before seen; immediate, large-scale rebuilding was needed. The social agenda and economy of modern architecture coalesced in these reconstruction efforts to build an optimistic future, as exemplified in the endeavor to provide housing to all—typically in combinations of high-rise apartment complexes and low-rise detached or semidetached structures—as quickly as possible. Urban planning and architecture based on notions of human scale and interactions continued to evolve. CIAM dissolved and the voice of the younger generation, including Team Ten architects, among others, gained prominence through the 1950s and into the 1960s, when Brutalism began to dominate the architectural vocabulary both in the United States and Europe.

In the United States, the years immediately after the war were a time of seemingly endless opportunity and growth, tempered by the political and cultural rhetoric of the developing Cold War. It was

a forward-looking period during which modernity, as defined more by the speed, simplicity, and functionality that helped to win the war and less by the socially conscious modernist theory of the European designers, was accepted as the way of the future. Spared Europe's destruction, and without a corresponding need to rebuild, the US managed a relatively smooth transition to a peacetime economy: financial and space-planning efficiencies and technological innovations fine-tuned during the war were employed to remedy a nationwide lack of building that had existed since the prewar decade through the mass construction of housing, businesses, and infrastructure. The early optimism of modernity in the postwar years was reflected in the construction of many new buildings of every type, and the international success of some iconic modernist buildings like the United Nations, Lever House, and the TWA Terminal in New York prompted a broader adoption of this new style for all types of civic and commercial buildings. From airports for the burgeoning air travel industry to performing arts centers for cultural appreciation to private residences and public housing providing decent, clean, affordable shelter for the general population, modern architecture symbolized a progressive direction and hope for a better, more civil future. Even government buildings at all levels adopted a modernist appearance, often in concrete rather than glass and steel, to reflect responsible spending and to project strength and dependability. The positive perception of modernity, and specifically modern architecture, continued in the US through the 1960s. But by the end of the decade, the ubiquity of modern architecture had rendered it common and unpopular: it was no longer exciting. By the 1970s, perceptions had shifted, and particularly urban renewal projects, large-scale housing projects, and public plazas garnered increasingly negative reactions.

Concurrently, the postwar period witnessed the growth of regional modernisms for which the aesthetic and functional tenets established in Europe during the 1920s and 1930s were adapted to the local climates and cultures in Africa, Latin America, and Asia. The influence of modernism in the prewar period, for example, started in the 1930s, in the construction of the White City in Tel Aviv, which was based on Bauhaus principles. The modernist idiom was exported to the European colonies in Africa and Asia throughout the twentieth century; however, the forms and language of the International style did not predominate until the postwar period. The deliberate search for regional expressions of modernism, pursued by local architects, often developed as part of or subsequent to new regimes embracing modernism as a symbol of a break with the past. In Latin America, for instance, modernism flourished in the postwar period. Through numerous state commissions, Lucio Costa (1902–1998) and Oscar Niemeyer (b. 1907) established an increasingly distinct, free-form modern vocabulary in Brazil starting in the late 1930s, as did the landscape designer Roberto Burle Marx (1909–1994). All three men were integrally involved in one of the most significant experiments with modernism realized in the country: the construction of the modern city of Brasília, built 1956–1960 (Figure 1-2). Other prominent concentrations of postwar modernism in Latin America include the work of Luis Barragán (1902–1988) in Mexico, Ricardo Porro (b. 1925) in Cuba, and the Venezuelan architect Carlos Raúl Villanueva (1900–1975), each with its own regional characteristics and identity.

With the onset of the 1970s, the stylistic homogeneity began to disappear in Europe, the United States, and increasingly, across the globe; the modernist forms were deemed austere and formulaic, and the modernist language slowly lost its starkness



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in favor of more ornate forms and surfaces. The backlash against modernism was partially manifested in the growth of the eclectic and whimsical vocabulary of postmodernism, which freely referenced traditional styles. This fundamental philosophical and design shift was not, however, a rupture equal to that which occurred at the onset of modernism, but rather a stylistic phenomenon that left the materials, typologies, and efficiencies of construction constant. (The challenges currently confronting preservationists regarding modern architecture—notably issues of temporality and ubiquity—will continue to present themselves as the postmodernist period in turn gains historical significance and thus requires evaluation by the preservation discipline.)

1-2 Brasília, Brazil. View of the National Congress Building. Planned by Lucia Costa, designed by Oscar Niemeyer, and landscaped by Roberto Burle Marx, Brasília was largely constructed between 1956 and 1960 and was considered a textbook example of a modern city. It was inscribed on the World Heritage List in 1987, barely thirty years after its completion.

The History of Preserving Modern Architecture

Although preserving modern architecture may seem to be pushing the preservation discipline in new directions, the increasing focus on modern architecture is not unique in the evolution of the appreciation for earlier periods' distinct traditional architectural styles. Interest often starts with collectors, who bring attention to the art and artifacts of a particular period once a sufficient amount of time has passed—twenty-five to thirty years—to allow for reflection and, likely, nostalgia. Following that, the recognition of a famous architect or building expands awareness and appreciation for the entire period. Individual iconic structures noted as significant or as contributing to the oeuvre of a major architect are often the first focus of preservationists, especially as they come under threat from materials failure or deferred maintenance, from functional or physical obsolescence as the buildings edge toward the half-century mark (the point at which historic significance is considered in

most jurisdictions), or by development pressures in the form of demolition or insensitive change. With the preservation success or failure of these icons as rallying points, public awareness and preservation efforts expand to include other noted buildings, architects, and trends of the period, growing to general acceptance of the period as worthy of saving.

For modern architecture, a similar pattern occurred, though at different times in different countries for different reasons. In the United States, for example, the growing appeal of midcentury modern design, such as Saarinen's tables, Eames's chairs, the Barcelona chair by Mies, and Noguchi's many lights, predates the restoration work on many modern architectural icons in the last decade of the twentieth century. The architecture and the accompanying design interiors and finishes only became noteworthy for a wider audience of designers, architects, and collectors in the first few years of the twenty-first century. In the larger panorama, though, the preservation of modern architecture began in Europe, where the style developed, with the icons of the movement.

Preserving the Icons in Europe: The Beginning

The initial interest in modernist buildings as heritage symbols began in Europe as early as the 1950s and 1960s, when insensitive changes and deferred maintenance started to threaten the structures famous for their association with the modern movement, a single architect, or the ideals of modern design. These efforts grew slowly and were reinforced gradually by revisions to legislation and increasing governmental attempts to identify important buildings from this time period. As the preservation of these iconic buildings was addressed on a limited basis throughout the 1960s and 1970s, other significant prewar buildings intermittently

came to the forefront. A comprehensive recognition of the recent past as valuable heritage, however, did not gain momentum until the 1990s. Therefore, it is important to summarize both the development of these preservation efforts in Europe and the key role icons and master architects played in promoting preservation interest in modern architecture.

The Bauhaus, designed by Walter Gropius (1883–1969) and built between 1925 and 1926, is the building most identified with the inception of the modern movement in Germany in the 1920s (Figure 1-3). Due to its importance as an educational institution, the school was initially repaired in the 1940s and subsequently reopened after having been seriously damaged during the war. As early as 1964 it was officially recognized locally, and ten years later it was deemed a national (East German) landmark. Following the designation, and fifty years after its construction, a major restoration effort in the mid-1970s repaired its failing curtain wall.¹ As the seminal building for the modern movement, preservation work at the Bauhaus continued over the years and expanded from its focus on the original building to include the residential facilities that are part of the complex and other Bauhaus buildings designed for the city of Dessau. As an icon of modernism, the preservation of the Bauhaus was fundamental to the initial recognition of the significance of both the style and the period as a whole.

As with the Bauhaus, conscious preservation efforts for modern buildings typically develop through a focus on the legacy of one of the masters; the most salient example is Le Corbusier (1887–1965) in France. As the quintessential example of his five points on architecture, the Villa Savoye, built 1929–1931, was a milestone for the recognition of modern architecture in France (Color Plate 1).² Le Corbusier himself was instrumental in advocating for the preservation of the house in Poissy, though the building was not designated a national historic



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monument by the French Ministry of Culture until after the architect's death.³ In fact, the first work by Le Corbusier to be so recognized was the postwar *Unité d'Habitation* in Marseilles in 1964 (Figure 4-3). In 1968, the Fondation Le Corbusier was established as part of the Villa Savoye preservation efforts, in conjunction with the Association of the Friends of Le Corbusier and the French Ministry of Culture; it continues to advocate for the preservation of the architect's body of work.⁴ Conservation work has progressed on the Villa Savoye and includes two major renovations that resulted from the reinterpretation of the house's history and significance and the introduction of more rigorous preservation practices.

In another European center of modernism, the Netherlands, concern for the heritage of the 1920s and 1930s also came to the forefront in the early 1960s; it was a reaction to the threat of changing uses requiring significant alterations to buildings that embodied the ideals of modern design. The landmark tuberculosis sanatorium *Zonnestraal*, designed by Jan Duiker (1890–1935) in collaboration with Bernard Bijvoet (1889–1979) and Jan Gerko Wiebenga (1886–1974) between 1926 and 1928, was eventually partially abandoned when tuberculosis ceased to be a major threat to public health (Color Plate 2). In response to the poor condition of some of the buildings, a major Dutch architectural magazine dedicated an entire issue to the project in 1962.⁵ The buildings continued to be used as a hospital through the 1980s; however, the fate of the complex as a coherent expression of modernism remained secondary to its viability as a medical facility. It was not until the late 1990s and early 2000s that preservation of significant portions of the

site was effectuated in a meaningful way.⁶ Nonetheless, the focus on *Zonnestraal* in the late 1980s and early 1990s drew attention to the threats to modern buildings and the challenges in their conservation and eventually became fundamental to the larger European efforts to address the protection of modern architecture.

In West Germany, the restoration effort of the *Weissenhof* housing development in Stuttgart was another early and important benchmark for the preservation of modernist buildings. Created in 1927 for an exhibition titled “*Die Wohnung*” by the *Deutscher Werkbund*, the project showcased the potential of modern housing through a settlement of some thirty-three houses and sixty-three apartments designed by seventeen different architects, including Le Corbusier, Mies van der Rohe (1886–1969), J. J. P. Oud (1890–1963), Mart Stam (1899–1986), Walter Gropius, Hans Scharoun (1893–1972), and Peter Behrens (1868–1940) in a surprisingly coherent manner.⁷ The municipality sold the experimental residential development in 1938. Following World War II, a number of damaged houses in the center of the site were demolished for new construction, threatening the coherence of the original design. Advocacy for the significance of the remaining houses on the site began in 1956 and resulted in a local landmark listing in 1958, though insensitive changes continued. Between 1981 and 1987 extensive renovation was finally undertaken to remove some of these later additions.⁸ In 2002 the two buildings designed by Le Corbusier were once again restored, this time converted into a visitors center and a museum devoted to the history of the settlement and its restoration.⁹ The early recognition of the significance of *Weissenhof* was not isolated; the acknowledgment of housing as fundamental to the heritage of this period occurred throughout the country and important efforts were made to preserve these early housing estates.¹⁰

1-3 Dessau, Germany. The Bauhaus. Walter Gropius, 1925–1926. General view. The building, a seminal icon of modern architecture, was initially renovated in 1960–1961 and again in 1965. Upon its fiftieth anniversary in 1976, the steel window-wall system was reconstructed in aluminum, maintaining the overall transparency of the design in the new material, especially on the corners, as seen here.

These four examples, which were hallmarks of the modern movement, set professionals and the public in East Germany, France, Holland, West Germany—indeed all across Europe—on the path to thinking about preserving other structures from the prewar modern movement era. The steady recognition of buildings through national listing began, albeit intermittently, in the 1970s. In the UK for example, a group of the icons of the interwar period, including the Nottingham Boots Pharmaceutical Factory designed in 1932 by Sir Owen Williams (1890–1969), was included in 1970 on the list of architecturally, historically, or culturally significant structures managed by English Heritage, the agency specifically responsible for preservation in the UK (Figure 4-30).¹¹ The new listing was the result of a change in legislation that extended the cutoff date for a building's eligibility from 1840 to 1939. Other modern buildings, such as High and Over in Amersham, Buckinghamshire, designed by Amyas Connell (1901–1980) in 1929, were subsequently added to the list at the end of the same decade. This occurred, however, in a context in which Art Deco and Neo-Georgian buildings were still not readily accepted or recommended for listing status in England.¹² It was not until 1987 that buildings constructed after 1939 were even allowed to be considered for listing, when a thirty-year rule (still in effect) for English Heritage-listing consideration was adopted.

Beyond the recognition of iconic buildings, the prominent architects and structures of the prewar period became the focus of the next wave of recognition and preservation efforts, which continued to develop at a local or national level and gained more prominence during the 1980s. In 1987, the careful restoration of the abandoned Penguin Pool at the London Zoo, completed in 1934 by Berthold Lubetkin (1901–1990) with Tecton, his architectural firm, was one of the first restoration efforts for a

modern building in the UK.¹³ The restoration of the Notre Dame du Raincy, designed by Auguste Perret (1874–1954) and built between 1922–1923 in France, was also completed in 1987. The reconstruction of Mies's 1929 Barcelona Pavilion, demolished in 1930, was proposed in 1980 and initiated three years later. The recognition of the major modern buildings in many countries—created as much by the lost battles as those that were successful—focused attention on the lesser known but equally important examples of the prewar period.¹⁴

The Broadening Scope: The Consolidation of International Efforts and Looking Beyond the Icons

Although advocacy for the early-period buildings led to intermittent restoration, at the end of the 1980s modern buildings remained the focus of a relatively small group of heritage professionals, architects, and scholars. By the mid-1990s, however, a broad international dialogue had begun to address specific preservation issues concerning modern buildings and the necessity to expand the study of the period. This corresponded to the growing activity focused on the preservation of twentieth-century architecture at national and local levels. When the Bauhaus Dessau structures and earlier buildings in Weimar were added to the World Heritage List in 1996, it reflected the broader efforts at all levels of cultural heritage management to recognize early modern architecture.¹⁵

The disparate strands of modern architecture preservation in the European countries coalesced in 1989 when the concern for and focus on Zonnestraal spurred the renovation's architects in the Netherlands to reach out to other professionals, academics, and cultural heritage agencies with interest and expertise in modern architecture, including existing organizations such as the

Fondation Le Corbusier in France, the Thirties Society in England (renamed the Twentieth Century Society in 1992), and the Fundació Mies van der Rohe in Spain. From this initiative, the International Working Party for the Documentation and Conservation of Buildings, Sites, and Neighborhoods of the Modern Movement, or DOCOMOMO, was founded.¹⁶ Within a year, the organization held an international conference in Eindhoven, Netherlands. This first conference was successful in attracting some 140 professionals from twenty different countries and included presentations on a wide range of projects and initiatives. The conference concluded with the adoption of the Eindhoven Statement, essentially a mission statement for the nascent organization that set goals for gathering and disseminating information regarding modernist architecture and for expanding the preservation mandate beyond iconic buildings.

The formation of DOCOMOMO not only reflected the burgeoning movement in preserving modern architecture, it also provided a springboard for the discussion and study of the history and conservation of modern architecture. Although the development of modernism (and therefore its preservation) in each European country is unique, many of the preservation issues are nonetheless similar, whether they relate to technical preservation or establishing significance within a national or international context; the activities and publications of DOCOMOMO became a forum for sharing this scholarship and experience.¹⁷ Most importantly, the increased public interest and academic recognition stimulated not only further scholarship, but also the surveying and identification of other important twentieth-century buildings.

In the same vein, frantic, last-minute attempts to save significant modern buildings from demolition led to the realization that comprehensive surveys of the period were necessary for the assessment of indi-

vidual buildings, both for their singular significance and their contribution to the overall context. As a result, during the last two decades of the twentieth century, surveys became increasingly common. In the Netherlands, for example, the built environment from 1850 through 1940, constructed during the era of industrialization, was documented. This occurred simultaneously in Great Britain and subsequently in the United States. In the UK and US, surveys (of varying comprehensiveness) were frequently theme-based and significantly changed the approach to the identification of this heritage in both countries—notably in the UK, where numerous buildings that were previously denied heritage status were added to English Heritage's list. As a result of the Dutch survey, various social housing projects that had been early experiments in prefabrication and semi-industrialized building, along with representations of the work of architect W. M. Dudok (1884–1974) in Hilversum, Netherlands, and the famous Van Nelle Factory built between 1925 and 1931 to the designs of J. A. Brinkman (1902–1949) and L. C. van der Vlugt (1894–1936) in Rotterdam were all designated.

With the growth of these initiatives and their consolidation at an international level, the focus broadened and began to include many different building types as well as less iconic yet regionally significant architecture. In addition, new and innovative preservation strategies had to be devised for the sometimes unprecedented scale of these buildings. Van Nelle, for instance, eventually became one of the more meaningful preservation experiments for early industrial buildings. As a result of intensive cooperation in a public-private partnership involving the owner, regulatory agencies, the new developer, and other interested parties, the adaptive reuse scheme has been sensitive to both the architectural significance and functional viability of the building.¹⁸ As Van Nelle demonstrates, the preservation of modern architecture in Europe has generally encountered

less resistance both from professionals and the public than in other parts of the world. This willingness to incorporate modern structures into the European heritage panorama allowed for creative approaches and solutions—often led or supported by governmental agencies such as the ministries of culture—and to the creative use of existing heritage regulations. As a result, the 1990s witnessed a largely successful consolidation of earlier efforts for the recognition of prewar modern buildings.

With the acceptance of early modern architecture as part of the continuum of architectural heritage that merits protection, slowly post-World War II buildings began to be considered worthy of preservation.¹⁹ The focus on the buildings and sites from that era of postwar reconstruction in Europe remained limited until the middle of the 1990s and did not gain prominence until the turn of the twenty-first century, coinciding with America's more coordinated examination of its postwar built fabric. In France, for instance, the postwar work of significant French architects other than Le Corbusier, such as Jean Prouvé (1901–1984), started to receive recognition by preservation advocates. In 1999 a remaining *Maison Tropicale*, one of the three Prouvé projects built in 1949 as a prototype for prefabricated homes, was dismantled in the Congo and sent back to France for restoration and reconstruction, subsequently to be exhibited internationally.²⁰ Also of note are the preservation efforts for the buildings of the reconstruction of the city of Le Havre designed by Auguste Perret, which have been ongoing since they were protected by the French government in 1995. These efforts eventually led to the recognition of Le Havre as a World Heritage site ten years later.

In England, buildings have been exempted from the thirty-year rule in cases of extraordinary contribution to national heritage. The Alexandra Road housing project in London, a large urban renewal development of terraced housing, was initially

conceived and designed by Neave Brown (b. 1929) in 1968 and finally completed in 1978. Despite initial animosity toward the project and its unusual scope and scale, it was designated less than fifteen years after construction was completed. The project was listed at the request of a group of occupants supported by a number of advocacy groups, including DOCOMOMO-UK, in order to prevent further improper and unsightly repairs and replacements.²¹ Successes such as these saved many significant European modernist buildings and helped to generate even more interest in modern heritage. Largely due to the new legal flexibility and supported by thematic surveys, 315 postwar buildings or groups of buildings were listed by English Heritage in 2000.²² Although the number of postwar buildings protected by English Heritage continues to increase, it includes controversial Brutalist buildings like the Trellick Tower, designed by Erno Goldfinger (1902–1987) and built between 1966 and 1972, and opposition to the recognition of buildings from this period remains.²³

Unsympathetic development and the threat or reality of abandonment (and subsequent demolition) of significant buildings continues to challenge heritage professionals in Europe. Buildings of inarguable import suddenly appear in the news because of such events. For instance, in the Netherlands, the Municipal Orphanage in Amsterdam, a signature building built 1955–1960 and designed by Aldo van Eyck (1918–1999), one of the founding members of Team Ten, was threatened with demolition in the late 1980s.²⁴ The large site on which the actual building stood was eventually acquired by a developer who built a series of low-rise buildings adjacent to the former orphanage; as part of the property sale, he agreed to retain the van Eyck building and rehabilitate it for office use. In a less successful example, the rehabilitation of Bracken House, a 1959 brick newspaper office building with a less modern, more



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traditional appearance designed by Sir Albert Richardson (1880–1964) involved the insertion of a fundamentally new building into the old envelope while maintaining only sections of the original facades (Figure 1-4). Bracken House was the first postwar building listed by English Heritage in 1987, but unlike the successful and innovative solution at Van Nelle, the facadism at the Bracken House demonstrates the potential misunderstanding of both the significance of this architecture and its preservation.²⁵ In the meantime, in Scotland, the building noted as the best example of postwar architecture, St. Peter's College in Glasgow (also known as Cardross Seminary)—designed by Gillespie Kidd & Coia and built 1962–1968—remains closed while the Brutalist complex progresses to a ruinous state.²⁶

Except for a small number of iconic structures, preservation approaches to modern architecture in Europe have generally emphasized rehabilitation and continued creative use rather than strict preservation or restoration of the buildings and sites. Interesting and innovative projects, such as the adaptive reuse of the former Fiat Lingotto Factory in Turin for a mixed-use convention center and educational facility, exemplify the emphasis on the rehabilitation of these buildings for ongoing use. Carried out in stages under a master plan through

1-4 London, England. Bracken House. Albert Richardson, completed 1959; renovation by Michael Hopkins, 1987–1992. General view. While hardly modern stylistically, this was one of the first post-World War II structures to be listed in England. While two sections of the original traditional masonry at either end of the block were kept, new infill was constructed in the middle.

the mid-1990s, the rehabilitation of Van Nelle, like Zonnestraal, is centered on the perpetuation of the economic, cultural, and functional viability of the buildings. This continued use is recognized as fundamental to the original and ongoing significance of the buildings. Even approaches to social housing demonstrate an emphasis on rehabilitation rather than strict preservation. In 2001, for example, Keeler House, a sixteen-story low-income housing project designed by Denys Lasdun (1914–2001) and built 1957–1959, was remodeled into—irony of ironies—luxury housing.²⁷

Overall, European countries continue to both individually and collectively identify, assess, and conserve the built fabric of the twentieth century. The discipline at the turn of the twenty-first century is increasingly organized and has gained some prominence in the cultural heritage discourse. Nonetheless, the preservation and acceptance of modern architecture, and especially of those buildings beyond the icons, is still in its infancy, despite Europe's established heritage process and its tradition of championing its monuments.

The United States: Post–World War II to Today

On the west side of the Atlantic Ocean, it was not until the postwar period, when America experienced an unprecedented construction boom, that modernism became the dominant architectural idiom. The consideration of modern buildings, sites, and landscapes as cultural heritage, however, occurred in the US in the last two decades of the twentieth century—paralleling Europe's examination of its post–World War II heritage. It was a time when many of these buildings had reached the prescribed fifty years of age necessary to be considered significant, but also when development

pressures and obvious maintenance issues became more prevalent, increasingly threatening the buildings. As in Europe, the perception of the buildings as part of the cultural heritage and identity increased during the last decade of the twentieth century and the first few years of the twenty-first century, allowing for a broader focus on not just the iconic buildings and master architects, but more ordinary structures as well.

Modern Architecture in the United States

The acceptance of modern architecture and its preservation in the United States centers on the visionary architect Frank Lloyd Wright (1867–1959). Prior to World War II, the US did not have as strong a modernist tradition as some of the European countries. The prevailing stylistic interest was Art Deco and its various derivatives. Removed from the modern movement in Europe, the work of Frank Lloyd Wright stands alone. His less ornamental and open-plan houses from the 1900s and 1910s introduced America to a simplified idiom that focused on design elements, and he inspired European émigré architects (many of whom would later become significant in their own right) who respected his work or worked with him upon their arrival in the US.²⁸

The introduction of modernism as a distinct style is to a large degree the work of a handful of architects who arrived from Europe or were influenced by the early modern style. They arrived as early as the 1920s and established concentrated areas of early modern expression around the country, for instance, in New England around Boston, in California around both San Francisco and Los Angeles, in the Midwest in and around Chicago, and on the island of Puerto Rico. This group included prominent architects such as Austrian Richard Neutra (1892–1970), who arrived in Chicago in 1928 and left for Los Angeles two years later. There he worked

with fellow Austrian R. M. Schindler (1887–1953), who himself had moved to California in 1919 after initially arriving in Chicago in 1914. The Swiss Albert Frey (1903–1998) also eventually settled in California; he arrived in New York in 1930 and moved to Palm Springs four years later. Other significant figures in the introduction of modernism include the American architect and editor of *Architectural Record*, A. Lawrence Kocher (1885–1969), and Henry Klumb (1905–1984), who arrived in the US in 1928 from Germany, settling in Puerto Rico in 1944.²⁹ Klumb and Neutra both briefly worked for Wright. In 1937 both Walter Gropius and Marcel Breuer (1902–1981) arrived in Boston from Germany via England, and that same year another Bauhaus associate, Mies van der Rohe, arrived in Chicago. American architects Edward Durell Stone (1902–1978) and Wallace K. Harrison (1885–1981) were also both working in the modern idiom prior to the war.

The efforts of the Museum of Modern Art (MoMA) were also highly significant to the introduction of modernism to the United States. Three years after the museum was founded, MoMA's 1932 exhibit and accompanying publication, *The International Style: Architecture Since 1922*, arranged by Henry-Russell Hitchcock (1903–1987) and Philip Johnson (1906–2005), presented European modernism along with a few examples of the style in the US. The exhibit portrayed modern architecture as a new visual language gaining global influence, downplaying its original social program and context. The subsequent Brazil Builds exhibit in 1943 at MoMA further emphasized the prominence of modern architecture and provided the basis for its full acceptance in the postwar period.

The postwar era's construction boom was defined by a need for housing, corporate expansion both on sprawling suburban campuses and (in the guise of tall buildings) in urban centers, institutional growth,

and civic improvements. The knowledge base and an infrastructure of materials and methods that had made the building campaigns of the wartime defense industries possible were easily adapted to the ensuing upsurge in construction. The immense need for buildings of all kinds and the efficacies honed during the war came together with an incredible sense of personal, social, and economic opportunity and optimism; the result was a cultural, economic, and political energy almost unprecedented in American history. It embraced the architectural expression and principles of modernity and resulted in the acceptance of a modern design vocabulary in almost all sectors of the building process.

A severe housing shortage from the Depression and war years was compounded by waves of returning veterans. Several legislative acts, such as the so-called GI Bill and various government-insured mortgage programs, were aimed at increasing the number of residential units available to address the shortage. The resulting proliferation of affordable, simply constructed individual homes in newly created suburbs came to define the postwar era in such communities as the somewhat traditionally styled Levittown development in Long Island, New York, and more rarely, the more modern Mar Vista neighborhood in Los Angeles. These mass tracts of housing often utilized and expanded on construction methods and spatial arrangements developed before and during World War II that were in turn influenced by social housing reformers and modernist designers. Also addressing the housing shortage but on a much smaller scale was direct government involvement in constructing subsidized low- and middle-income housing, primarily in cities—usually as multistory buildings and later as high-rises inspired by the social housing efforts in interwar and postwar Europe.

Concurrently, the growth of the American corporation, spurred on by new ideas and innovative

products, manifested in the cities and suburbs as glass-and-steel office buildings that presented a great deal of transparency—literal and figurative—that contrasted with the image of businesses housed in masonry-clad Art Deco structures from the prewar era. In this period of optimism, architects experimented with materials and finishes: new products were readily available, and innovation was enthusiastically encouraged. Corporations such as John Deere looked to new materials like self-weathering steel for its own new headquarters, while Formica developed new laminates for the rapidly expanding interiors market.

The positive perception of modernity, and specifically modern architecture, continued in the US into the 1960s, though it was tempered by a lack of popular acceptance for some of the more expressively stern and aesthetically bare forms. Adding to an emergent backlash against modernism was governmental involvement that had shifted from providing housing for returning veterans to regenerating urban cores deemed blighted or deteriorated as the housing shortage eased. The resulting urban renewal efforts, usually designed in a modern style devoid of ornamentation and using modern materials, were frequently accompanied by the destruction of older neighborhoods. This demolition of the past—and consequent upheaval of residents—became in many ways identified with modern architecture and is one of the factors behind the growth of the preservation movement in the postwar decades. A classic example is the 1963 demolition of New York’s Beaux Arts-style Pennsylvania Station, designed by McKim, Mead, & White from 1905 to 1910, to make way for the construction of a large, nondescript sports arena and office tower. Penn Station’s destruction became an impetus for the grassroots preservation activism that ultimately led to the passage of stricter preservation legislation both locally, through various ordinances and municipal

laws, and nationally as one of the events that led to the passing of the National Historic Preservation Act of 1966.

Despite the seemingly antagonistic relationship between historic preservation and modern architecture, the buildings and building typologies that flourished in the United States in the mid-twentieth century increasingly merit reevaluation. Many of them, including those that have come to be seen in a negative light in the ensuing decades—often as much a result of social changes as perceived architectural failures—are now not only architecturally significant, but also important historic representations of the considerable and sometimes innovative urban planning and design initiatives that shaped all US cities in the postwar period (Figure 1-1).³⁰ They also contributed to the growth of preservation as an advocacy movement and as a modern professional discipline.³¹

Preserving Modern Architecture in the United States

The development of preservation efforts for twentieth-century architecture in the US, while similar to their development in Europe, is also very distinct from them. The buildings of the prewar period, like the prewar modernist European structures, began to receive preservation attention beginning in the 1960s and 1970s when the preservation movement here ignited. However, in the US (as in the UK), the prewar period was characterized more by Art Deco and Art Moderne than by modernist design. Preservation efforts concerning modern architecture in the United States arguably began with the early recognition of Frank Lloyd Wright’s work. Thus the discussion of the development of modern architecture preservation must first address Wright as a distinct yet important precursor to and contemporary of the subsequent preservation movement.³²



1-5

Because he was an iconic figure, preservation efforts focused on Wright's work.

The Focus on the Legacy of Frank Lloyd Wright

The first efforts to preserve Wright's buildings and legacy in many ways began, not unlike the initial efforts to preserve Le Corbusier's, with the architect's own actions. The Taliesin Fellowship, created in 1932 as an educational community in which students learned from Wright and worked on repairing and remodeling Wright's projects, continues to perpetuate his legacy—and therefore its future preservation. It was Frank Lloyd Wright's Fallingwater (Color Plate 3), which was completed shortly before World War II and received a great deal of publicity—but was not represented in Hitchcock and Johnson's MoMA exhibit—that was arguably the means by which most Americans received their first introduction to a more obviously modern style and

architectural language. After the death of its owner, Edgar Kaufmann Sr., in 1956, his son Edgar Kaufmann Jr. donated oversight of Fallingwater to the Western Pennsylvania Conservancy, but largely retained curatorial responsibility; the house subsequently opened as a museum in 1963.³³

At approximately the same time that Fallingwater was opened to the general public, another significant Wright house underwent a major change. In 1964, Marjorie Leighey, the second and then current owner, donated the Pope-Leighey House with all its furnishings to the National Trust for Historic Preservation (Figure 1-5).³⁴ As originally commissioned by Loren Pope in 1939, it was a 1,200 square-foot Usonian

1-5 Alexandria, Virginia. Pope-Leighey House. Frank Lloyd Wright, 1939–1941. General view. As early as 1964, one of Wright's Usonian houses was threatened by demolition and moved that same year because of the construction of a major interstate highway in Falls Church, Virginia. The building was given to the National Trust for Historic Preservation and moved intact to Woodlawn Plantation in Alexandria.

house. The modestly scaled residence was no match for planned highway construction, and in order to prevent demolition, the National Trust moved the building from its original Falls Church, Virginia, location to the grounds of Woodlawn Plantation in Alexandria, Virginia, the home of George Washington's nephew. Transferred from its original site into the shadow of this Georgian Colonial house, Wright's Pope-Leighey House also represents one of the first instances of relocation as a modern preservation option. It continues to demonstrate the architect's innovative designs for smaller, affordable single-family houses. The National Trust has also maintained alterations to the spaces completed by the two families in order to present how the dwelling was modified to fit their lifestyles.³⁵

Even earlier, preventing the demolition of a Wright building spurred the preservation of a more recent work at the local level. The Frederick C. Robie House in Chicago, completed by Wright in 1910, exemplifies the architect's Prairie style. Community activism resulted from the threat of the Robie House's demolition in 1957 and spurred the creation of the Chicago Landmarks Commission, with the house the first building to be designated. Nonetheless, alterations were made during the period when the Robie House functioned as administrative offices for the University of Chicago. In 1997, the Frank Lloyd Wright Preservation Trust leased the building and began a phased project that combined restoration and reconstruction, notably of interior spaces, in addition to necessary system upgrades. Completed in 2003, the work restored the Robie House to the original 1910 design intent, and it was opened to the public as a museum.

Wright's stature in American architecture places his impact on preservation on a level with Le Corbusier's in France or Alvar Aalto's (1898–1976) in Finland: all are iconic architects whose body of work is singled out for protection because of its

prominence. During their lifetimes (or through associates directly after their death), Wright, Corbusier, and Aalto (as well as others) all established foundations or charitable organizations to maintain and preserve their legacies. The foundations were charged with managing the records of their work as well as their buildings (and thus their reputations), and thereby function as active participants in preservation. As recognized masters, subsequent threats to their buildings focused public attention on the need to preserve buildings of a more recent vintage, though in the case of Wright, his link to traditional craftsmanship and separation from the modern movement limited the impact preserving his works had on the more modernist buildings of the same prewar period. However, preservation of Wright's work not only focused attention on twentieth-century architecture, but promoted a different aesthetic definition of what should be preserved beyond the eighteenth- and nineteenth-century examples.

The Preservation of Modernism: The Icons and Beyond

The preservation movement in the United States grew significantly during the 1960s from an activity carried out by small individual groups to a grassroots, often urban-based movement with broad support. It was initially driven by the backlash to the urban renewal policies of the period but became an established discipline backed by federal legislation by the end of the decade.³⁶ Interest in the larger panorama of architectural heritage also grew and eventually began to focus on the impact of modernity in the built fabric. Nonetheless, while the icons of Wright's work and a few other individual structures did come into focus during the 1960s and 1970s (Richard Neutra's Lovell House [1927–1929] and Rudolph Schindler's Lovell Beach House [1926], both in Southern California, were listed on

the National Register of Historic Places in 1971 and 1974, respectively), interest in modern buildings grew during the following decades, but only gained real prominence in the 1990s.

Numerous additional initiatives in the 1970s did, however, allow for the broadening scope of preservation activity beyond the very old, the very rare, or the iconic, and acted as precursors to the interest in modern architecture, which in the US is mostly characterized by postwar buildings. For instance, following the UK's example, the Society for Industrial Archeology (SIA), established in 1971 in the United States, sought to study, document, and preserve the country's technological and industrial heritage. As evidence of growth in interest in the very industrialization that formed an essential part of the development of modern architecture, the SIA's creation helped set the stage for a broader acceptance of nontraditional building types as significant. The Society for Commercial Archeology (SCA), established in 1977, remains devoted to the documentation of twentieth-century buildings and artifacts. Clearly inspired by the slightly earlier SIA, the SCA focused on roadside-related architecture constructed primarily in the 1920s and 1930s and increasingly shifted to the remnants of highway buildings and culture of the 1940s and 1950s. Its work documents the industrial developments and influence in building forms. Interest in both these organizations signaled a rapid evolution in thinking about the scope of preservation, which would again be challenged when postwar heritage began to be addressed.

Another indication of this growth is found once again in the work of Frank Lloyd Wright. The concept of a conference and association of owners of Wright houses had been proposed as early as 1985, but it was not until 1987 that the first conference was held. The Frank Lloyd Wright Building Conservancy was founded two years later, in 1989,

to facilitate the preservation and maintenance of his remaining structures through education, advocacy, preservation easements, and technical services. Since that time, the organization has been very active in the advocacy and preservation of Wright's architecture. Additionally, the ongoing and extensive restoration of Fallingwater has kept it at the forefront of conservation techniques. The questions raised by and about the work continue to contribute to the understanding of the problems surrounding the preservation of modern architecture. Early recognition or significant maintenance projects also started to occur in the 1980s for midcentury buildings, particularly for corporate architecture that was changing ownership or had become outdated. Two examples, both designs by Gordon Bunshaft (1909–1990) of Skidmore, Owings & Merrill, include the 1982 national and local listing of Lever House in New York when it was threatened with demolition, and the successful restoration work at the Pepsi-Cola building in New York in the mid-1980s following a change in ownership.

It was not until 1995 that a consolidated effort to address America's heritage of modern structures was made, through the first Preserving the Recent Past Conference in Chicago, sponsored by the Historic Preservation Education Foundation. Participation at the conference was beyond anyone's expectations: a clear demonstration of the growing interest in the topic.³⁷ Subsequent to the 1995 conference, advocacy and actual efforts focused on the conservation of modern iconic buildings, works associated with major architects, as well as more local projects. The late 1990s witnessed increased activity, including the listing of important buildings such as the Glass House (Philip Johnson, 1949) on the National Register in 1997 (Color Plate 4). Notable rehabilitations included the curtain wall replacement of Lever House, which began in 1998. Significant restorations included the 1997 restoration of Walter

Gropius's house in Lincoln, Massachusetts, reinterpreted in 2001; the renovation of Mies van der Rohe's Farnsworth House in Plano, Illinois, following a flood in 1996; and the restoration of Richard Neutra's 1946 Kaufmann House in Palm Springs, California, finished in 1999. Also in the mid-1990s, thematic studies carried out by the federal government led to the recognition of many of the properties associated with the Cold War and the Space Age; the Kennedy Space Center (1962–1965) in Florida, for example, was listed in 2000. Individual efforts of important architects like Charles Eames (1907–1978) were also recognized: the Eames House (1949) in Pacific Palisades, California, was nominated and accepted to the National Register in 2006.

Other less than iconic buildings and groups of buildings also came into focus during the late 1990s and the early twenty-first century. The developments designed by well-known architects, including the Case Study House Program and innovative suburban developments such as the housing developed by Joseph Eichler (1900–1974) in California, received early recognition and interest. In conjunction with this attention was a fascination with the unusual design and use of materials of the midcentury era, as evidenced by the growing appreciation for the steel-paneled Lustron homes. The first Lustron home was listed on the National Register in 1997, and numerous other homes were subsequently added to the register at the turn of the twenty-first century. Numerous corporate campuses, single-family homes, and performing arts centers are now all coming into the purview of preservationists, and while they represent challenges, it is becoming more accepted that prominent examples of modern architecture merit preservation.

This increase in activity since the 1995 conference is also due in part to the establishment of organizations dedicated specifically to the advocacy and

preservation of modern architecture. Such groups function both nationally (e.g., DOCOMOMO-US and the Recent Past Preservation Network) and locally (e.g., the Modern Committee of the Los Angeles Conservancy and Houston Mod); they are fundamental to the conservation of America's modern heritage of the pre- and postwar periods. Their efforts are helping to change an image of modern architecture that for many remains ambiguous—including for some in the preservation movement. Of particular note is the architect, writer, critic, and educator James Marston Fitch (1909–2000), who established one of the first graduate programs for preservation at Columbia University in 1964 and was himself a modernist architect and scholar of modern architecture, as well as one of the most influential educators in preservation. He both advocated preservation and modern design and noted the shortcomings of modernism without evolving an anti-modern attitude.³⁸

While perception remains one of the largest challenges for the preservation of modern architecture in the United States, the perceived and actual functional and material obsolescence that the buildings experience is equally problematic. In addition, the homogeneity of the postwar development that has characterized most US cities will continue to defy the search for rarity and demonstrates that uniqueness cannot become the only argument for significance. Increased activity to identify the important buildings or groups of buildings at the local and national levels will be fundamental to the ultimate preservation of modern architecture.

Challenges for the Future

The challenges facing preservationists working with modern architecture will continue to evolve and resolve as the discipline focuses on the appropriate

principles and tools for this era of the built fabric. Much of this discussion will take place at the national level, possibly institutionalized through organizations such as the International Council on Monuments and Sites (ICOMOS), the United Nations Educational, Scientific, and Cultural Organization (UNESCO), and DOCOMOMO, as general guidelines are set that can then be applied appropriately locally. Additional issues that will shape the evolution of the dialogue concerning modern heritage include: the continued expansion of the understanding of modernism through further study and preservation efforts in Asia, Africa, and Latin America; the inclusion of landscape design, urban planning, and interior design as integral to the language and forms of modern architecture and, therefore, its preservation; and the need to recognize the temporality of our interpretations of the recent past and allow for the flexibility of future reevaluations of this heritage as time passes.

The experiences of Europe and the United States have been (and likely will be) repeated with varying degrees of success around the world as other countries and regions come to terms with their (often imported) modern heritage. The dissemination of the modern design language and forms as it was adapted to local climates and cultures represents a large body of architectural heritage that is increasingly the focus of academic study—with some interesting results.³⁹ As noted by the sizable contributions of DOCOMOMO, working parties from countries outside of Europe at the beginning of the twenty-first century, the conservation of this heritage will continue to come into focus both at the local and international levels. Many of these regions witnessed the actual construction of ideal modern utopias as originally envisioned by their designers, while reciprocally the development and history of cities such as Brasília and Chandigarh, India, are highly significant to the broader understanding of the development of modernism.

While deepening the study of modern architecture will help clarify the larger panorama of its significance, the subjects of urban planning, landscape design, and interior design, which shape the buildings that are the focus of current preservation efforts, are all equally as pertinent. All three disciplines remain (somewhat undeservedly) secondary to the analysis of the architecture yet are fundamental to the overall understanding of modern buildings. Modernist urban planning remains largely tied to negative perceptions of urban renewal, although earlier examples of postwar reconstruction evince its significant contributions. While the work of landscape architects such as Roberto Burle Marx (1909–1994) or Dan Kiley (1912–2004) is well-known and respected, the preservation of their work is not yet always sufficiently or effectively addressed.⁴⁰ Interior design is one of the most vulnerable features of modern buildings after landscape design. Change is highly likely on the interiors of all modern building typologies, but particularly on the commercial interior. Local building codes, zoning ordinances, and preservation designation increasingly safeguard building exteriors, yet interiors receive little to no protection. Efforts to incorporate recognition of the importance of interior spaces in the early stages of the interpretation of modern architecture will not only help maintain its integrity, but also allow for more flexibility in the future reassessment of the buildings.⁴¹

Finally, acknowledgement of the compressed historical perspective from which these buildings are being addressed—that is, how little time has passed since their construction—is necessary to the longevity of the buildings. The transitory and evolving nature of the interpretation of their significance is as much a challenge for the preservation of modern architecture as the ephemeral and sometimes semipermanent quality inherent in the materials of which they are built. This is of particular

import when dealing with architects' legacies that have been highly influenced by the architects themselves. As time passes, a reevaluation of the significance of individual buildings (and the appropriate preservation methods) will be necessary, and will undoubtedly take place.

Over the last hundred years, preservation has established its own history and guidelines. The preservation of modern architecture challenges that

establishment in some of its fundamental concepts as modern architecture once did its own predecessors. This only seems appropriate. This challenge will need to be resolved in order to arrive at meaningful preservation concepts that are not just applicable to the buildings, structures, and sites facing us today, but also to those that we will face tomorrow, while architecture seems to become ever more temporal in both its styles and materials.