

MARCEL BREUER
Building Global Institutions

MARCEL BREUER

Building Global Institutions

Edited by
Barry Bergdoll and
Jonathan Massey

Lars Müller Publishers

In memory of Robert Gatje (1928–2018),
for his contributions to the architecture of Marcel Breuer & Associates
and to the research for this volume.

6	Introduction: Bureaucratic Genius
18	I SAINT JOHN'S ABBEY
34	Marcel Breuer and the Invention of Heavy Lightness Barry Bergdoll
64	II UNESCO
80	Architecture and Mediocracy at UNESCO House Lucia Allais
116	Marcel Breuer: Structure and Shadow Guy Nordenson
140	III PRECAST PANEL
154	From Garden City to Concrete City: Breuer and Yorke's Garden City of the Future Teresa Harris
180	Atomic Bauhaus: Marcel Breuer and Big Science John Harwood
202	IV NEW YORK
222	Architectures of Opportunity at Breuer's Bronx Campus Jonathan Massey
252	V FRANCE
272	Modernism as Accommodation Kenny Cupers with Laura Martínez de Guereñu
292	Breuer's Ancillary Strategy: Symbols, Signs, and Structures at the Intersection of Modernism and Postmodernism Timothy M. Rohan
318	VI GLOBAL BREUER
348	Postface: The Marcel Breuer Digital Archive at Syracuse University Lucy Mulrone
359	Acknowledgments
360	Biographies
361	Index
367	Credits

1 ZUP de Bayonne,
Bayonne, France,
1966–73, overall view



Modernism as Accommodation

Kenny Cupers with Laura Martínez de Guereñu

Atop a hill on the outskirts of Bayonne, a port city in the French Basque country, towers a monumental chain of high-rise apartment buildings designed by Marcel Breuer. When one is traveling at high speed along the highway that connects the region with Spain, the ensemble appears glaringly out of scale. A curvilinear sculpture almost half a mile in length, it dwarfs not only the city's medieval fabric but also Vauban's sprawling fortifications and citadel of the seventeenth century [1]. The façades are made entirely from prefabricated concrete panels, evoking a seriality that reinforces the sense of alienation. Only from a closer vantage point can visitors appreciate the façades' intricate play of surface and depth and the balconies that afford majestic views of the surrounding landscape. The high-rises are part of an even larger housing project, planned in 1963 as a self-sufficient neighborhood of thirty-five hundred dwellings [2].¹ It was only partly completed over the decade that followed, but what was built still covers an area larger than the historic city of Bayonne, built over centuries.

Even though its scale and severity astonish visitors today, the project was not unusual at its time. In the decades following World War II, France evolved from a largely rural country with an outdated housing stock into a rapidly modernized urban nation. This evolution was characterized by the massive production, at an unprecedented scale, of publicly funded housing and new towns. In suburban Paris, Lyon, and Marseille, tens of thousands of housing units rose simultaneously. Smaller provincial cities such as Bayonne witnessed an equally sweeping building boom. The Bayonne project was no different from the many other new structures, in perhaps all but one aspect: its architect. Most of the commissions for housing and new town projects went to French architects trained at the *École nationale supérieure des Beaux-Arts*,

2 Aerial perspective rendering



the country's most prestigious professional school for architecture, which had historically produced the architects of large state projects. It was not uncommon for well-established architects, some of them winners of the illustrious Prix de Rome, to be involved in mass housing projects at this time. But the choice of Breuer, a German-trained architect with an American-based office, was highly unusual. Breuer's Bayonne project in fact remained one of the very few French housing projects designed by a renowned international architect.

By the time the Bayonne project neared completion in the mid-1970s, however, France's ambitions for mass housing already seemed ill-fated. In a 1974 article, the French newspaper *Le Monde* celebrated the Bauhaus architect but concluded that "the massive ensemble of Bayonne shows that there is nothing new in collective housing blocks, for which Breuer did not find a new scheme."² In fact, minister of equipment, housing, and tourism Olivier Guichard had officially outlawed the construction of large-scale housing projects the year before, and the earliest projects were already being demolished in the early 1970s—relegated to the dustbin of history as failures of modernist hubris. Many of those still standing today are inhabited by the immigrant poor, and recurring suburban unrest seems to legitimize demolition rather than renovation.³

Caught in this downfall, Breuer's landmark ZUP Sainte-Croix in Bayonne exemplifies our still-troubled relationship with architectural modernism. Does his project illustrate modernism's self-proclaimed crisis, confounded as it was by the failure of public housing? Or does its recent renovation and proud renaming as Résidence Breuer confirm the undeniable merits of its design? Despite decades of scholarly revision, modernist assumptions about the power of architecture to shape social life continue to mar our understanding of the actual role of design in a housing system shaped by large-scale institutions and economic forces. Rather than surmise the authorial intentions of form as if it were frozen in time, we might view Breuer's ZUP as an opportunity to understand modernism as accommodation—as a process of adjustment to conflicting demands and changing circumstances. Perhaps the question then is not whether Breuer's ZUP is an ingenious tour de force, a bureaucratic compromise, the victim of a historic transition, or an unexpected success. We might ask instead how it could be any of these things at different moments in time and what this may tell us, not just about the authorship of Breuer but about the project's material and social life over time.⁴

Systemic Design

By the time Breuer was commissioned for the Bayonne high-rise in 1963, French mass housing production had become a well-oiled machine. The construction of large-scale housing was so dominant in the public mind that French administrators and architects could present these large structures as the only rational form of urban development. That did not mean they were accepted without critique. From the start, journalists spoke of the new housing as "rabbit cages," and specialists speculated about the buildings' harmful psychological effects on inhabitants. Problems with technical quality and the lack of collective amenities informed legislation and new design experiments. In 1958, the French state established the so-called ZUP, or *zones à urbaniser par priorité*, as a way to allow larger areas to be earmarked for more comprehensive urban development.⁵ Tightly controlled by the centralized state, these priority urbanization zones were meant to steer urban expansion by consolidating inexpensive land parcels on the outskirts of the city. While reaffirming the desire for economies of scale through standardization and rationalization of housing construction, they were primarily meant to assure the integration of collective facilities in new projects.

It was in this context that Pierre Sudreau, the new minister of construction, and André Malraux, the first minister of culture, both attempted, on their own terms, to renew the promises of mass housing. Sudreau led a commission to improve design based on a study of everyday life in new housing areas. Malraux and his director for architecture, Max Querrien, promoted prominent modernist architects as part of their larger agenda to democratize access to high culture. Such political and architectural ambitions directly affected the planned expansion of Bayonne. Like many French cities, both large and small, Bayonne experienced significant population growth in the postwar period. National-level economic planners estimated that more than four thousand new dwellings were needed to accommodate the projected growth.⁶ The majority of these were to be built in a single ZUP. Planners targeted a large swath of mainly agricultural land on the bank of the Adour River opposite the historic town (s).⁷

Two different explanations exist for how Breuer came to be involved as the architect for Bayonne's master plan. One is by way of Malraux, who seems to have recommended Breuer to the

3 Map indicating the extent of the ZUP in relation to the city of Bayonne



municipality. The culture minister was indeed acquainted with Bayonne's mayor, Henri Grenet, as a result of their work in the French Resistance.⁸ The other possibility is Max Stern, founder of the Bureau d'études et de réalisations urbaines (BERU), an economic planning firm with which Breuer had already worked in connection with the Flaine ski resort project.⁹ BERU was hired for Bayonne even before Breuer became its architect. Since Stern was well connected to government elites in Paris, and it is likely that he knew Malraux personally, the two explanations do not necessarily contradict each other.¹⁰ Even though Breuer had limited experience with collective housing design, he had gained renown in France with such projects as the UNESCO building, the IBM offices, and the Flaine ski resort. Breuer was, in fact, establishing an office in Paris at this time, and Malraux seems to have personally assured his induction into the *Ordre des architectes*.¹¹ Breuer's Paris office was directed by Robert Gatje, who had moved from New York, and it included André Laurenti, a collaborator on the UNESCO project. With this new branch office and a team of collaborating local architects, among them Guillermo Carreras and Eric Cercler, Breuer seemed well equipped for the Bayonne job. Nevertheless, Malraux's choice of a Hungarian-born architect, even when he represented the prestigious international legacy of the Bauhaus, remains idiosyncratic. Apart from Breuer, the only other international architect Malraux got commissioned for a mass housing project was Oscar Niemeyer, but his design for a project in Grasse remained unbuilt.

Despite the high hopes attached to Breuer's commission, his design was framed by—and had to accommodate—the same bureaucratic planning and production system that was reshaping the country. With the help of national funds, the city bought, and in some cases expropriated, the land from private owners and then resold it to social housing organizations that would own and develop the buildings.¹² In concert with the ministry, the municipality hired BERU as consultant. By the early 1960s, an entirely new sector of such firms, private as well as publicly funded ones, had emerged in response to the postwar building boom. The design of Bayonne's ZUP was typical of this new division of labor among designers, experts, and the state administration in postwar France. BERU envisioned a range of units, depending on tenancy, funding, and form. In addition to different categories of social rental units (65 percent), there were subsidized (25 percent) as well as market-rate (10 percent) condo apartments. This housing stock was to be divided over a high-rise, a mid-rise, and a

low-rise sector.¹³ Breuer's design was undergirded by a regime of expertise that produced various qualities by speaking in numbers.

p. 265/18 His master plan, first presented in February 1964, ingeniously applied BERU's programmatic parameters to the site. Topographically, the area was shaped like a bowl, sloping up from the Adour riverbank to its northern and eastern borders—an old regional road and a planned national highway. Minimizing the necessary roadwork and using the already existing green spaces, Breuer positioned fourteen-story high-rises on top of the ridge, arranging them in a series of chains that formed a gigantic crescent embracing—and towering over—the site as a whole. Each chain had its own curvature and was positioned at a distance from the next, allowing for different perspectives of monumentality and openness as one moved across the site. A second housing group consisted of mid-rise blocks, centered on the project's civic center and church. Even though all of the blocks were simple oblongs, they were positioned to suggest different group forms. U-shaped arrangements of three blocks were placed on the southeastern and southwestern ends in a parabolic shape, while the northern end terminated in two rows of oblongs. A third housing group, at the very bottom of the hill, comprised rows of single-family homes placed in a rectilinear pattern. An extensive park landscape tied the three housing groups together and was dotted with schools and sports facilities. As a whole, the layout not only suggested different scales of community formation but also served to accentuate the existing topography, with the housing groups increasing in density and scale as one went up the hill.

Even though it was inscribed in the arch-modernist concepts of green city and neighborhood unit, Breuer's master plan amounted to more than just towers in a park. It reflected, if unassumingly, a marked turn in postwar modernism toward the revaluation of traditional urbanity. For the ZUP's civic center, Breuer inverted the dominant figure-ground relationship by closely assembling six mid-rise buildings around a central square [4]. In concert with changing government expectation, Breuer was not just designing a housing estate but also the other buildings associated with a community. Even though the façades were made of the same prefabricated concrete panels found everywhere in the project, the square's ground-floor galleries recalled the prototype of a medieval market square. The

4 ZUP de Bayonne, photograph of the town center



buildings housed not only boutiques and a supermarket but also various community amenities, including a youth club, a sociocultural center, a medical center, a library, a post office, a police station, and a church. The center emulated the functional mix of traditional city centers, even if many of the amenities were new products of the welfare state rather than age-old institutions. In fact, Breuer's design typified the changing output of government-sanctioned modernism in postwar France more generally, as the state gradually shifted its goal from providing basic housing to creating lively neighborhoods.¹⁴

Despite the project's intricate massing, officials and citizens alike perceived Breuer's design as a bold statement about the representation of collectivity—much like other housing projects in France at this time. Placed on top of the hill, the housing slabs turned Bayonne's horizon into a monument to modernity for the citizenry as a whole—in addition to providing thousands of inhabitants with a panorama of the mountains and the historic city, with its cathedral towers and its landscape of tiled roofs. Bron-Parilly and La Duchère, two large housing projects around Lyon, also featured giant slabs, hundreds of meters long, prominently positioned on the hills. These projects were designed by French architects trained in Beaux-Arts compositional techniques, but their underlying ambition was identical. The monumentalization of collective dwelling—a Versailles for the people—recalls the utopian socialism of the early nineteenth century. It is an approach that characterizes the history of modern housing, from Victor Considerant's designs for Charles Fourier to Ricardo Bofill's postmodernist housing complexes in the French New Towns. How easily such gestures of generosity—whether in neo-classical, modernist, or postmodernist cloak—turned into vehicles of social stigmatization would become clear in the decades that followed.

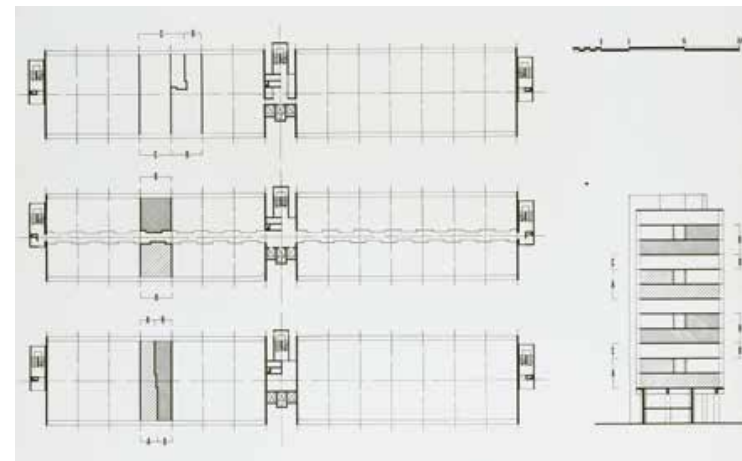
A Difference in Repetition

Breuer and his team had to accommodate to stringent limitations for the housing design—both directly, through government regulation, and indirectly, through funding structures. In the decades following World War II, French welfare was administered through social abstraction and technical normalization. Families were classified according to the male breadwinner's profession and then assigned particular housing and other needs. This process of social rationalization—which was overtly classist and implicitly racist—has a much longer history, but it was especially during

the postwar period that architectural modernism began to play a particularly significant role in it. Norms for the layout and size of different categories of dwelling units were based on the sociology of household types, and they often presumed a particular architectural form—as the repetitive nature of mass housing projects across France showed. Architectural standardization made social rationalization sensible, often in the form of identical apartments with identical windows.

Breuer's design was necessarily inscribed in this rationality. That did not mean, however, that his architecture was entirely predetermined or that there was no room for invention. Even though he responded to the demand for economies of scale with a limited number of dwelling forms, Breuer introduced difference and variety where he could. For the high-rise housing, Breuer built upon Le Corbusier's influential *Unité d'habitation* but substantially adjusted it to suit the particular conditions and aspirations associated with the Bayonne project. Each fourteen-story slab consisted of four layers of three floors, in addition to a ground floor and mezzanine (5). Only the middle floors of each layer were bisected by a longitudinal corridor. Three elevators, one standard and the other two skip-stop, connected the four corridors with the main entrance, which was located in the middle of the block. An additional skip-stop elevator was placed at each end of the slab. This arrangement not only minimized the circulation space but also allowed Breuer to develop a variety of dwelling types.

In the first five high-rises, each of which contained 160 units, there were fourteen different types, ranging from one-bedroom to four-bedroom apartments. The last two high-rises, built during



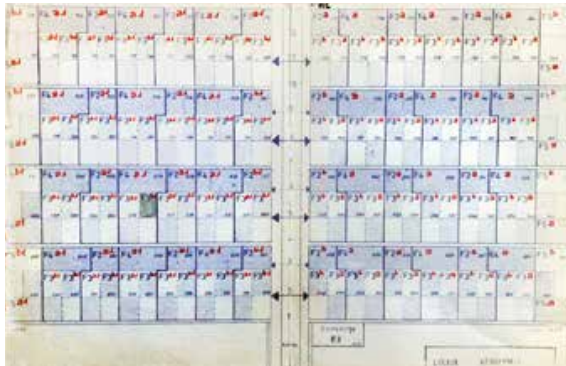
5 ZUP de Bayonne, plans and section drawing showing the organizational principle of the high-rise block

6 ZUP de Bayonne, section drawing through the high-rise block, showing the arrangement of different housing types

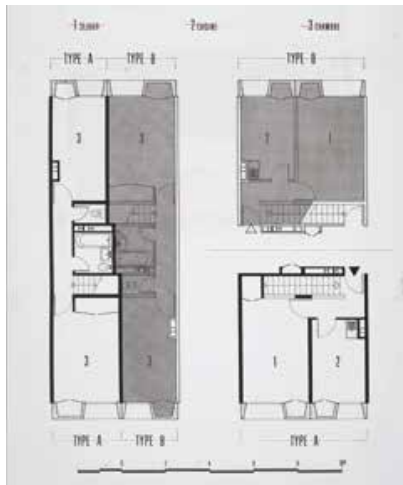
7 Plan drawing of the two-bedroom apartment type (F3) in the high-rise blocks

8 Plan drawing of the one-bedroom (F2) and three-bedroom (F4) apartment types in the high-rise block

9 Plan drawing of the mid-rise apartment blocks



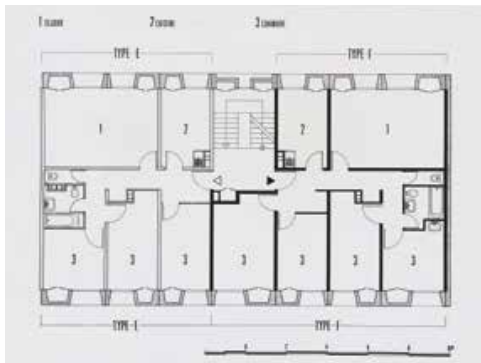
6



7



8



9

a later phase, included eight additional variants to the three-bedroom apartments—those most in demand. In addition, the last three high-rises featured balconies for the living rooms on the south façade. While this typological variety paralleled that of the *Unité*, the spatial organization differed significantly (6). Only the four-bedroom apartments (termed F5s) located at the ends of the slabs were interlocked duplexes comparable to those in the *Unité*. The two-bedroom apartments (F3s) were simple duplexes, with living spaces on the corridor floor and bedrooms below. The remaining floors alternated one-bedroom (F2) and three-bedroom (F4) apartments. They were accessible by interior staircases from the longitudinal corridor below, unlike those adjoining the central elevators, which were meant to accommodate residents with disabilities.

What facilitated this typological diversity was a simple technical choice: a large structural bay of 5.7 meters, divided into a small bay of 2.56 meters and a larger one of 3.14 meters (7, 8). The *Unité*'s structural bay of 3.66 meters could either serve as a living room or be divided into two small rooms just 1.83 meters in width, whereas Breuer's asymmetrical division of a much larger bay allowed for a far more flexible organization of living spaces. This was one of his most important achievements at Bayonne. Living rooms could now be appropriately paired with kitchens, and larger bedrooms with smaller ones. In addition, the expanded structural bay allowed the interior staircases to be placed parallel to the corridor—saving space compared to the longitudinal position of the *Unité*'s staircases—and to integrate them into the central bathroom core. Finally, with this organization Breuer managed to give each apartment, even the one-bedroom units, two exposures and thus the possibility of cross-ventilation. Nevertheless, until renovations, many applicants stated they would accept any unit in Bayonne's social housing stock "apart from the Breuer buildings!"—by which they meant the high-rise slabs.¹⁵

For the mid-rise housing group, Breuer designed four-story walk-ups, keeping the same system of the structural bays but alternating one large bay of 5.70 meters with two smaller ones of 2.56 meters (9). Each block included two staircases, serving two units per floor, which amounted to sixteen units per block. Because these mid-rises were targeted not only for a higher category of social housing but also for private homeowners, they included only three- and four-bedroom units with balconies and generous living rooms occupying the full 5.7-meter bay. The promotional brochure for these units shows how the cooperative



10 Marketing brochure for the ZUP mid-rise condo apartments

developer targeted a middle class intent on privacy, comfort, and amenities (10).

Unlike many French housing architects, who often adopted government-type plans with minimal variation, Breuer and his team insisted on typological diversity, even if the overall contours were already defined by BERU's programmatic parameters. The resulting housing designs celebrated a sense of the collective through repetition and monumentality, while allowing inhabitants a sense of identification with their individual dwellings. The ZUP's variety of dwelling sizes and types might well have guaranteed, or at least bolstered, the success of the project over time. It accommodated, at least in the high-rise blocks, a diversity of occupants, from younger couples and large families to the elderly. In addition, it allowed tenants to stay in the neighborhood but move to different apartments as their needs or circumstances changed.

The Thickness of a Panel

Even before Breuer was involved with Bayonne, the government had already hired a technical consultancy firm for the project's engineering. COFEBA (Compagnie Française d'Engineering Baretts) was founded by Jean Baretts, a man local to the Bayonne region but of national political influence.¹⁶ Baretts had given his name to a patented industrial construction method, which he had developed for the prefabrication of large concrete panels. His firm specialized in technical studies for the application of such methods in public works as well as housing projects. Baretts was hardly the only one to develop concrete panel construction at this time in France. During and after World War II, the French government had prioritized large industrial firms for reconstruction and infrastructure projects, to the detriment of small-scale builders. To address the acute housing shortage, those same companies were supported by the state for the development of industrialized housing construction. The steady commissions for mass housing projects across France made new techniques of prefabrication

practically free of financial risk. As a result, companies such as Camus quickly became market leaders in heavy prefabrication. Camus was a patented panel construction system by the engineer Raymond Camus, and it was exported globally after its development in the late 1940s.

Even though the resulting buildings often looked identical, Baretts's system differed significantly from other factory methods, ultimately allowing Breuer to mold it in exceptional ways.¹⁷ The differences between most concrete panel systems on the market were essentially limited to the details of their joints related to technical safety and with little consequence in outward appearance. Prefab panels were always floor-to-ceiling and in most cases included window, door, and balcony details. Baretts's panels were just as heavy as Camus's, could be just as finished, and often looked indistinguishable (11). The real difference then was in the economic logic of their production, which could occur either in a specialized factory or on-site, in a mobile workshop. Camus's factories required heavy investment, and, because of transportation costs and economies of scale, they were viable only for very large projects in large metropolitan areas. Baretts's "mobile workshops" were more nimble: they could be erected on a site anywhere, even in small provincial cities such as Bayonne, and were economically viable even for "small"—as they were considered at this time—construction projects of three hundred or more housing units. By the time of the Bayonne master plan, Baretts had already built more than sixteen thousand housing units with his system, from single-family homes to eighteen-story blocks, in France and abroad.

p. 260/11

Breuer had previously collaborated with Baretts on the Flaine ski resort project, where he had gained considerable experience in building lodging for the burgeoning winter holiday market and had been able to customize the patented prefab system.¹⁸ Breuer had beveled the concrete panels inward and given some of the windowed panels a thick, upstanding ridge. The different panels were assembled in a checkered pattern of glass and concrete, resulting in a three-dimensional façade that refracted the crisp Alpine light into a multiplicity of smoothly textured surfaces and reflections. Working from this achievement, Breuer exploited the Baretts system further at Bayonne. His major innovation was in the panels' extraordinary thickness of 75 centimeters (7–9). This extreme depth

11 An apartment block constructed with Jean Baretts's patented prefabrication method: "Ville verte" of Canteleu by architects Louard and Lechevallier

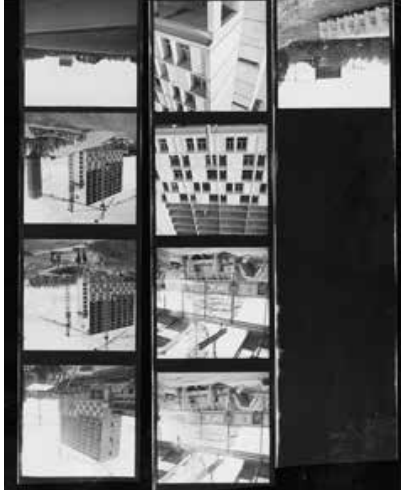


the old town, the windows of the high-rise wall suggested anonymity through ambivalence in scale, since one could either read each window as a dwelling unit or see four closely placed windows as one large opening. While the permutation of a limited number of panels conveys Breuer's sense of efficiency and control over the production process, it also signals an attempt to express, at least formally, the individuality of dwelling in a housing system that tended to produce alienating monotony.

Even more than poured-on-site concrete, heavy prefabrication entailed a reorganization of labor and expertise that many architects understood as a threat to their profession but to which Breuer seems to have responded with cunning rather than offense. Heavy prefabrication methods indeed coincided with the centralization of expertise in the construction industry. Concrete in this sense presented not only an opportunity for technical engineers, organized in corporate firms such as Baret's, but also a cause for both the de-killing of traditional artisans and the disempowering of architects in the design process.¹⁹ While Le Corbusier responded to this threat by inventing his own system, the Modulor—alluding to a universal humanism while aiming to reconquer dimensional normalization from the construction industry—Breuer accommodated by exploiting the potentials of system building from within.

Breuer's concrete panel aesthetic was decidedly slick compared to the artisanal *brut* use of poured concrete in Le Corbusier's Unité (191). If concrete is not naturally or automatically a modern material, as Adrian Forty has suggested, Breuer made it modern

13 Assembly of the aggregate panels, contact sheet



by emphasizing the exactitude of a material that is "always at risk of slipping back into its craft and earthbound origins."²⁰ This engineering aesthetic was, at least in part, a product of the French prefabrication industry. Yet, despite his insistence on the industrial smoothness and luxuriousness of concrete paneling rather than the rough and irregular traces of manual labor, the aggregate panels he used to give his buildings a rusticated base suggest a more ambivalent position (44). For these panels, Breuer valued manual labor and local stone from the quarries of La Rhune, both traditionally used in Basque house construction. This unassuming nod to regional building

turned the panels into boxes that could be hollowed on either side. Corresponding to the asymmetrical division of the structural bays, there were two types of panels—a small one (of 2.56 meters in width) and larger one (of 3.14 meters). Breuer designed two configurations for each one, resulting in a total of four different panels to be mass-produced in Baret's mobile factory. All panels consisted of a set-back floor-to-ceiling window part and a protruding full part. The protruding full part was either flush or asymmetrically beveled inward, emphasizing the panels' ridges. This planar difference, however small, produced a different perception of the concrete depending on the angle of the sunlight falling on it. In addition, the windows could be placed to either the left or right within the panel. To ventilate the kitchens, Breuer added a protruding concrete exhaust on top of the windowsill of the kitchen panels. Once assembled, the panels produced a variegated pattern of concrete and glass, of full and hollow, and of light and shadow.

p. 266/20

The three-dimensional patterning gave the buildings both a rigorous seriaty and a sense of variety. In addition to providing increased structural strength and thermal insulation, the panel system significantly enriched the interior experience of the dwelling units. By expanding the boundary between inside and outside into a usable and habitable zone, Breuer augmented the visual and physical space of the apartments. Even if the budget allowed balconies to be provided only in the later phase of the high-rise housing, his design provided a spatial generosity that was rarely seen in state-sponsored housing. The hollowed panels could be left open, but they also allowed for built-in closets, which opened up space in the rooms themselves (7-9). The panels not only framed the panoramic views of the mountains and historic city but also protected the windows from the elements without necessitating the addition of eaves. Each window had two symmetrical shutters, which allowed inhabitants to modulate light and heat inside their apartments and created an additional layer of formal variation and movement in the facade.

For the onlooker, from the outside the facade system produced changing perceptions of anonymity and individuality. Looking up from the park landscape that sloped down, the deep floor-to-ceiling windows, each with its own shutter, emphasized the dwellings as individualized spaces, private yet publicly visible (21). For the driver on the highway and even the inhabitants of



12 ZUP de Bayonne, high-rise blocks as seen from the park

14 ZUP de Bayonne, construction of the high-rise blocks



style and the use of differently sized stones for the panels produced a variegated mediation of the building with the soil. While Le Corbusier resolutely elevated his Unité from the landscape, Breuer's attitude was multivalent. While the high-rises featured a double-height gallery on the park side, suggesting levitation, they seemed firmly rooted in the ground on the other side.

p. 267/21

With its accommodation to imposed limitations and exploitation of implicit possibilities, Breuer's design for Bayonne exemplifies an important transformation of architectural agency in the postwar period. Architecture could no longer be revolutionary, as it had been in the interwar period, or even avant-garde, in the specific sense of producing social change through design. In the postwar context of development and modernization, architecture was enmeshed in large-scale industries and bureaucracies that administered not only its production but also its consumption. Like his colleagues, Breuer accommodated to this regime, which in the case of France resulted from a close alignment between liberal capitalist production and centralized state planning. At the same time, the architect nudged some of its many restrictions, subtly turning them into architectural possibilities, by differentiating the massing, diversifying the housing types, or detailing the prefabricated panels of his ZUP.

Overhauls

By the time Bayonne's first high-rises were finished, concrete architecture was more reviled than celebrated and not just by the

general public but increasingly by intellectuals as well. Jean-Luc Godard's film *Deux ou trois choses que je sais d'elle*, an iconic critique of the French postwar suburbs, identified the nefarious consequences of state-led capitalist modernization with the dreadful monotony of concrete blocks and slabs. Breuer's ZUP was being built at exactly this time of growing discontent about modern architecture, which in France had become synonymous with the alienating effects of state capitalism.²¹ Breuer's high-rise housing, proudly positioned on top of the hill, was increasingly perceived as the opposite of generosity, a gratuitous attack on the landscape of Bayonne. This shift shaped the course of the project in multiple ways. The most direct impact was the gradual curbing of the project in the late 1960s and early 1970s. While the mid-rise buildings were largely realized as planned, only seven of the eighteen to twenty-two high-rises once planned were built. Single-family homes in traditional styles were later built instead, while Breuer's own proposals for low-rise units were neglected. The commercial and civic center, designed in 1965, was delayed and was finally finished only in 1975. Some amenities, such as the youth center and the hotel, were never built, while the extensive social services that were planned never materialized as anything more than some office space in a single building.

Paralleling this gradual disinvestment were crucial changes in the design process itself. Initially, Breuer was directly in charge of all design aspects, but he eventually lost control when local architects, in particular Bernard Darroquy, whom Breuer had initially hired to work with him, took over. This overhaul was only in part due to Breuer's physical distance from the site. Conflicting political interests also seemed to foster the master plan's unraveling. The design of the schools, for instance, was not in Breuer's hands because commissions were ultimately decided by the education ministry, which preferred working with a tight circle of "approved architects," apparently including Darroquy,²² whose

15 View of the central square, 2015



school designs Breuer loathed. Moreover, Darroquy changed Breuer's original design on multiple occasions without consent or even consultation. As a result, pitched tile roofs suddenly appeared on Breuer's prefabricated panel buildings surrounding the central square, despite Darroquy's earlier promise [15].²³ Breuer was dismayed by such stylistic cacophony but remained powerless. Darroquy seemed to have won

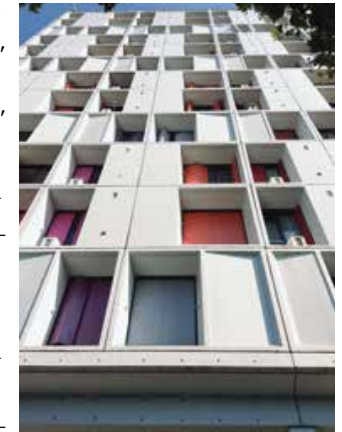
the favor of the mayor, and Breuer was gradually left out of the decision-making process. In a memorandum from 1972, Gatje reported that Breuer was concerned he was “gradually losing control of the situation, and our once proud vision is in danger of being frittered away piece by piece.”²⁴ Breuer and Gatje even tried to have Darroquy fired.²⁵ Ultimately, when the municipal government engaged in an additional project for the ZUP in 1975, it hired the French architect Louis Arretche, claiming that Breuer would surely not be interested and that Arretche would be respectful of Breuer’s designs. In response, Breuer officially resigned, even though he had already been effectively sidelined.²⁶

Soon after the end of construction in the mid-1970s, and despite the best intentions of some planners and policy makers, the ZUP witnessed a residential mobility pattern that left much of the high-rise housing to those with no choice but to live there. In the 1980s, as inhabitants felt relegated to the high-rises, the ZUP quickly became stigmatized. That process did not occur for all housing, however. The Office Public Municipal d’HLM de Bayonne built and owned the first three high-rises and the western wing of the U-shaped mid-rises, while a second organization, the Société Anonyme d’HLM de Bayonne, was responsible for the fourth high-rise and the three western, oblong mid-rises.²⁷ Such internal divisions help explain the divergent social and material histories of individual buildings. The fourth high-rise stood completely empty at some point in the 1980s.²⁸ In 1986, more tiled roofs appeared on the U-shaped mid-rises, but only on the western ones; they were owned by the same housing company that owned the high-rises. The mid-rises on the eastern side, in private ownership, are still largely in their original condition.

By the turn of the millennium, the ZUP’s decline had come to a head. The mayor’s son, Jean Grenet, who became mayor himself in 1995, suggested the complete demolition of Breuer’s high-rise housing.²⁹ When demolition of the project, so proudly commissioned by his father three decades earlier, turned out to be economically unviable, especially considering the persistent housing need in the urban region, the government slowly moved toward the idea of renovation. A complete overhaul eventually took place between 2007 and 2013, with the help of national funds. During the refurbishment, Breuer’s concrete panels became a curious advantage. Their excellent thermal and sound insulation meant they did not need to be replaced or covered up, which would have dramatically altered the look of the façades—as is the case with

many similar housing projects, such as the East German *Plattenbauten*. Brightly colored shutters, ranging from orange and red to purple, were added to reinforce a new image for the neighborhood, while keeping Breuer’s design intact (16). After the renovation, the high-rise complex was renamed *Résidence Breuer*. Its stigma seemed undone by association with the word *résidence*, which usually denotes a privately owned apartment block, and with the name Breuer. Breuer’s authorship offered an opportunity to rebrand the project—to remove any negative connotations with social crisis by turning the complex into the opus of a famous Bauhaus architect. This was a self-conscious campaign to restore his professional image, as some of the planners involved in the renovation themselves confirmed.³⁰ The architect’s iconic tubular chair proved particularly useful in this regard, even if this design was largely reduced to illustrating a desirable middle-class lifestyle (17).

Throughout its history, Breuer’s ZUP has accommodated not only its inhabitants but also the state’s conflicting demands and changing expectations, as well as the ups and downs of public perception. From a moment when the state began to question its dominant approach to housing development and design, through a period during which the ZUP was undesirable and partially



16 View of the renovated façade of the ZUP high-rise block, 2015



17 Marketing materials for the renovated high-rise apartments

abandoned, to a redemptive contemporary moment of celebration, Breuer's ZUP adapted ingeniously to change. At a time when the bulk of French housing built in the postwar decades is either in dire need of maintenance or slated for demolition, Bayonne's upward trajectory is telling. Even when its trajectory is not unique, it remains atypical and, as such, demonstrates how design can matter in a realm as bureaucratic as that of French housing.³¹

It remains an open question as to whether the reclamation of Breuer's ZUP foreshadows a broader nationwide shift in how the public will see and inhabit the heritage of postwar modernism. What is certain, however, is that such a revival cannot simply be reduced to the politics of public perception. When asked about the housing complex in which he has spent most of his adult life, Michel Duran, a native Bayonnais with a sense for hyperbole, is effusive about his deep respect for Breuer. Despite his limited experience with housing design, he argues, Breuer designed a housing complex "better than that of Le Corbusier." Standing on his ninth-floor balcony overlooking the park landscape and the cathedral towers of Bayonne on the horizon, he recounts his many apartment moves within the complex as his life circumstances changed, as well as the changes the complex underwent over the past decades [18].³² Duran's personal history, so intimately interwoven with the concrete of Breuer's ZUP, as well as his extolling the joys of what he proudly calls his "Breuer balcony," throws at least one belief into question. The laments of architecture's impotence in the face of a draconian housing system suddenly appear irrelevant when standing on this balcony and grasping just how well Breuer's modernism has accommodated—and continues to accommodate—life.

18 View from Michel Duran's ninth-floor balcony at the ZUP, 2015



- 1 ZUP Sainte-Croix, Note de présentation, July 5, 1963, 19910710/3, Centre des archives contemporaines (hereafter, CAC followed by cataloging number).
- 2 "Breuer, l'architecte qui vient du Bauhaus," *Le Monde*, June 20, 1974.
- 3 For a general history of housing in postwar France, see Kenny Cupers, *The Social Project: Housing Postwar France* (Minneapolis: University of Minnesota Press, 2014).
- 4 This text has been written by Kenny Cupers based on collaborative research with Laura Martínez de Guereñu, who lived in Breuer's ZUP for one week in August 2015. She is currently working on the paper "Barcelona, Harvard, Côte Basque: A Mutual Exchange between Sert and Breuer."
- 5 See "Décrets relatifs aux plans d'urbanisme directeurs et de détail, aux lotissements, aux zones à urbaniser par priorité, à la rénovation urbaine, aux associations syndicales de propriétaires en vue de la réalisation d'opérations d'urbanisme," *Journal officiel de la République française*, December 31, 1958.
- 6 See Complément à la note de présentation, July 27, 1963, CAC 19910710/3.
- 7 ZUP Sainte-Croix, Note de présentation.
- 8 See Denis Canaux and François Xavier Leuret, "La résidence Breuer dans le quartier Sainte Croix à Bayonne: De la barre à la résidence," in "Les grands ensembles d'habitat des années 60: Un patrimoine du quotidien," *Bulletin CPAU Aquitaine* 43 (July 2008): 42; and Dominique Amoureux, *Marcel Breuer: Les réalisations françaises* (Paris: Éditions du Patrimoine; Centre des monuments nationaux, 2014), 25.
- 9 Robert F. Gatje, *Marcel Breuer: A Memoir* (New York: Monacelli Press, 2000), 140–41; "Two New French Towns," *Architectural Record* (August 1969): 109.
- 10 See Maryvonne Prévot, *Catholicisme social et urbanisme: Mauric Ducreux (1924–1985) et la fabrique de la Cité* (Rennes: Presses universitaires de Rennes, 2015), 76–80.
- 11 Amoureux, *Marcel Breuer*, 120.
- 12 See Direction de l'habitat et de la construction, CAC 19830719/14–19830719/15.
- 13 ZUP Sainte-Croix, Note de présentation.
- 14 See Cupers, *Social Project*, chap. 3.
- 15 Applicants' "tout le parc sauf la résidence Breuer!" request(s) quoted in Canaux and Leuret, "La résidence Breuer dans le quartier Sainte Croix à Bayonne," 43.
- 16 Baretts sat on various government committees, including the Commission général au Plan and the Centre Scientifique et Technique du Bâtiment. See Dossier de présentation du bureau d'études techniques COFEBA, Departmental Archives of Bayonne, 12 W 24/2.
- 17 See Jean Baretts, "Considérations pour la pré-fabrication lourde," *Habitation* (1965); and "Procédé Baretts," excerpt from *Le Bâtiment*, special issue (1957), both in Dossier de présentation du bureau d'études techniques COFEBA.
- 18 Despite tensions between the two men—apparently Breuer had tried to get Baretts fired from the project—Breuer was forced to work

- with him again at Bayonne. See Robert Gatje to Mario Jossa, memorandum of April 4, 1972, Breuer Digital Archive, Syracuse University Libraries, Syracuse, NY.
- 19 This goes back to the turn-of-the-twentieth-century pioneering of reinforced concrete and the establishment of technical consultancy firms such as François Hennebique's. See Adrian Forty, *Concrete and Culture: A Material History* (London: Reaktion Books, 2012), 240–41.
- 20 *Ibid.*, 15.
- 21 At the forefront of such critiques was Henri Lefebvre. See Cupers, *Social Project*.
- 22 Robert Gatje to Mario Jossa, memorandum of January 12, 1972, Breuer Digital Archive.
- 23 Bernard Darroquy to Robert Gatje, letter of April 2, 1970; and Gatje to Darroquy, October 27, 1969, image no. 39727-001, both in Breuer Digital Archive.
- 24 Gatje to Jossa memorandum, January 12, 1972.
- 25 "If there were a way for us to supplant Bernard as architect of these two schools, it would in fact be not a bad solution. Whether this is politically or ethically possible remains to be seen." Robert Gatje to Mario Jossa, memorandum of January 25, 1972, Breuer Digital Archive.
- 26 Mayor of Bayonne to Marcel Breuer, letter of January 22, 1975; and Breuer's response in memorandum of January 14, 1976, both in Breuer Digital Archive.
- 27 Direction de l'habitat et de la construction, CAC 19830719/14–19830719/15.
- 28 José Luis Ecay, interview by Laura Martínez de Guereñu, Bayonne, August 2015.
- 29 Canaux and Leuret, "La résidence Breuer dans le quartier Sainte Croix à Bayonne," 42.
- 30 *Ibid.*, 47.
- 31 Another example of a successful renovation is Bois-le-Prêtre, near Paris, by Frédéric Druot, Anne Lacaton, and Jean-Philippe Vassal, in 2011. See Craig Buckley, "Never Demolish: Bois-le-Prêtre Regrows in Paris," *Log 24* (Winter–Spring 2012): 43–50.
- 32 Michel Duran, inhabitant of a *foyer-logement*, F2-2b, Building 7, ninth floor, apartment 95, with a balcony open to the south, in conversation with Laura Martínez de Guereñu, August 14, 2015.

Acknowledgments

The idea for this book emerged toward the end of a stimulating semester-long course co-taught by the editors at the Syracuse University School of Architecture. The course was an experiment in which students worked together to produce an exhibition and brochure, their ideas having been critiqued by a group of invited outside scholars and joined in as well by Syracuse architecture faculty and librarians. Our first thanks go to all those who participated in these discussions—in particular contributors Lucia Allais, John Harwood, and Teresa M. Harris and students Hilary Barlow, Patrick Clare, Aimee Hultquist, Marcus Johnson, Douglas Kahl, Nilus Klingel, Kristopher Menos, Paloma Riego del Mar, Melissa Santana, Scott Schwartzwalder, Michael Silberman, Simon Taveras Jr., and Daley Wilson. Mark Robbins, then dean of the School of Architecture, had conceived the idea for a course, invited us to co-teach it, and provided support as the idea of a workshop and exhibition planning became part of the pedagogical approach. Faculty members Jon Lott and Brett Snyder designed the exhibition and its catalog, which helped us see Breuer's drawings and photographs with new clarity.

One impetus for the course was the work happening in parallel at Syracuse University Libraries to create the Marcel Breuer Digital Archive (MBDA), now an invaluable online resource; a full list of those involved in the project can be found there. Sean Quimby conceptualized the digitization project, secured National Endowment for the Humanities funding to create the digital archive, and invited us to join the advisory committee. Teresa M. Harris managed the project, saw it through to completion, and generously shared the deep knowledge of the collection that she formed along the way. Lucy Mulroney has stewarded the MBDA project in its later stages and shares here her insights into the constitution of the architectural holdings of the Syracuse University Libraries. Michael Dermody and Nicolette Dobrowski provided research support.

Barry Bergdoll had begun research in the Breuer papers in the Syracuse library many years earlier and is indebted to staff members, some now retired, including Katherine Manwaring, Mark F. Weiner, Carolyn A. Davis, Peter Verheyen, and David Boda. Patricia Waddy and Mark Linder were frequent hosts and interlocutors over the years.

The authors who contributed to the volume generously shared their insights with us and with one another, as did Robert Gatje, whose firsthand knowledge proved invaluable to some of our authors. Columbia University student Megan Anne Kinkaid provided research assistance with the copious illustration program in its early stages, and Michael Abrahamson at the University of Michigan heroically completed that work, wrangling authors and working with staff at several repositories to secure image files and publication permissions. Maureen Creamer Bemko copyedited text with clarity and care.

Lars Müller embraced this project and helped us orchestrate the relation between text and image, resulting in a handsome layout designed by Martina Mullis.

The research, illustration program, and publication of the book have been generously supported by the Graham Foundation for Advanced Studies in the Visual Arts, which awarded the project a production and presentation grant. We are also immensely grateful for the financial support and trust of Elise Jaffe + Jeffrey Brown, and of Lauren Pack and Rob Beyer, which greatly improved the quality of the publication. At the University of Michigan A. Alfred Taubman College of Architecture and Urban Planning, Linda Mills helped us manage the project budget, in concert with colleagues at Storefront for Art and Architecture.

We thank all of these colleagues and collaborators who have patiently retained their faith in a project that has developed over a decade from start to finish, and we thank them especially for their intellectual contributions in generating and publishing new perspectives on Breuer's work.

—Barry Bergdoll and Jonathan Massey

Biographies

Barry Bergdoll is Meyer Schapiro Professor of Art History in the Department of Art History and Archaeology at Columbia University and curator in the Department of Architecture and Design at the Museum of Modern Art, New York, where from 2007 to 2013 he served as Philip Johnson Chief Curator of Architecture and Design.

Jonathan Massey is Professor and Dean at the Taubman College of Architecture and Urban Planning at the University of Michigan. The author of *Crystal and Arabesque: Claude Bragdon, Ornament, and Modern Architecture* (2009), Massey is also a member of the Aggregate Architectural History Collaborative, and coeditor of its book, *Governing by Design: Architecture, Economy, and Politics in the 20th Century* (2012).

Lucia Allais is Assistant Professor in the History and Theory of Architecture at Princeton University. She is a member of the Aggregate Architectural History Collaborative and an editor of Grey Room.

Kenny Cupers is Associate Professor of History and Theory of Architecture and Urbanism at the University of Basel. He is the author of *The Social Project: Housing Postwar France* (2014) and editor of *Use Matters: An Alternative History of Architecture* (2013).

Teresa M. Harris is Curator of Avery Classics at the Avery Architectural & Fine Arts Library, Columbia University. She served as project coordinator of the Marcel Breuer Digital Archive for the Special Collections Research Center at Syracuse University Libraries.

John Harwood is Associate Professor of Architecture at the Daniels Faculty of Architecture, Landscape, and Design at the University of Toronto. He is the author of *The Interface: IBM and the Transformation of Corporate Design, 1945–1976* (2011), a member of the Aggregate Architectural History Collaborative, and an editor of Grey Room.

Laura Martínez de Guereñu is Assistant Professor of History and Theory of Architecture at IE University. She is co-author of *Mies van der Rohe: Barcelona 1929* (2017) and editor of *Rafael Moneo: Remarks on 21 Works* (2010).

Lucy Mulroney is Senior Director of the Special Collections Research Center at Syracuse University Libraries. Her book *Andy Warhol, Publisher* is forthcoming from the University of Chicago Press.

Guy Nordenson is a structural engineer and Professor of Structural Engineering and Architecture at Princeton University. He is the author of *Seven Structural Engineers: The Felix Candela Lectures in Structural Engineering* (2008) and a collection of essays, *Patterns and Structure* (2010).

Timothy M. Rohan is Associate Professor in History of Art & Architecture at the University of Massachusetts, Amherst. His book, *The Architecture of Paul Rudolph* (2014), is the first monograph about one of the most important modernist architects of the mid and late twentieth-century. He has also edited *Reassessing Rudolph* (2017), a volume of essays about the architect by different scholars. His latest research concerns modernist interiors.

Index

Page numbers appearing in italics refer to photographs and illustrative matter.

Adams, Fred, 195, 308
 advertising, 295, 297, 302–304, 307, 308–315, 317n48
 Afghanistan, 318, 335
 Anderson, Lawrence, 188
 Annunciation Priory of the Sisters of St. Benedict (Bismarck, ND), 236, 305–306, 318, 330–331
 anthropomorphism, 296–297, 301, 305, 307
 Aquitaine resort (France), 252, 270–271
 architectonic, 121, 138
 architects, consultants vs., 84–90
 The Architects' Collaborative (TAC), 15, 87
Architects' Journal, 156, 164, 172
 architectural authorship
 agency and, 14, 83
 "author function," 109–110
 bending and folding as determination of, 97–99, 109–110
 de-authoring of form and, 95
 disputes and rights, 36, 83, 97, 110, 112
 Foucault on authorship, 83
 nature of, 7
 postwar notions of, 15, 83, 84
 See also *under specific project*
Architectural Forum, 241
 architectural history, questions central to, 7, 14, 16
Architectural Record (magazine), 53
Architecture without Rules (Masello), 12
 Archives of American Art (Wash., DC), 11, 352, 354, 356n15
 Argan, Giulio Carlo, 113n32
 Arison Club (Argentina), 44, 169, 318, 332–333
 Armstrong Rubber Company (New Haven, CT)
 ancillary strategy for, 293, 308–312
 commissioning of, 117, 309
 cultural contexts, 312–313
 design for, 117–121, 126, 236, 293
 photographs, 117, 118, 140, 141, 310, 311, 312
 Arp, Hans, 233
 Arrette, Louis, 288
Art in America (magazine), 307
 artwork, 64, 111, 115n80, 121, 233, 236, 299, 300, 351
 Arup, Ove, 124
 Associated Universities Incorporated (AUI), 185, 187
 Atlanta Public Library, 318, 328–329
 Atomic Energy Commission (AEC), 186–188

Backström & Reinus Gröndel, 88, 89
 balloon frame, 41–43, 44
 BAMBOOS housing, 36–37
 banners, defined, 139n31, 236, 293
 Banque Lambert (Brussels), 129–130
 Baretz, Jean, 282–285, 283
 Barnes, Edward Larrabee, 57
 Bauer, Herman, 47
 Bauhaus (Dessau), 35, 36–37, 156, 229
Bauhaus (magazine), 35
 Bauhaus (Weimer), 9, 14, 16, 34, 35, 173
 Bauhaus-Archiv (Berlin), 11
 "Bauhaus film," 34, 35
 Bauwelt competition, 158–159
 Bayer, Herbert, 39
 Becker, Marion, 156–157
 Beckhard, Herbert, 12, 130, 346, 352
Beginnings of Architecture (Giedion), 58
 Begrish, Frank, 241
 Begrish, Jane, 241
 Bell Telephone Laboratories, 190–191
 Belluschi, Pietro, 349, 350, 355n5
 bending, as design operation, 96–100, 109–110, 115n75
 Bergdoll, Barry, 355
 "Berkeley Box," 191–195
 BERU (Bureau d'études et de réalisations urbaines), 276–277, 282

Biedermeier period (Germany), 161
 Bier, Justus, 173
 "Big Education," 140, 223, 225–228
 Bigeleisen, Jacob, 187–189, 195
 "Big Science," 140, 185–186, 189, 198, 199, 200n12, 240–241
 billboards and signage. See advertising
 Bitter, Karl, 233
 Black Mountain College (Asheville, NC), 229
 Blake, Peter J., 58, 173, 174, 241, 295, 297, 307, 313–314
 Bloom, Harold, 132–133
 BNZ. See Breuer, Marcel; Nervi, Pier Luigi; Zehruss, Bernard
 Boissonnas, Éric, 252
 Bonus Act of 1958 (Highway Beautification Act), 303, 310–311, 317n41
 Boslett, A., 47
 Bourke-White, Margaret, 350
 Brazier, Bernis E., 191, 193
 Breuer, Constance, 11, 60, 352, 356n15
 Breuer, Marcel
 arrival in USA, 38, 41
 death of, 8, 202, 352
 early career, 7
 first marriage, 39
 interpretive approaches to, 14
 interviews with, 39, 42, 133, 139n31
 lectures and speeches of, 40, 54, 55–56, 137, 157, 164
 photographs of, 20, 65, 83, 203, 292, 319, 346–347
 religion and, 48, 133, 176
 residences, 12, 41, 42–43, 122, 202
 resurgence of, 7–17
 retirement of, 318
 self-promotion and, 177
 shift from residential to institutional work, 9–10, 13, 43–45, 121–122, 318
 teaching, 7, 41, 202, 229
 See also Marcel Breuer & Associates (New York City); Marcel Breuer Digital Archive (MBDA) (Syracuse University Libraries); *Marcel Breuer Papers* (Syracuse University Libraries); Walter Gropius and Marcel Breuer, Architects (Cambridge, MA)
 Bristol Center Office Building (Syracuse, NY), 131, 140, 151
 Broad Museum (Los Angeles), 11
 Bronx Community College, 245–249, 246, 248
 Brookhaven National Laboratory (Long Island, N.Y.), 16, 183–195, 189, 196, 197, 198, 200n12, 201n30
 brutalism, 12, 16, 37–38, 201n45, 294, 299
Building Trades Exhibition (1936), 155, 171
 Bush, Martin H., 348, 349, 351, 352, 353, 355
 Bush-Brown, Albert, 188
 Byrne, Barry, 46

Calder, Alexander, 64, 233, 297, 299
 Camp Upton, 185–187. See also Brookhaven National Laboratory (Long Island, N.Y.)
 Camus, Raymond, 283
 Candela, Félix, 132, 202
Can Our Cities Survive? (Sert), 173, 175
 cantilevers, symbolism and, 41, 97, 296
 Carreras, Guillermo, 276
 Cement and Concrete Association, 155, 156
 Cercler, Eric, 276
 "Cesca" chair, 7–8
 chair design, 34, 35–37, 87, 97–99, 98
 Chamberlain Cottage (Weyland, MA), 42
chiaroscuro, structure and, 121, 123–124, 127–131, 133, 134, 137–138, 240
 Chicago steel frame, 44
 chimneys, 296, 297, 299
 Chronopoulos, Themis, 245
 churches, 318. See also *specific project*

- CIAM (Congres Internationaux d'Architecture Moderne)
 Functional City, 174, 175
 Gropius and, 112n15
 growth of, 112n12, 113n22
 heart of the city conference, 174
 UNESCO project, 84–87, 99
 urban design and, 157, 159–160, 164, 167, 171–172, 173, 174–175, 177–178
- Cincinnati Modern Art Society, 173
- Civic and Commercial Center (Colombia), 177
- Civic Center of the Future, 89, 174, 177
- cladding, 38, 118–121, 137, 202, 239, 299
- Cleveland Trust Company, 140, 150
- cloverleaf plan, 156, 158, 164, 168–169, 170
- CNIT (Puteaux, F), 45, 55
- Coates, Wells, 179n42
- COFEBA (Compagnie Française d'Engineering Baretts), 282–283
- Cohen, Aaron, 246
- collective housing, 159–160, 252, 274. *See also* ZUP
 Sainte-Croix (Bayonne, F)
- competitions, 157–158, 158–159, 160, 164, 166, 174.
See also specific competition
- concrete panel systems. *See specific project*
- consultants, architects vs., 84–90
- consumerism, 176, 302–304, 308–312.
See also advertising
- Convent of the Sisters of Divine Providence (Baldegg), 342–343
- copyright, 36, 83, 97, 110, 112
- Costa, Lúcio, 81, 91–96, 114n40
- Crease, Robert P., 186, 200n10
- Crofton Ganes Pavilion (UK), 39
- Daily Mail*, 170
- Darroquy, Bernard, 287–288
- De Bijenkorf Department Store (Rotterdam), 318, 340
- Dermody, Michael, 354
- designers, architects as, 84–85
- "design formalism," 295–298
- de Waldner, C. F., 196
- digital humanities, 16–17, 355, 356n25. *See also*
 Marcel Breuer Digital Archive (MBDA) (Syracuse
 University Libraries)
- Diller Scofidio + Renfro, 11
- Dodson, Richard, 188, 193, 201n28
- Driller, Joachim, 9, 12
- Duchamp, Marcel, 350
- Duran, Michel, 290
- Dworschak, Baldwin, 47, 48, 133
- Eames, Charles, 195
- Eames, Ray, 195
- Eggers & Higgins, 228, 238, 247
- Egli, Ernst, 105
- Egyptian architecture, 53, 57–58, 106
- Eisenman, Peter, 313
- Elberfeld, Germany, 36
- El Recreo Urban Center (Venezuela), 334
- engineering, integration of, 49
- English architecture, 161, 171
- Erps, Martha, 39
- Evans, Randall, 157
- Everson Museum of Art (Syracuse, N.Y.), 59
- Exhibition Building (Turin, Italy), 122, 123, 124
- exhibitions, 13, 38, 155, 157, 170–171, 173.
See also specific exhibition
- "Faceted, Molded Façade, The" (Breuer), 197–198
- Farkas, Barron & Partners, 122, 128, 239
- farmhouse architecture, 39–40
- fascism, 294, 298
- Fellhimer & Wagner, 195
- fieldstone walls, 41–42
- figuration, 296–297
- films ("Bauhaus film"), 34, 35
- fireplaces, 296, 297, 299
- Flaine ski resort (France), 252, 258–263, 276, 283
- flow, 50–51, 60, 117, 120, 121–131
- folds/folding, 48, 52, 110–111, 121–135. *See also specific project*
- formalism, 132, 293–298, 313, 315–316
- Forty, Adrian, 285
- Foster, Richard, 245
- Foucault, Michel, 83, 100, 114n42
- France, 273, 275, 278–279, 282–283.
See also specific project
- freestone structural walls, 39
- Friedrichstraße train station (Berlin), 166, 167
- From Bauhaus to Our House* (Wolfe), 8
- functionalism, 47, 48–49, 50, 157, 170, 296–297
- "functionalization," 101–107
- furniture design, 7–8, 34, 35–37, 38, 87, 97–99, 98, 229
- Gagarin House (Litchfield, CT), 296–297, 299
- Gallo-Roman Museum (Lyon-Fourvière, F), 123
- Garden, Nelson B., 191–193
- garden city movement, 171–174
- Garden City of the Future (model), 15, 44, 155–179
- architectural authorship of, 157
- critical reception of, 170–178
- cultural contexts, 157, 171
- design of, 157–167, 169
- health benefits of, 159, 160
- photographs, 154, 155, 162, 166, 169
- urban design and, 150–160, 157, 164, 167–170
- Y plan form, 167, 169, 174, 176
- Gatje, Robert F.
 Armstrong Rubber Building project, 117–119, 309, 310
 Brookhaven National Laboratory project, 182–184, 189–190, 193–199
 on economic logic, 121
 IBM Research Center project, 129–130, 181, 182–184, 195–199, 252
 New York University project, 232
 photograph of, 346
 Saint John's Abbey project, 50, 51–52, 127, 128, 138n19
 Whitney Museum of American Art project, 57, 134
 writings of, 12–13, 57
 ZUP Sainte-Croix project, 276, 288
- Gatje Papachristou Smith, 352
- Geller chair, 98, 99
- German Building Exhibition (1931), 36
- Giedion, Sigfried, 14
 monumentality and, 44, 86, 174–176, 177, 294, 298
 on "standard form," 114n46
 on UNESCO headquarters project, 96
 writings of, 41–42, 58
- God's Own Junkyard* (Blake), 295, 297, 313–314
- Goldberger, Paul, 8
- Goldstein, Israel, 224–225
- Gothic architecture, 46, 49, 50, 54, 124, 130, 131
- Gothic Architecture and Scholasticism* (Panofsky), 50
- Grand Central Terminal (New York), 8, 318
- Grand Coulee Dam (WA), 50, 127, 129, 139n26, 318, 320–323
- Graves, Michael, 8, 294, 315, 317n49
- Greenblatt, Stephen, 133
- Grenauer, Emily, 306
- Grenet, Henri, 276
- Grenet, Jean, 288
- Gropius, Walter
 Architects' Collaborative, 15
 Bauhaus (Dessau) building, 35, 229
 Breuer's break with, 9–10
 Chamberlain Cottage, 42
 on economy of high-rise building, 159
 Hagerty House, 41, 121–122
 Harnismacher House, 38–39, 62n4
 at Harvard, 41
 housing designs, 48, 163
 influence of, 133
 J. Georges Peter and, 186
 office with Breuer, 37, 188, 202
 papers of, 62n4, 350
 photographs of, 83
 residences, 122
 Saint John's Abbey project, 18, 47, 48
 UNESCO project, 45, 81, 85, 87, 94, 112n15, 113n18
 Weissenhof Siedlung project, 38
- Gropier, William, 350
- Großsiedlung Siemensstadt (Berlin), 159, 160
- Großstadtarchitektur* (Hilberseimer), 160
- Guichard, Oliver, 274
- Hagerty House (Cohasset, MA), 41, 122
- Hague, The, 318, 341
- Harnismacher House (Wiesbaden), 38–39, 62n4
- Harris, Teresa, 354, 356n23
- Harrison, Wallace, 87
- Harvard University, 11, 37, 41, 43, 54, 173, 186, 354
- Hassenpflug, Gustav, 36, 160
- Haworth, Leland, 188
- Hays, K. Michael, 307–308, 313, 317n48
- Heald, Henry T., 225–226
- "heavy lightness," 38, 56, 57, 233
- Hester, James, 224, 226
- HEW headquarters (Wash., DC), 152–153
- Highway Beautification Action (Bonus Act of 1958), 303, 310–311, 317n41
- Hilberseimer, Karl Ludwig, 160, 166, 167, 177
- Hitchcock, Henry-Russell, 38, 81, 107, 161, 164
- Hochhausstadt (Hilberseimer), 166, 167, 177
- hospitals, 36, 45, 164–165
- House for a Sportsman* (exhibition), 36
- Howard, Ebenezer, 171, 172
- HUD headquarters (Wash., DC), 53, 89, 127, 130, 138n18, 140, 144–145, 167
- Hunter College, 189, 202, 220–221, 229
- Huxley, Julian, 84, 101
- Huxtable, Ada Louise, 164
- Hyman, Isabelle, 9, 12, 13, 167, 309, 356n15
- hyperbolic paraboloid forms, 131–132
- IBM facilities (Boca Raton, FL), 119, 130, 142–143, 199
- IBM logo, 308
- IBM Research Center (La Gaude, F), 16
 Breuer on, 181
 commissioning of, 195
 cultural contexts, 181–182
 design of, 53, 119, 181–201, 195, 198–199, 199n6
 photographs of, 40, 116, 180, 181, 182, 196, 198, 252–257
 Y plan form, 40, 89, 129–130, 167, 198
- IBM World Trade Building (France), 140
- Ideal Home Exhibition* (1936), 155, 170–171
- IKEA, 312
- Institute for Architecture and Urban Studies, 313
- Institute for the History and Theory of Architecture, 354
- institutions
 architectural scholarship and, 14
 Breuer's shift from residential work to, 9–10, 13, 43–45, 121–122, 318
 collaboration with, 7
 Foucault's "author function" and, 83
 postwar notions of, 15–16, 100, 184–185, 294, 299–300, 302–303
See also architectural authorship
- international organizations, symbolism and, 51
- International Style, 15, 38, 223, 232, 294, 299, 307
- Iran, 318
- Irwin, Robert, 136
- Itten, Johannes, 37
- Izenour, Steven, 295, 313–314
- Jacobs, Jane, 177
- Jasik, Stephen, 224
- Johnson, Philip, 38, 57, 226, 245
- Johnston-Sahllman Company, 128
- John Wood the Younger, 161
- Jones, Cranston, 174
- Jordy, William H., 293–294
- Jossa, Mario, 346
- Kahn, Louis, 57, 58, 59, 129, 202, 206
- Kaigai Bunka Tyuo Kyoku (Japan), 173
- Kardos, István, 39, 42
- Kaufmann, Edgar, Jr., 195
- Kimball, Fiske, 227, 228
- Komendant, August, 129
- Kramreiter, Robert, 46
- Laurenti, André, 276
- Lawn Road Flats (London), 179n42
- League of Nations, 82, 84, 100, 101, 114n51
- Learning from Las Vegas* (Venturi, Scott Brown, Izenour), 295, 313–315, 314
- Lebanon, 105
- Le Corbusier
brise soleil, 197
 High Court India project, 299
 influence of, 38, 39, 41, 45, 53, 133, 161, 279
 Macia Plan, 166, 167
 the Modular, 285, 296–297
 religion and, 176
 three-pointed skyscraper project, 88, 89
 UNESCO project, 81, 83, 85, 86, 91–96, 106, 112n15
 Unité d'habitation project, 45, 279, 281, 285, 286, 296–297, 299, 305
 Ville contemporaine project, 159, 166, 167, 168, 176, 177
 Ville radieuse project, 167
- Lee, Richard C., 117, 309
- Léger, Fernand, 44, 294, 298
- Leon, James L., 128–129
- Levy, Matthys, 118–119, 121, 127, 130, 136, 138n18, 139n26
- lightness, 15, 35–63, 127, 131, 202, 299, 300
 "heavy lightness," 38, 56, 57, 233
- Lincoln Center (New York), 11
- Lipton, Thomas, 233
- Living Architecture* (Stierlin), 58
- Lowell, Waverly, 356n19, 356n21–22
- Macia Plan (Barcelona), 166, 167
- Malraux, André, 275–276
- Marcel Breuer, 1921–1961* (Breuer), 40
- Marcel Breuer, Architect* (Hyman), 13
- Marcel Breuer: A Memoir* (Gatje), 13
- Marcel Breuer & Associates (New York City)
 growth of, 10, 14, 37, 43, 202
 Paris office, 12, 65, 252, 276, 318
 photographs of, 65, 252, 346
 successor to, 352
 writings by partners of, 12–13
- Marcel Breuer Digital Archive (MBDA) (Syracuse University Libraries), 11–12, 16–17, 348–357
- Marcel Breuer Papers* (Syracuse University Libraries), 9, 10–11, 195–196, 352–353, 354
- Markelius, Sven, 83
- MARS Group, 156, 172
- Masello, David, 12
- Mazower, Mark, 100
- McCarter, Robert, 11–12
- McKim, Mead & White, 202, 223, 227, 248
- Mead, Margaret, 103, 107, 114n59
- Meinberg, Cloud, 46, 48, 50
- Meister, Morris, 245–246, 248
- Melnikov, Konstantin, 232–233
- Melvin, Jeremy, 157
- Metropolitan Museum of Art (New York), 8–9, 174

Meyer, Adolf, 35
 Meyer, Richard, 351
 Mies van der Rohe, Ludwig, 37–38, 60, 97, 188, 226, 304, 350
 Miró, Joan, 64, 233, 299
 Mitrany, David, 101
Modern House, The (Yorke), 156
 modernism
 as accommodation, 16, 274, 285, 290
 basis of modern architecture and, 158
 collapse of, 312
 contextualist pressures on, 110
 effects of corporate design processes on, 81
 in England, 41
 figuration and, 296–297
 formalism and, 296
 mid-century, 7, 8–9, 10, 11, 81, 100, 109
 postmodernism and, 8–9, 16, 294, 295, 296–297, 312–316
 preservation vs., 106
 Regency architecture and, 161
 Modrow, Sebastian, 356n23
 Moholy-Nagy, László, 37
 monumentality, 294–295, 306–307, 313.
 See also New Monumentality
 Moore, Henry, 233, 299
 Morse, Philip, 186–187
 Motley, James G., 190–191
 Moxey, Keith, 356n25
 Mumford, Eric, 174, 179n51
 Mumford, Lewis, 82, 106, 165, 175–176, 299, 300
 Mundipharma Factory and Headquarters (Limburg, DE), 339
 Murphy, Joseph, 46
 Museum of Modern Art (MoMA) (New York), 8, 13, 37, 57, 62n4, 135, 173, 202
 native tradition, 40
 Nelb, Tawny Ryan, 356n19, 356n21–22
 Nelson, George, 195
 nervature, 131
 Nervi, Pier Luigi
 Breuer on genius of, 108, 137
 Exhibition Building project, 122, 123, 124
 folded concrete, 18, 48, 61, 108, 109–110, 115n75, 124, 131
 Gatti Wool Factory project, 131
 Hunter College project, 202
 influence of, 108, 133, 137–138, 165
 isostatic rib systems, 49, 54
 lectures of, 54
 Palace of Labor project, 56
 photographs of, 83
 Saint John's Abbey project, 18, 45, 48, 49–50, 52, 53–54, 55–56, 131
 stadium architecture, 53
 thin-shell concrete structures, 131
 UNESCO project, 45, 49–50, 52, 55, 64, 81, 85, 90–96, 107–110, 122–123, 124, 126–127, 298, 300
 Whitney Museum project, 61
 Nestlé headquarters (Vevey, Switz.), 88, 89
 Neutra, Richard, 47, 349–350
New Architecture (exhibition), 172
 "new baroque," 120–121, 127, 130, 131, 133, 135–136
 New England Merchants Bank competition, 119
 New Kensington (PA), 48, 186
 New Monumentality, 44, 86, 174, 175, 294–295, 298–300, 301, 316
 New National Gallery (Berlin), 60
 Newsom, Carroll, 226
 New York, 202–222. See also *specific project*
 New York University (NYU), 16, 223–251
 Begrisch Hall, 134, 214–217, 224, 225, 229, 232–233, 235, 236, 238, 241
 Bronx Community College and, 245–249, 246, 248
 commissioning of, 202, 242

critical reception of, 241–244
 cultural contexts, 242–245, 245–249
 enrollment, 224–226, 229, 244–245, 247, 251n48
 funding, 240–241, 242, 245
 growth and expansion of, 223–224, 226
 photographs, 212–219, 222, 224, 227, 230, 232, 235, 237, 238, 248
 Silver Hall, 214, 216–217, 224–225, 227, 228–232, 230, 241–242, 245, 247–248, 250n18
 Technology Building, 130–131, 218–219, 237–240, 238, 241, 242–244, 247, 248
 Niemeyer, Oscar, 45, 276
 "Nine Points on Monumentality" (Giedion, Sert, Léger), 44
 Noël, August L., 57
 Noguchi, Isamu, 64, 233
 Nowicki, Matthew, 295–296, 304, 308
 Noyes, Eliot, 195, 308
 Olgiata Parish Church (Rome), 327
 OMA (Office for Metropolitan Architecture), 11, 89
On Growth and Form (Thompson), 201n44
 Packard, Vance, 307
 Palace of Labor (Turin), 56
 Panofsky, Erwin, 50
 Papachristou, Tician, 346, 352
 Pei, I. M., 57, 59, 188, 226
 Peter, J. Georges, 186–187, 188
 Picasso, 64, 233
pilots, 119–120, 126, 130–131, 133, 182. See also *specific project*
 Pirelli tire company (New Haven, Conn.), 311–312
 Plas-2-Point House, 43
 Poelzig, Hans, 166, 167
 popular culture, 294–295, 297, 302, 307, 312–316.
 See also advertising; consumerism; *cultural contexts under specific project*
 Porto Opera House (Portugal), 11
 poster (imaginary film), 34, 35–36, 37
 postmodernism, 8–9, 16, 294, 295, 296–297, 312–316
 Potsdamer Platz (Berlin), 158, 168–169
 prefabricated housing, 42–43, 48, 282–283.
 See also *specific project*
 Princeton University, 229, 315
 Querrien, Max, 275
 Quimby, Sean, 353
 Rand, Paul, 195, 308
 Rauch, John, 16
 Raymond, Antonin, 47–48
 Regency architecture, 161
Renaissance and Baroque (Wölfflin), 120–121
 research laboratories, 191–193. See also Brookhaven National Laboratory (Long Island)
 Robbins, Mark, 10
 Robert A. M. Stern Architects, 248, 249
 Roberto, Joseph J., 244–245
 Rogers, Ernesto, 81–83, 300, 306
 Royal Crescent (Bath, UK), 161
 Rudolph, Paul, 57, 188, 294, 313
 Saarinen, Eero, 14, 81, 83, 86–87, 90, 91–96, 134, 188
 Saint John's Abbey (Collegeville, MN)
 ancillary strategy for, 300–306
 bell banner, 18, 21–23, 54–56, 132, 134, 139n31, 236, 293, 297, 301–303, 304, 305, 316n26
 Breuer on, 133, 139n31
 commissioning of, 10, 43–44
 comparisons to UNESCO, 123, 132
 cultural contexts, 13–14
 design for, 18, 45–57, 64, 123, 127–129, 131, 132, 137, 308
 photographs, 18–33, 55, 56, 127, 292, 301, 304, 305
 success of, 318

Salvadori, Mario, 53–54
 San Francisco Museum of Art, 173
 Sarah Lawrence College, 202, 230, 231
 Sargent, D. Kenneth, 352
 Sarget-Ambrine Pharmaceuticals (Mérignac, F), 252, 268
 Saussure, Ferdinand de, 313
 Sayer House (Glanville, F), 252, 269
 Schwarz, Rudolf, 46, 51
 Schwendler, William T., 241
 Scott Brown, Denise, 16, 294, 313–315, 314, 317n48
 Scully, Vincent, 298
 Seaborg, Glenn T., 201n30
 Seidler, Harry, 131, 137
 Selcer, Perrin, 110
 Selye, Hans, 199
 Semper, Gottfried, 39
 Sert, Josep Lluís
 CIAM and, 112n15, 174–176
 Civic and Commercial Center project, 177
 Garden City of the Future project, 174–176
 New Monumentality and, 44, 86, 294, 298
 UNESCO headquarters project, 81, 86, 113n18
 writings of, 173, 175
 Severud Perrone Sturm Conlin Bandel, 130
 Sexton, John, 223
 Shand, P. Morton, 161
 Sharp, Thomas, 46
Shelter in Transit and Transition (exhibition), 157, 173
 Shoup, Eldon, 185
 Siegert, Bernhard, 110
 signs and billboards. See advertising
 Silver, Julius, 225
 Sitte, Camillo, 171
 Skidmore, Owings & Merrill (SOM), 14
 slab apartments, 158–160
 Smith, Hamilton, 14, 50, 51–52, 59, 60, 128, 231, 346, 352
 Smith College, 229
 Smithson, Alison, 8, 177
 Smithson, Peter, 8, 177
 South Boston Redevelopment plan, 173–174
 Soviet collective housing, 159–160
Space, Time, and Architecture (Giedion), 42
Space for Living (exhibition), 173
 Special Collections Research Center (Syracuse University Libraries), 11, 353.
 See also Marcel Breuer Digital Archive (MBDA) (Syracuse University Libraries); *Marcel Breuer Papers* (Syracuse University Libraries)
 Staehelin House (Feldmeilen, CH), 344–345
 Stam, Mart, 97, 99
 Standard Möbel, 87
 St. Anselm's Church (Tokyo), 47
 Stern, Max, 276
 St. Francis de Sales Church (Muskegon, MI), 50, 131–133, 132, 135, 139n31, 318, 324–325
 Stierlin, Henri, 58
 Stiftung Bauhaus Dessau, 354
 Stone, Edward Durell, 188, 294
 St. Paul's Cathedral (Burlington, VT), 326
 structure, 117–139
 divergent expression of, 119
 emotional effects of, 120–121
 fold and figure, 121–135
 Stuyvesant Six, 88, 98, 99, 174
 suburbanization, 177
 Sudreau, Pierre, 275
 Suger (Abbot), 46
Sun and Shadow (Breuer), 107, 120, 134, 135, 176, 295, 297, 303
Swerve, The (Greenblatt), 133
 Sydney Opera House, 124, 125
 symbolism, architecture and, 44, 51, 58, 294, 296–297, 301–308

Syracuse University Libraries. See Marcel Breuer Digital Archive (MBDA) (Syracuse University Libraries); *Marcel Breuer Papers* (Syracuse University Libraries)
 Syracuse University School of Architecture, 10–11, 349, 352
 Tafuri, Manfredo, 294, 312
 Taut, Bruno, 163
 Team 10, 177
 Telesis, 173
 Thimmesh, Hilary, 46, 52
 Thompson, D'Arcy Wentworth, 201n44
 Thompson, Elisabeth K., 191, 193
 Thonet, 97–99
 Tolley, William, 350
 Torin Corporation (Torrington, Conn.), 308, 317n36, 318, 336–339
 trapezoidal plans, 18, 52, 59–60, 86, 94
 Tschumi, Jean, 88, 89
 tubular steel furniture, 7–8, 34, 35–36
 TVA (Tennessee Valley Authority), 101, 105, 108
 Ukrainian State Theater (Kharkov), 157–158
 UNESCO headquarters (Paris), 49–55, 81–116
 ancillary strategy for, 294, 298–300
 architectural authorship of, 15, 45, 64, 83, 84, 85, 86–87, 91, 95, 97–99, 109–112, 122, 124–125
 "bending" and folding phase, 96–100, 108, 109–110, 115n75, 122–127, 125
 CIAM and, 84–87, 99
 commissioning of, 10, 43–44, 81–82, 96, 276
 critical reception of, 53–54, 81–83, 89, 110–112, 165, 300, 306
 cultural contexts, 13–14, 82–84, 96–97, 99–100, 101–107, 102, 104, 110–111, 115n79, 294
 description of, 64
 design phases, 83–84, 96–100
 design process, 90–96
 flow and form of, 122–127, 129
 framing plan, 123, 124–126
 "functionalization" and, 101–107
 legacy of, 111–112, 122–123
 NYU and, 228–229
 photographs, 49, 51, 64–79, 83, 85, 86, 92–93, 105–106, 108, 109, 123, 125, 126, 131, 300
 Y plan form, 45, 49, 55, 64, 86, 87–92, 113n32, 123, 124–126
 Union Internationale des Architectes (UIA), 85, 112n15
 United Nations, 100, 101
 University of East Anglia Library, 354
 University of Massachusetts (Amherst), 146–147, 304–305
 urban design, 157, 159–160, 164, 167–178
 US Embassy (The Hague), 318, 341
 Van Leer Company (Amstelveen), 167, 318, 341
 Vassar College, 229–231
 Venezuela, 334
 Venturi, Rauch, and Scott Brown, 16, 295
 Venturi, Robert, 16, 294, 313–315, 314, 317n48
 Verheyen, Peter, 353
 Viksjø, Erling, 89
 Ville contemporaine (Le Corbusier), 159, 166, 167, 168, 176, 177
 Ville radiouse (Le Corbusier), 167
 Vitra Design Museum (Germany), 13, 354
 Voorhees, Walker, Foley and Smith, 190–191
 Walker Art Gallery (Minneapolis, MN), 56
 Walter Gropius and Marcel Breuer, Architects (Cambridge, MA), 37, 62n4, 188, 202
 Wank, Roland A., 195
 Weidlinger, Paul
 Armstrong Rubber Company project, 118
 Breuer and, 121, 133, 137
 Grand Coulee Dam project, 129

HUD headquarters project, 130
 Saint John's Abbey project, 127, 128, 137
 St. Francis de Sales project, 131, 132
 use of tree-like forms, 45
 Whitney Museum project, 59, 136
 Weissenhof Siedlung (Stuttgart), 38
Werkbund exhibition (Paris), 40
 Westwick, Peter J., 186
 White, Stanford, 223, 227, 248
 Whitney Museum of American Art (New York)
 ancillary strategy for, 293, 294, 295, 306–308,
 314, 317n48
 Breuer on, 14, 181, 307
 Breuer papers and, 351, 354
 critical reception of, 37, 306–307
 design for, 37, 53, 57–61, 134–137, 307–308, 311,
 314, 315, 317n49
 photographs, 35, 61, 135, 136, 202–211, 294
 "rebranding" of, 8–9
 Wiener, P. L., 177
 Wiesenfeld, Hayward and Leon, 128, 129–130
 Wilk, Christopher, 8
 Wolfe, Tom, 8
 Wölfllin, Heinrich, 120–121, 127, 131, 135, 138, 316n7
 Wolfson House (Salt Point, NY), 122
 wood-frame construction, 37, 41–43
 Wright, Frank Lloyd, 47, 171
 Wurster, William, 236–237

Yale University, 130–131, 140, 148–149
 Yamasaki, Minoru, 294
 Yorke, F. R. S., 16, 18, 39, 161, 172, 179n52. *See also*
 Garden City of the Future (model)
 Young, Victoria, 13
 Y plan form
 bending of, 96–100
 comparisons to industrial propeller, 113n32
 Costa and, 114n40
 double-shaped, 167, 169, 174
 Garden City of the Future model, 167, 169, 174, 176
 HUD headquarters, 89
 IBM Research Center, 40, 89, 129–130, 167, 198
 Nestlé headquarters, 88, 89
 as new international standard, 87–89
 New York University, 238
 photographs of, 88, 92–93
 UNESCO headquarters, 45, 49, 55, 64, 86, 87–92,
 113n32, 123, 124–126

Zehrfuss, Bernard
 CNIT and, 45, 55
 Gallo-Roman museum project, 123
 photographs of, 83
 Saint John's Abbey project, 55
 UNESCO project, 45, 64, 85, 90, 91–96, 107–110,
 122, 298
Zeilenbau model, 167, 168, 170, 174
 Zevi, Bruno, 82, 89, 111
 Zimmermann, Erich, 166
 ZUPs, defined, 16, 275
 ZUP Sainte-Croix (Bayonne, F)
 architectural authorship of, 274–275, 289
 commissioning of, 273–274, 275–276
 critical reception of, 274, 286–290
 cultural contexts, 273–274, 275, 276, 278–279,
 282–283, 286–287, 288
 design of, 16, 174, 252, 273–291
 marketing materials for, 282, 289
 photographs, 264–267, 272, 273, 275, 277,
 279–280, 282, 284, 285, 286, 287, 289, 290
 refurbishment of, 286–290

Credits

Every reasonable effort has been made to identify rights holders for the images in this book. Please notify the publishers of any errors or omissions so that they can be corrected in subsequent editions.

Front cover: Hedrich-Blessing Collection, Chicago History Museum (hb30662z)
 Back cover: Marcel Breuer papers, 1920–1986, Archives of American Art, Smithsonian Institution/Lucien Hervé
 Quotation on cover flap: Marcel Breuer, "Notes on lectures, 1936–1948," in *Marcel Breuer, Buildings and Projects, 1921–1961*, ed. Cranston Jones (New York: Praeger, 1962), 257.

© Peter Aaron/OTTO for Robert A.M. Stern Architects: 6/26
 Administrative Files, Special Collections Research Center, Syracuse University Libraries: Postface/1
 Courtesy Lucia Allais: 2/14, 2/17
 Architekturmuseum TU Berlin: 4/12 (Inv. No. 2809)
 Marcel Breuer papers, 1920–1986, Archives of American Art, Smithsonian Institution (AAA): II/3, II/14, 2/10, 2/21, 2/23, III/13, 5/1, 5/4, 5/8, 5/11, IV/4, V/2, V/19–20, 7/1, 7/3, 7/5, 7/7–9, VI/2, VI/6, VI/13–14, VI/16, VI/18, VI/22, VI/48
 AAA / Evelyn Bernheim: IV/2
 AAA / Kurt Blum: VI/49
 AAA / Gilles Ehrmann: II/14, II/18
 AAA / Yves Guillemaut: V/9–13, V/15, V/21, 7/4, 7/12
 AAA / Lee A. Hanley: I/9
 AAA / Bill Hedrich, Hedrich-Blessing: I/4, I/15, I/21
 AAA / Lucien Hervé: 1/15, II/1, II/11
 AAA / Shin Koyama: IV/16, VI/3, VI/20–21
 AAA / Robert Lautman: III/24
 AAA / Joseph W. Molitor: III/3, III/5
 AAA / Chas R. Pearson: 3/17
 AAA / Ben Schnall: III/9
 AAA / Manfred von Werthern: II/20
 Max Dupain, Art Gallery New South Wales / © 2017 Artists Rights Society (ARS), New York / VISCOPY, Australia: 3/7
 Bauhaus-Archiv Berlin: 1/1, 4/4
 Berland-Berthon, *Les grands ensembles d'habitat des années 60: Un patrimoine du quotidien* (Bordeaux: CPAU Aquitaine, 2008), 47: 7/17
 Brazier, Bernis E. and Elisabeth K. Thompson, "Laboratories for Radioactive Research," *Architectural Record* 121 (June 1957), 216–26, republished in *Buildings for Research* (New York: F. W. Dodge, 1958): 5/6–7
 Breuer, Marcel, and Peter Blake, *Sun And Shadow: the Philosophy of an Architect* (New York: Dodd, Mead, 1955): II/9
 Breuer, Marcel, "Stuyvesant Six: A Redevelopment Study," *Pencil Points* (June 1944), 66–70: 2/7
 Bronx Community College Archives: 6/22–25
Casabella Continuita: 2/3
 Daily Mail / Solo Syndication: 4/19
 Departmental Archives of Bayonne, 12 W 24/2: 7/11
 © Ezra Stoller / Esto: 1/2, 1/11, 1/21, 1/23, 3/22, IV/3, IV/6–11
 © Fondation Le Corbusier / ADAGP, Paris / Artists Rights Society (ARS), New York 2017: 2/2 [L4(7)39], 2/6R [L1(1)47], 2/20 (29751), 4/13 (13189), 4/15 (31006A)
 Robert M. Gatje: 8/11
 Habitat Sud Atlantic, Bayonne: 7/6
 Harvard Art Museums/Busch-Reisinger Museum, Gift of Walter Gropius, Photo: Imaging Department © President and Fellows of Harvard College: 1/10 (BRGA.85.18)
 Courtesy of the Frances Loeb Library, Harvard University Graduate School of Design: 4/22
 Hedrich-Blessing Collection, Chicago History Museum: I/1 (hb30953v), I/16 (hb30955e), I/19 (hb30955j2_pm), 3.20 (hb30662k), VI/10 (hb30662z)

Karl Ludwig Hilberseimer Papers, Ryerson and Burnham Archives, The Art Institute of Chicago: 4/16 (070383)
 Historic American Buildings Survey, Library of Congress Prints and Photographs Division, Washington, DC: I/7 (HABS MINN,73-COL,2)
 Jones, Cranston, ed., *Marcel Breuer Buildings and Projects, 1921–1961* (New York: Praeger, 1963): 1/8
 Landesarchiv Berlin/Horst Siegmann: 1/22 (F Rep. 290 Nr. 0004316_C)
 Ralph Lieberman: 8/4
 Laura Martínez de Guereñu: V/22, 7/15–16, 7/18
 © Massachusetts Institute of Technology, photograph by G. E. Kidder Smith: 8/8
 MAXXI Museo nazionale delle arti del XXI secolo, Roma. Collezione MAXXI Architettura. Archivio Nervi: 1/20, 2/22, 3/4–5
 Marcel Breuer Papers, Department of Special Collections, Syracuse University Libraries (MBDA): Introduction/1, I/3, I/5–6, I/11–13, I/17–20, 1/3–7, 1/9, 1/12–13, 1/16–18, II/2, II/4–7, II/10, II/12–13, II/19, 2/4–5, 2/9, 2/11–13, 3/1–3, 3/11, 3/13–16, 3/18, 3/21, 3/23, III/1–2, III/4, III/6–8, III/10–12, III/14–16, III/18–23, 4/1–3, 4/5–6, 4/8, 4/11, 4/14, 4/17, 4/20–21, 5/2–3, 5/9–10, IV/1, IV/5, IV/13, IV/17–18, IV/21–24, 6/2–9, 6/15–20, V/1, V/3–8, V/14, V/16–18, V/23, V/25–28, 7/2, 7/13–14, 8/5–6, 8/9–10, VI/1, VI/4–5, VI/8–9, VI/11–12, VI/15, VI/17, VI/19, VI/23–31, VI/33–40, VI/42–43, VI/46–47, VI/53–55
 MBDA / Louis Checkman: VI/41
 MBDA / Cunningham-Werdnig: III/17
 MBDA / Gilles Ehrmann: II/16
 MBDA / Bill Hedrich, Hedrich-Blessing: VI/7
 MBDA / Lucien Hervé: II/8, II/15, II/17, 3/6, 3/12, 3/19
 MBDA / Pierre Joly and Véra Cardot Photographers: V/24
 MBDA / Shin Koyama: I/14
 MBDA / Bernhard Mossbrugger: VI/51, VI/52
 MBDA / Jan Versnel: VI/44
 MBDA / KLM Aerocarto: VI/45
 MBDA / Ben Schnall: VI/32
 MBDA / Vitra Design Museum: VI/48
 Courtesy Michael Graves Architecture & Design: 8/2
 Kazuyoshi Miyamoto: 1/14
 © The Museum of Modern Art/Licensed by SCALA / Art Resource, NY: 4/18
 National Archives of France: 7.10 (19860172/1)
 Nervi, Pier Luigi, The Works of Pier Luigi Nervi (New York: Praeger, 1957): 3/9–10
 New York University Archives (NYU): IV/12, IV/19–20, 6/1, 6/11–14
 NYU / Dean Brown: IV/15
 NYU / Irwin Goosen: IV/14
 NYU / Joseph J. Roberto Collection, RG11.4, Box44, Folder7: 6/21
 NYU / Stanley Seligson: 6/10
 Timothy M. Rohan: 8/7, 8/12
 Royal Institute of British Architects Collections: 4/7 (RIBA97069), 4/9 (RIBA97079), 4/10 (RIBA97078)
 Saint John's Abbey Archive: I/2, I/8, 8/1
 State Library of New South Wales, [IE103271] and Jörn Utzon: 3/8
 Ben Schnall: 8/3
 Jean Tschumi Archives: 2/8
 UNESCO Archives: 2/1, 2/15–16, 2/18–19
 Venturi, Robert, Denise Scott Brown, and Steven Izenour, *Learning From Las Vegas, revised edition: The Forgotten Symbolism of Architectural Form*, figures 75 & 76, page 88 & 89, © 1977 Massachusetts Institute of Technology, by permission of The MIT Press: 8/13
 Eric Sutherland for Walker Art Center, Minneapolis: I/10
 Walker, Ralph, *Ralph Walker, Architect, of Voorhees, Gmelin & Walker; Voorhees, Walker, Foley & Smith; Voorhees, Walker, Smith & Smith* (New York: Henahan House, 1957): 5/5

MARCEL BREUER
Building Global Institutions

Editors: Barry Bergdoll, Jonathan Massey
Essays: Lucia Allais, Barry Bergdoll, Kenny Cupers with
Laura Martinez de Guereñu, Teresa Harris, John Harwood,
Jonathan Massey, Guy Nordenson, Timothy Rohan
Editorial Assistant: Michael Abrahamson
Copyediting: Maureen Creamer Bemko
Proofreading: Simon Cowper
Indexing: Debbie Olson
Design: Integral Lars Müller/Lars Müller and Martina Mullis
Production: Martina Mullis
Lithography: prints professional, Berlin, Germany
Printing and binding: DZA Druckerei zu Altenburg, Germany
Paper: Profibulk, 1.3, 135 gsm

Publication of this book has been supported by a grant
from the Graham Foundation for Advanced Studies in the
Fine Arts.

Additional support generously provided by Elise Jaffe +
Jeffrey Brown, and by Lauren Pack and Rob Beyer.

© 2018 Lars Müller Publishers and the authors

No part of this book may be used or reproduced in any form
or manner whatsoever without prior written permission,
except in the case of brief quotations embodied in critical
articles and reviews.

Lars Müller Publishers
Zürich, Switzerland
www.lars-mueller-publishers.com

Distributed in North America by ARTBOOK | D.A.P.
www.artbook.com

ISBN 978-3-03778-519-5

Printed in Germany