Building Concrete Democracies: New Brutalism in Great Britain, the United States, and Brazil from the 1950s to the 1980s

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Abstract

This essay explores New Brutalist architecture in transnational perspective, focusing on the decades between the mid-1950s and the mid-1980s. Conceived in Great Britain in the early 1950s as a creative tool to give built expression to visions of social inclusion, New Brutalism functioned differently as a means for the public articulation of hierarchies of power in the United States and Brazil. At a time when debates about American identity, notions of citizenship, and belonging were becoming increasingly divisive, New Brutalism in the United States lost its socially inclusive visions of the public as built equality gave way to privilege in shaping urban spaces in the 1960s and 1970s. In Brazil, in contrast, New Brutalism functioned as a way of framing responses to political authoritarianism and economic modernization. By highlighting similarities and differences in how built form was used and interpreted in Great Britain, the United States, and Brazil, the essay underlines architecture’s important role in giving built shape to the (urban) public.

“Whatever it is, it’s not beautiful,” a Boston cabdriver remarked upon looking at City Hall in 1969, after the building had just opened to the public (Huxtable 48). The building’s raw concrete shape seemed to sit like a spaceship in the colonial heart of the city, removed from its historical and aesthetic context. Observers in Great Britain and Brazil often expressed similar sentiments upon encountering concrete architecture of this era. They were used to marble, steel, and glass, materials that had shaped cities on both sides of the Atlantic, but not concrete (Grindrod; Bergdoll et al.). Exposed concrete, however, defined the transformation of urban space in the second half of the twentieth century. Starting in the 1960s and lasting until the 1980s, architects in the United States, Great Britain, and Brazil used New Brutalism as the stylistic idiom that poured concrete into shape (Elser, Kurz, and Cachola Schmal 116-51, 152-87, 406-41). For many urban planners, architects, and builders, it was an ideal expressive tool to frame their built reactions to postwar urban structural transformations and their social, political, and economic fallout. This essay explores how different national and cultural contexts mattered in producing differences and similarities in shaping democratic urban design. Although architects used similar stylistic vocabularies...
to design buildings and urban spaces in the third quarter of the twentieth century, they articulated different visions of society. Along the way, New Brutalism became a symbol of the welfare state in Great Britain; in the United States, it functioned as an architectural power style for political and economic elites; and in Brazil, it symbolized built resistance to authoritarianism and dictatorship.

Initially, creative builders on both sides of the Atlantic were inspired by an architectural and planning agenda formulated by British architects Alison and Peter Smithson in the 1950s. The couple had been looking for answers to questions regarding urban planning and design that modernism did not address or had foundered on. With New Brutalism, they formulated an alternative ethics and aesthetics of planning and building. They envisioned a new language of form. At the same time, they articulated new visions of urbanity that dealt with the negative consequences of the ideas modern architects had celebrated only decades before: renewal, redevelopment, and car-centered transportation networks. The Smithsons called for an architecture and urbanism that produced socially integrated spaces. They hoped to create places that could be sensually experienced by their residents—through building materials and spatial layout—and enjoyed by all as expressions of a local sense of belonging (Van den Heuvel 35; Boyer 97-103). Any administrator, Peter Smithson said in an interview in 1959, could lay down a master plan for a town based on good principles, “but when it actually comes to building on the ground, it is the way the buildings themselves fit together and fit with each other which creates the actual places in which you move, and have a feeling of identity or lack of identity” (Smithson et al. 41).

The term “New Brutalism” was coined to express this agenda. It was a new twist on Le Corbusier and other modernists’ Brutalism, which derived from béton brut, the French term for exposed concrete (Calder 12). But it also had a fun dimension. Architecture critic Reyner Banham suggests it was an acronym of Peter Smithson’s nickname “Brutus” and Alison’s first name (10). Initially, this style became popular among cutting-edge architects as a new, more inclusive and humanistic way to shape the built environment in the 1950s—one that mostly but not always relied on concrete as a building material (Boyer 91). However, this essay argues that later, in the 1960s, New Brutalism began to be reduced to its aesthetic features—exposed concrete and boxy volume—in Great Britain and the United States. Along the way, its function as a means for the articulation of hierarchies of power changed. Once conceived of as a language of form designed to articulate ideas and practices of equality and inclusion, it was increasingly reinterpreted as a way of inscribing elite power and privilege into urban space, particularly in the United States. Only in Brazil did planners and builders hold on to New Brutalism as an ethics and aesthetic of equality and inclusion into the 1980s. Here, it continued to be relevant as a language of form that challenged social power dynamics and created spaces that invited civic engagement.
By the end of the 1980s, New Brutalism had been replaced by Postmodernism as an avant-garde architectural style (see Klotz).

Focusing on New Brutalism from a historical perspective, this essay explores new territory. It approaches the subject from a transnational angle in an Atlantic framework. It conceives of New Brutalism’s language of form as a cultural idioms, designed and appropriated to articulate the concerns of British, U.S.-American, and Brazilian societies. Why and how, it asks, did this architectural style become the preferred language of form to give built expression to social, economic, and political power relations? The essay builds on the scholarship of Dolores Hayden, Di-anne Harris, David Harvey, Henri Lefebvre, and others who suggest that spatial configurations of human habitats are reflections of power relations based on gender, race, class, ethnicity, and other identities. Humans, these scholars suggest, shape the built environment and are shaped by it in return. What role then did New Brutalism play as an ethics and aesthetics of urban renewal and urban reform? What visions of city, community, and democracy did it reflect? How did it transform public space by drawing or redrawing boundaries? How did architects and urban planners—the central actors in this story—apply New Brutalism to shape the built environment in British, U.S.-American, and Brazilian cities? Answering these questions in comparative perspective, divergent understandings of inclusion, agency, and belonging become as apparent as shared definitions of exclusion, privilege, and power.

The Emergence of New Brutalism in Great Britain

Confronted with the realities of urban life in postwar London, the young architects Alison and Peter Smithson began to think about the future of British cities.¹ A decade after the end of World War II, London still bore the scars of wartime damage. Moreover, large parts of the city’s East End were characterized by poor housing and a lack of infrastructure (Marmaras 15-20; Calder 10-11). Dealing with these issues, the couple also critically engaged with modernist concepts of urban renewal. In their eyes, many redevelopment projects in historic areas were too driven by the concerns of business and finance, disregarding the needs of most Londoners. They produced sterile buildings and blocks, not lively neighborhoods where people actually lived, worked, and enjoyed themselves (Boyer 283-87). Collaborating with like-minded colleagues in groups like Team 10, the Smithsons explored alternative forms of architecture and urbanism (Boyer 231-57). As they investigated the material conditions of urban life, they recognized that the destruction brought on by Nazi bombings and the scarcity of material resources were problems that affected not only the inhabitants of central and east London but Britons in cities across the country. They also considered other factors that had an impact on British cities: shifts in economic development, suburbanization, deindustrialization, decolonization and...
the disintegration of the British Empire, and population growth trig-
gerated by immigration from former colonies in the Caribbean, South
Asia, and Africa (Boyer; Crinson; Lichtenstein and Schregenberger; van den Heuvel).

British postwar state planning initiatives such as the New Towns
Act (1946) and the Town and Country Planning Act (1947) served as
the backdrop for the development of the Smithsons’ agenda. These acts
were designed to breathe new life into urban planning and the con-
struction of housing. The New Towns Act provided the legal basis for
the incorporation and construction of planned communities, so-called
new towns. Milton Keynes (1967), a new town about ninety minutes
outside of London, is one of the best-known examples (Harwood 1-45;
Hardy 294-316). The Town and Country Planning Act provided for
the construction of council housing: public housing under local municipal
control (Boughton; Ravetz). The Smithsons were fans of council housing
but disliked the new towns. They deplored the construction of what they
saw as artificial communities just as much as they deplored the commer-
cial redevelopment of downtown residential areas, whose poor residents
with working-class and immigrant backgrounds were often pushed out.
The Smithsons interpreted the relocation of these populations to the
fringes of metropolitan areas as an expression of the ways in which Brit-
ish society marginalized them. Instead, the couple clung to the idea of a
multifunctional city (Lichtenstein and Schregenberger 20).

The Smithsons were interested in creating new solutions with regard
to individual building projects and general urban-planning concepts.
Rather than subscribe to the market-driven planning that was becom-
ing more common in London, they favored a more holistic approach.
They conceived of the built environment as one of the key components
of the human habitat. It was the space in which human beings lived and
interacted. Each of their projects was a study exploring the habitability
of space and architecture for humans as social creatures. For the Smith-
sons, to create spaces worth living in entailed the incorporation of local
context and the use of local resources (Architecture; Urbanism). In 1957,
they wrote in the British monthly Architectural Review:

The situation for the modern architect today is still fundamentally the same,
we are still functionalists and we still accept the responsibility for the com-

munity as a whole, but today the word functional does not merely mean
mechanical as it did thirty years ago. Our functionalism means accepting
the realities of the situation, with all their contradictions and confusions,
and trying to do something with them. In consequence we have to create an
architecture and a town planning which—through built form—can make
meaningful the change, the growth, the flow, ‘the vitality’ of the commu-
nity. (“Cluster City,” qtd. in Banham 72)

“As found” was the term they chose to label their aesthetic. Locally
sourced materials were to go into the construction of buildings, giving
them a particular look and shape (Lichtenstein and Schregenberger).
Moreover, they envisioned each building as growing out of and feeding into the immaterial matrix of local systems of meaning making, thus becoming part of local culture and community. Their notion of community is best expressed in their “doorstep philosophy” (Highmore 79-100). Like Jane Jacobs in *The Death and Life of Great American Cities* (1961), the Smithsons recognized sidewalks as incubators of urban life. On the sidewalks, people communicated, built social networks, and formed collective identities. Instead of dividing the city into the four functions of the modernist city (housing, transportation, work, recreation), they focused on the connective tissue: the spatial bonds between “the house, the street, the district and the city” (Steiner 144, see also 143-47).

Focusing mostly on the construction of school buildings and residential architecture (council housing), the Smithsons translated their inclusive social agenda into built form. Two examples show that their New Brutalism was more than a reference to earlier vernacular building styles and working-class culture. It was an effort to use modern architecture “as a tool for adjusting culture toward greater harmony with its ideals” (Muschamp). This philosophy inspired the couple to tackle their first project and to submit a design for the construction of a school in Hunstanton, a seaside town in Norfolk. Hunstanton Secondary Modern School opened in 1954 to the critical acclaim of local residents and the architectural community (Stalder 129). The school campus included several rectangular-shaped one- and two-story buildings arranged around courtyards and sports facilities. The buildings’ exteriors resembled modern industrial architecture: they featured steel frames, large glass surfaces, and brick walls made from limestone, a local building material. Unfinished brick walls, exposed plumbing and wiring, and industrial-style light fixtures characterized the interiors. The ordinary materials used for its construction squarely framed it in the Smithsons’ “as found”-aesthetic and their functionalist approach to building an infrastructure for education. The building also illustrates that initially, New Brutalist architecture was not about building with exposed concrete, but with materials that were easily available and affordable in a particular location. The Smithsons’ ethics of social inclusion translated into large glass windows and open floor plans in the common areas. The buildings’ features suggested easy access to the school for children from different social backgrounds and provided space for the circulation of ideas. Its innovative contribution to modern architecture, as Laurent Stalder has also argued, lay less in its aesthetics than its new construction techniques, e.g., regarding the welding of the steel frame. More importantly, it translated the Smithsons’ programmatic thinking about human communication and interaction into novel arrangements of buildings and sequences of rooms designed to enable “new patterns of movement” and “new patterns of association” (Smithson et al. 45-46; Stalder 136, see also 132-36).

The housing project Robin Hood Gardens, in contrast, featured exposed concrete as a building material (Figure 1). Like Hunstanton Sec-

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2 Laurent Stalder describes the reactions of architects in Great Britain and the United States in detail. Whereas some, like U.S.-American architect Philip Johnson, were convinced that the Smithsons had kicked off a new movement in architecture, others, like British critic Reyner Banham, recognized the school’s significance as a new type of building only sometime later (129-30).
Not deemed worthy of historic preservation, the first block was demolished in late 2017. Now also slated for demolition, the other will follow soon.

Secondary Modern School, it translated the Smithsons’ holistic agenda and doorstep philosophy into built form. The council estate in East London’s Poplar neighborhood was move-in ready in 1972. It was designed to provide housing in a densely populated traditional working-class neighborhood of dockworkers and their families, which had recently experienced an influx of immigrants from the Caribbean and South Asia (Brennan 433). The project’s mission to provide affordable housing for low-income communities was spelled out in its name: Robin Hood was the early-modern English outlaw and folk hero who, according to legend, took from the rich and gave to the poor. The Smithsons created two building blocks of seven and ten stories with contours that imitated a streetscape. Framed around a park, these blocks and their surrounding landscape were designed to melt into a neighborhood that bore the scars of war damage and the demolition of old structures. The Smithsons used prefabricated concrete parts—the most cost-efficient material—to build Robin Hood Gardens, the exterior of which was shaped by horizontal lines with rows of windows on the one side and access balconies on the other. The apartments ranged in size between two and six bedrooms and included two-level duplexes. They offered housing for working-class families both small and large and included up-to-date amenities like central heating. The access balconies provided residents with a vertical network of walkways, much like sidewalks on the street. The Smithsons hoped these “streets in the air” would facilitate communication among residents of the estate by providing space for casual encounters. The couple also hoped these streets would help residents craft a community on what Nicholas Thoburn calls “the fault-line of class and inequality” (612). Much like the school in Hunstanton, Robin Hood Gardens combined an inclusive social agenda with a functionalist aesthetic in the way its creators used building materials, shaped design, and arranged public space. Initially a bold statement of social change in Britain’s postwar democracy, the project eventually fell into disrepair, reflecting some of the challenges associated with public housing that Patricia Morton and Robert Gioielli discuss in detail in this volume.3
In Great Britain, New Brutalism became popular as an architectural idiom that inscribed economic frugality, social change, and the growing British welfare state into the built environment (Calder 83; Grindrod 5-18). Inspired by the Smithsons, other architects, including Ernő Goldfinger and Denys Ladan, adopted the style, if often in a less radical manner. Through these interpretations, New Brutalism evolved (Clement). It became more commercialized, lost most of its ambitious social agenda, and was eventually reduced to an aesthetic of concrete surfaces and boxy shapes. The Barbican Center in London is a good example—a huge council housing complex, which comprises apartments, a concert hall, an art gallery, and other amenities (Orazi). It was never affordable for working-class Londoners, although it exuded New Brutalist flair. By 1982, the year it opened, the New Brutalist aesthetic had come to define public space across the country. New Brutalist buildings dotted urban landscapes. Cities everywhere had built New Brutalist town halls, libraries, schools, housing, and many other types of buildings. They had done so because, until the early 1980s, planners and architects recognized New Brutalism as an architecture of democracy that powerfully articulated British society’s changing social, political, and economic dynamics.

New Brutalism in the United States

The Smithsons’ work was noticed in the United States almost instantaneously. Louis Kahn and Paul Rudolph served as interlocutors. During the 1950s, they were both prolific architects and held professorships at the Yale School of Architecture. Kahn collaborated with the Smithsons in the context of the Congrès Internationaux d’Architecture Moderne (CIAM); Rudolph engaged with them through professional networks and brought them to Yale in the early 1960s. He would go on to build one of the first New Brutalism-inspired structures in the United States: the Yale Art and Architecture Building, which sat on the university campus and housed the respective departments. It was a sophisticated and ambitious creation made of bush-hammered concrete (Rohan, “Rendering the Surface”). However, it focused mostly on the architecture’s material aesthetic and disregarded its ethical agenda of holistic planning and social inclusion (Rohan, The Architecture 76). The case studies of Boston City Hall and L’Enfant Plaza in Washington, D.C., then again, support my argument that U.S. architects subscribed to the Smithsons’ original agenda before they began to reinterpret it. These architectural landmarks show how New Brutalism was interpreted in the United States—in the context of an expanding consumer society that was not only characterized by social division and political fragmentation but that also began to reach the limits of economic growth in the 1970s.

Boston City Hall, the object of the cabdriver’s displeasure in the opening anecdote, was built between 1963 and 1968 according to the
plans of Kallmann, McKinnell, & Knowles, a firm owned by three Co-
lumbia University architecture professors whose design had won an in-
ternational competition (Pasnik 97–98). The building’s construction has
to be read in the context of postwar U.S. urban history. Like other cities
on the East Coast, Boston had struggled with its lost significance as a
center of trade and industrial production after the end of World War II.
The city was affected by White flight as increasing numbers of its White
middle-class residents moved to the suburbs in the 1950s, reflecting a
national trend. At the same time, low-income communities were con-
centrated in downtown neighborhoods characterized by old buildings
and poor housing (O’Connor; Pasnik, Kubo, and Grimley 20–21). Urban
planners in Boston—and elsewhere—found answers in renewal, hoping
that a “New Boston” would emerge from the processes of transformation
they set into motion. As Lizabeth Cohen’s essay in this volume shows,
their goal was to break up these neighborhoods and redevelop them ac-
cording to modernist ideals of urban development. To make room for
Boston City Hall and the adjacent Government Center (state service
buildings), planners demolished the area around Scolley Square, a vi-
brant and ethnically diverse working-class neighborhood in the colonial
center around the corner from Faneuil Hall, which was also popular as
one of the city’s affordable entertainment districts (Kruh; Ockmann 36).
In its place, City Hall was erected as the center piece of the new public
service district. City officials hoped it would reshape Boston’s image as
a modern and dynamic metropolis. By shifting boundaries and mak-
ing room for public architecture, they also intended to plant a power-
ful symbol of democratic municipal government into the city’s cultural
landscapes.

The building spoke in a loud, New Brutalist language that articu-
lated its aesthetics and ethics (Figure 2). Leading architect Gerhard
Kallmann framed it as a radical reaction against modern architecture (in sync with the Smithsons):  

We distrust and have reacted against an architecture that is absolute, uninvolved and abstract. We have moved towards an architecture that is specific and concrete, involving itself with the social and geographic context, the program, and methods of construction, in order to produce a building that exists strongly and irrevocably, rather than an uncommitted abstract structure that could be any place and, therefore, like modern man—without identity or presence. (qtd. in Heyer 260)  

With its forms, spaces, and layout, the building was designed as a dynamic body that was supposed to melt into the historic fabric of the city. Its creators also tried to give built expression to the relationship between Bostonians and their representatives in the municipal government. City Hall’s ground floor was an open space that gave easy access to the service areas and enabled the circulation of people between the building and the plaza that surrounded it. The plaza featured brick, a traditional building material characteristic of Boston’s colonial architecture. Brick was also used to build the base of City Hall, which otherwise consisted of precast concrete modules. The building thus seemed to grow out of the ground, suggesting that not only was it anchored in old building traditions—the Smithsons’ “as found” aesthetic—but also in the basic principles of democratic self-rule, which Founding Fathers such as Samuel Adams, a Bostonian, had established during the Revolutionary Period. Ideally, City Hall could be read as a symbol of democratic government growing out of an urban citizenry. The building’s second floor was defined by irregular shapes, mostly different-size window frames, which protruded from the façades. On the inside, these areas housed the mayor’s office, the council chamber, and the councilors’ offices—the different bodies of the municipal government, which often competed over the shape of urban politics. Administrative offices were located on the top floors of the building. Their even horizontal organization alluded to their function: to provide services reliably and in a well-organized fashion. Going from bottom to top, then, the building’s features expressed an organizational pattern of different spaces, functions, and hierarchies. They also provided the built framework for ethical government: for the people by the people.  

The early feedback from critics on Boston City Hall was mostly positive. Most recognized what Kallmann, McKinnell, and Knowles had wanted to deliver: a powerful symbol of democratic citizenry and vital municipal polity. In the Washington Post, Wolf von Eckardt recognized it as a building “that proclaims the majesty of government by the people” (Eckardt, “Boston”). The New York Times’s Ada Louise Huxtable alluded not only to the building’s local significance but its more global implications when she described it as “a tough and complex building for a tough and complex age, a structure of dignity, humanism, and power” (51). The Black freedom struggle, the feminist movement, the rise of conserva-
tism, and other domestic complexities come to mind, as do the Vietnam War and the Cold War.

The residents of Boston were less enthusiastic. Many contemporaries did not recognize City Hall as the built expression of transparency, accessibility, and inclusion its architects had wanted to deliver, neither initially nor later on (Ockmann 38-39; Pasnik 101). Rather than as the house of the people, they perceived the concrete mega-structure as a fortress into which Mayor Kevin White and his administration had barricaded themselves. White, who served from 1968 until 1984, was seen by many as a polarizing and corrupt figure. While his administration received credit for the revitalization of Boston’s waterfront and financial district, the desegregation of schools via court-ordered busing of children in Boston was a divisive issue that tore at the city’s social fabric (see, e.g., Crockett; Formisano). Opposing groups in the conflict over racial integration came to see their municipal government as the steward of factional interest, not the common good. Rather than a symbol of inclusion, City Hall became a symbol of exclusion for many, a place where the people’s concerns went unheard. Over time, the way in which Bostonians made sense of the building’s architecture changed. Forms and materials that at least some had interpreted as expressions of humanism and inclusion were later interpreted as articulations of division and partisanship. By the mid-1970s, City Hall’s exposed concrete spoke for a select few to an urban public that was no longer listening (Shand-Tucci 78).

New Brutalism was also an ambitious, holistic urban-planning agenda. My second case study investigates the planning and construction of a project designed to serve as a seed for the commercial redevelopment of an entire neighborhood in Washington, D.C. Planners hoped that L’Enfant Plaza would transform and revitalize a large portion of the southwest quadrant of the city, the area bounded by the National Mall to the north and the Anacostia River to the south. The project was initiated by the National Capital Planning Commission in the 1950s in an effort to change forms of use in that particular section of the national capital. A diverse group of stakeholders—which in addition to the National Capital Planning Commission included Congress, the Commission of Fine Arts, and eventually the mayor—hoped to transform a mostly residential neighborhood, home to a large community of working-class African Americans who had lived there since the Civil War, into a mixed-use area that would combine residential, commercial, public, and leisure uses and help energize Washington’s economy (Zeckendorf; Gutheim and Lee; Gillette).

After years of planning and one rejected proposal after another, a design drafted by Chinese American architect I. M. Pei was accepted. It included a hotel, a shopping mall, several office buildings, a central plaza, and a promenade that connected Independence Avenue, on the south side of the National Mall, to the Anacostia River. After the residents of the neighborhood were removed and rows of townhouses were demolished,
work began in 1965 and L'Enfant Plaza opened its doors to the public in 1968 (Wiseman 59–62). Washington Post architecture critic Wolf von Eckart praised it “as a triumph of good architecture over bad planning.” He liked the urban character of the building ensemble. Its water basin, fountain, rows of trees, and public art gave shape to “modern America’s most beautiful outdoor ‘salon’” (Eckardt, “L’Enfant Plaza”). Eckart also appreciated Pei’s buildings. He recognized the big, boxy structures with overhanging top floors and cantilevered roofs as “a superb work of urban design [...]. We have rarely ventured such excellence in our public architecture.” In the same article, he also identified some of the project’s flaws: its devastating impact on the local community and its failure to produce more liveliness in the area (Eckardt, “Dead-End Glory”).

This essay argues that these criticisms were responding to the ways in which New Brutalism was reinterpreted in the United States. Pei used its aesthetic but disregarded its ethics. His buildings communicated a new agenda. They did not emerge from a holistic planning process. No local materials were used in their construction, nor did they respond to the needs of the local community. Instead, New Brutalist architecture at L’Enfant Plaza was used as part of a strategy to counter the effects of urban structural change and deindustrialization by planting monumental signifiers of urbanity onto the urban canvass. Stephen Fox has written in this context about New Brutalism as a power style, used to make bold statements of urban grandeur at a time when American cities were falling apart (Fox 21–22). L’Enfant Plaza provided space for work, consumption, and leisure, functions that Washington, D.C., was trying hard to salvage as responsibilities of the postindustrial city. The District and cities across the country used New Brutalist architecture to fight structural change that threatened to make them meaningless as diverse and diversified urban environments. The Boston and Washington, D.C., examples show, however, that urban renewal and redevelopment came at a price, paid mostly by working-class Americans and members of minority communities. Few building projects addressed their concerns as members of the public, instead dislocating them (see Gillette; Zipp; Morton in this volume). By the 1970s, then, New Brutalism had become the architecture of the establishment. It had lost its inclusive agenda and become the exclusive architecture of American economic, political, and education elites.

This reinterpretation of New Brutalism took place in the context of the domestic and international crises of the 1970s: the Watergate scandal, the oil crisis, desegregation and affirmative action, hijackings and acts of sabotage in the transportation sector, and America’s ongoing wars, hot and cold (Abrahamson 117). This reinterpretation had two dimensions. Americans began to look at and think of New Brutalist architecture differently. Some had never bought into its inclusive message as users and residents of buildings and public spaces; others were no longer buying it. Moreover, planners, and architects began to use New Brutalism differently, recognizing it as a forceful idiom to articulate state power and
to demonstrate constitutional democracy’s ability to defend itself. Boxy concrete structures like the FBI Building in Washington, D.C., and Dallas City Hall did not invite interaction and dialog; instead, they gave shape to the anxiety and paranoia of the late 1960s and the 1970s. An architecture designed by Peter and Alison Smithson to give expression to democratic ideas of inclusion and participation was thus filled with new meanings in the United States. Here, social, political, and economic elites used New Brutalism to write power and privilege onto urban landscapes in an effort to redraw the boundaries of American democracy. Along the way, exposed concrete gave shape to frustration with the status quo. In Boston, Washington, D.C., and elsewhere, local residents avoided the public areas around New Brutalist structures. After offices and businesses closed, they sat empty. Lack of acceptance turned them into the urban wastelands that contemporary urban planners are still struggling to cope with in their efforts to revitalize American downtowns.

**New Brutalism in Brazil**

The Smithsons’ work also found reception among architects in Brazil. Before the couple appeared on the scene, however, Brazilian architects had been engaging with architectural modernism and its creators for quite some time. They participated in the transatlantic networks of exchange in which people and ideas circulated before and after World War II. Brazilian architects formulated their own critical responses to the tenets of modernism that shaped their approaches to designing the built environment in the postwar period. One of the important figures in debates about architecture in Brazil (and elsewhere in Latin America) was Le Corbusier, whose influence the Smithsons resisted by inventing New Brutalism. Le Corbusier’s ideas, building projects, and professional networks had an impact on modern Brazilian architecture; his aesthetics, in particular, triggered an interest in exploring concrete as a building material suited to the housing and public infrastructure needs of a rapidly growing population and economy. Other interlocutors in negotiating modernism in Brazil included Paul Rudolph and Marcel Breuer (Verde Zein, “Lateinamerika” 179; Brutalist Connections).

Brazilian architects João Vilanova Artigas, Paulo Mendes da Rocha, and Lina Bo Bardi operated in these conceptual and creative frameworks. Beginning in the late 1950s and early 1960s, they began to formulate an ethics and aesthetics of building and planning that was both the product of a dialog with radical European architects like the Smithsons and a homegrown response to Brazilian modernism (Carioca School) (see Medrano; Lepik and Bader; Spiro). São Paulo became its center. Ruth Verde Zein has posited that New Brutalism in Latin America was driven mostly by pragmatism, both in planning and in construction (Verde Zein, “Lateinamerika” 155). This essay argues that it was also inspired by theoretical and philosophical concerns. My case studies in São
Paulo—the Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo and the Museu de Arte—prove that these buildings provided built solutions to very specific local challenges and at the same time reflected aesthetic and ethical agendas. They were among a number of landmark projects realized by Artigas and da Rocha—both members of the Escola Paulista—and Bo Bardi. Each architect developed their design based on a thorough analysis of local social, economic, and political conditions, in much the same way the Smithsons did. Thus, their projects also translated social and political agendas of equality and inclusion into built form and explored new ways of casting concrete into shape in urban environments to produce democratic spaces.

In postwar Brazil, an expanding economy, a growing population, and rapid urbanization provided the context for architectural experimentation. Unlike Britons, Brazilians did not have to deal with war damage and the management of scarce resources in their continued efforts to modernize the country (Linhares et al. 327-38). Instead, wood was cheap and abundant. So was unskilled labor. Cheap wood and cheap labor were good resources for the construction of buildings made of concrete, which Brazilian architects, like their colleagues in Great Britain and the United States, recognized as a cost-efficient material. They enabled architects and builders to pour concrete into shape in situ. Rather than assemble prefabricated parts, which had to be produced elsewhere and then transported, workers built wooden molds and then pumped the building material into these forms, which were removed once the concrete had solidified (Andreoli and Forty 20-25). Artigas realized that what may have seemed like an economic necessity actually allowed him to explore shapes and forms in a completely new way and, ideally, to fit each building project into its environment (built and natural). In 1961, he observed: “The number of buildings that need to be built steadily rises, while at the same time the number of skilled workers continues to fall. Architects must therefore find expressive forms that can be executed with mostly unskilled labor but fairly good tools. Reinforced concrete is our material of choice. We have to use its tremendous advantages to build buildings that grow from these conditions and are aesthetically pleasing precisely therefore” (241; trans. Ortlepp). This sounds similar to the Smithsons’ “as found”-aesthetics.

In Brazil—and across Latin America—New Brutalist buildings built with concrete began to dot urban landscapes. During the 1960s and the 1970s, the style became one of the dominant architectural idioms, mostly competing against the more conventional Brazilian Modernism of the Carioca School, typified by Oscar Niemeyer. It was used for private residential buildings. Moreover, it became popular as a public architecture and gave shape to structures on university campuses, public museums, recreational facilities, and government buildings (Bergdoll 16-19; Verde Zein, “Brazil”124-53). In the Brazilian context, which is by no means exceptional, public building projects were often designed to
function as built expressions of modernization. Public architecture thus carried symbolic significance. New forms and new experiments served to articulate ideas about architecture and citizenry—urban or national—as Barry Bergdoll has pointed out (22). They also served as a way of dealing critically with the political and social status quo. In Brazil, New Brutalism thus became an answer to dictatorship. After years of democratic rule, the country fell under military dictatorship in 1964, from which it did not emerge until 1985. Architects like Artigas and Bo Bardi used New Brutalist architecture as a form of resistance against political oppression and the social paternalism of the country’s ruling elites. An analysis of the design of the Faculdade de Arquitetura e Urbanismo da Universidade de São Paulo (FAU) and the Museu de Arte São Paulo underscores this point.

The School of Architecture and Urban Planning at the University of São Paulo (USP) was built between 1961 and 1969 according to plans by Artigas, one of the founders of the Escola Paulista. A USP graduate, he was on the faculty of USP’s Polytechnical School and was involved in the school’s reorganization as FAU in 1948. In 1961, USP hired him to create a design for the school’s building. In addition to architecture and art, Artigas was also interested in politics. As a sympathizer of Brazil’s Communist Party, his political activism included the publication of a number of articles and public lectures, which led to his political persecution by the military regime. Although he continued to experience intense scrutiny until his death in 1985, he was able to resume his work as an architect, which enabled him to complete the FAU project (Verde Zein, “FAU-USP” 165; Buzzar 21-80).

The FAU building was a six-story, rectangular structure. It consisted of a core building made of steel frames, concrete, and glass. Protecting the top three floors of the core building from above was a concrete casing that sat on twelve poles. The rather massive and hermetic appearance of the casing, which was assembled from precast concrete panels, contrasted with the light and transparent features of the core building. The mixed messages of transparency and impenetrability sent by the exterior gave way to openness and flow in the interior. A large open atrium sat at the center of the building, around which Artigas arranged the studios and work areas. Ramps connected the floors along the borders of the atrium. Rather than stairs that suggested hierarchy, these ramps were an easy transition between floors that blurred levels and encouraged movement. The building was held up by a system of pillars, which were cast from concrete like the floors, most of the walls (some were glass), and the ceiling. Whereas the raw finish of the interior surfaces provided the building’s industrial and edgy appeal, its ceiling design added a level of sophistication. Evoking medieval and early modern examples, Artigas created a coffered ceiling—an arrangement of large pyramidal shapes with integrated light fixtures that illuminated the atrium and the adjacent areas.
With its layout and design features, the building provided space for the movement of people, the exchange of ideas, and the circulation of designs. It thus translated into strong, expressive built form aspects of FAU’s new curriculum, a mix of theoretical instruction and studio practice inspired by interdisciplinarity (Verde Zein, “FAU-USP” 167). Its forms and shapes were also a strong aesthetic statement that planted New Brutalism and its agenda of working with easily available resources into São Paulo’s cultural landscapes, and its higher education landscape in particular. Moreover, the structure loudly communicated its socio-political agenda, an ethics of civic engagement and political resistance (Fischer 107-08). Artigas created a space for learning that was protected from outside intrusion by a strong shell. It was designed to provide a safe space for those who studied at a public university. Here, ideas and ideals could circulate in ways they no longer could in the public arena outside. In that sense, FAU symbolized a vision of a democratic community, a fragment of an ideal city (see Bergdoll 23-27). Only later would it become a socially inclusive space where members of Brazil’s large communities of Color had access to architecture and urban-planning degrees. The particular qualities of concrete allowed Artigas to build a public building that consisted of open spaces and room to grow. His act of claiming urban space and shaping it creatively for use by São Paulo’s students, the next generation of Brazilian citizens, can be read as an act of resistance against an oppressive political regime.

The Museu de Arte São Paulo (MASP) can be read in similar ways. The museum was built between 1956 and 1968. It was designed by Lina Bo Bardi, a Brazilian with Italian roots and—one like Alison Smithson—one of the few women in the field of architecture at the time. In her work, Bo Bardi was interested in exploring architecture’s potential as an agent of social and cultural change—an interest she had begun to pursue in Italy and fully developed in postwar Brazil. She coined the term “arquitetura pobre” for an architecture that made modernist interventions into the built environment and gave expression to Brazil’s complex multicultural heritage (Lepik and Bader 19-23). She was not a member of the Paulista School, although she shared some of its political and social concerns of inclusiveness. Her buildings, however, left a distinct mark on São Paulo and helped establish it as the center of New Brutalist architecture in the country and the hemisphere (Lepik and Bader; Veikos).

The first issue to raise eyebrows was Bo Bardi’s choice of location. She did not want the museum to stay in the historic downtown, where it had been temporarily housed at the headquarters of the media company Diários Associados since its founding in 1947. Instead, Bo Bardi opted for a site in the Bela Vista neighborhood, an upscale area inhabited by São Paulo’s wealthy since the end of the nineteenth century. She planned to make her architectural intervention on Avenida Paulista, the neighborhood’s main traffic artery, where the elaborate mansions of coffee barons and industrialists dominated the streetscape. She proposed to build the museum on a plot where the Belvedere Trianon had been...
located before it was demolished in 1957—a popular overlook adjacent to Parque Trianon (Parque Tenente Siqueira Campos), which housed a restaurant and afforded great views of the city. Bo Bardi was determined to bring a public space for the display and consumption of modern art to a part of the city that was shaped by private wealth and privilege, which had mostly found built expression in neoclassical architecture. After she won the approval of a reluctant city planning commission, the construction of MASP dragged on for years before it finally opened its doors to the public in 1968 (Fischer 104-05). During those years, other plots around the museum site were redeveloped, and the area eventually became São Paulo’s financial district.

The museum consisted of two buildings (Figure 3). One was an unobtrusive edifice with room for offices and storage that disappeared into the hilly site and was not visible from Avenida Paulista. The other was the museum gallery on the Belvedere Plaza. Bo Bardi created a massive rectangular structure that hung from two arched support beams instead of sitting on the ground. This design allowed her to give shape to two spaces. She developed the new gallery where exhibits would go on display, but she also preserved the open area below the gallery. Visitors to the museum and those passing along Avenida Paulista could thus continue to enjoy the views of São Paulo the site afforded. Aesthetically, MASP shared the characteristics of the New Brutalist buildings discussed so far. It featured steel frames, large glass window panes, and concrete. The latter, in particular, articulated the building’s situatedness in a radical architectural discourse (see also Hall). According to Sabine von Fischer, the use of raw concrete also articulated MASP’s ethics, its social and political agenda. She draws attention to the straightforwardness and immediacy
of concrete. There was no finish, no decoration. The material stood in stark contrast to its surroundings; it served to give built expression to the notion of openness and the idea of the public (Fischer 106-07, 110).

The design may not have been ideal for an art gallery—curators like to protect works of art from natural light, not expose them to it, as the large glass windows did—but it effectively communicated its message of openness, accessibility, and transparency. It was an open space, both on the plaza and above it, that was owned and eagerly accepted by the public. Its New Brutalist aesthetics and ethics thus stood in contrast to the politics of secrecy, favoritism, oppression, and persecution of Brazil’s military dictators. Fischer also points to the continuing significance of the museum plaza as a public space. It continues to be used, she writes, “variably as open space in the city or as a public stage; as a personal or collective space” (109; trans. Ortlepp). Bo Bardi, no doubt, would approve. For Bardi, architecture was political, but it was also a way to negotiate the past, the present, and the future. Reflecting back on her professional life in a lecture she delivered in 1989, she defined architecture as “collective and sociopolitical art in the service of society” (qtd. in Fischer 106).

Conclusion

In the postwar period, New Brutalism became popular in Great Britain, the United States, and Brazil as an architectural idiom and urban-planning agenda that gave built expression to changing ideas of democracy, society, and community. Through the early 1980s, it put its stamp on British, American, and Brazilian cities and urban landscapes as an aesthetic and ethics of planning and habitability. It did so in spite of different social, economic, and political national frameworks, albeit in a shared global context. In the United States, New Brutalism became a strong symbol of resistance to urban crises and structural change. In Great Britain, the style inscribed ideas about the postwar welfare state into the built environment. In Brazil, architects used New Brutalism to create democratic spaces and resist the pressures of authoritarian rule. New Brutalist buildings symbolized hope and aspiration. They also came to symbolize fear and paranoia. In both the Americas and in Great Britain, studying the style helps us understand how the planning and construction of the built environment was intertwined with processes of social, cultural, and political formation. Built artifacts like Robin Hood Garden in London, City Hall in Boston, and the School of Architecture and Urban Planning in São Paulo not only reflect social, political, and cultural realities, but helped to construct them. At times, boundaries disappeared along the way. At other times, they were redrawn. Throughout, however, tracing the history of New Brutalism in Great Britain, the United States, and Brazil allows us to understand how historical actors like architects and urban planners struggled politically, economically, and socially to find an aesthetics and ethics that expressed their understanding of democracy in the postwar period.
Works Cited

Abrahamson, Michael. “Nordamerika.” SOS Brutalism: A Global Survey. Ed. Oliver Elser, Philip Kurz, and Peter Cachola Schmal. Zürich: Park, 2017. 116-21. Print.

Andreoli, Elisabetta, and Adrian Forty. Brazil’s Modern Architecture. London: Phaidon, 2005. Print.

Artigas, João Batista Vilanova. “Ginásio De Itanhaém.” Acrópole 271 (1961): 241-43. Print.

Banham, Reyner. The New Brutalism: Ethic or Aesthetic? London: Architectural Press, 1966. Print.

Bergdoll, Barry. “Learning from Latin America: Public Space, Housing, and Landscape.” Latin American in Construction: Architecture 1955-1980. Ed. Barry Bergdoll et al. New York: Museum of Modern Art, 2015. 16-39. Print.

Boughton, John. Municipal Dreams: The Rise and Fall of Council Housing. London: Verso, 2018. Print.

Boyer, M. Christine. Not Quite Architecture: Writing around Alison and Peter Smithson. Cambridge, MA: MIT Press, 2017. Print.

Brennan, Jessie. “Robin Hood Gardens, London.” SOS Brutalism: A Global Survey. Ed. Oliver Elser, Philip Kurz, and Peter Cachola Schmal. Zürich: Park, 2017. 432-35. Print.

Buzzar, Miguel A. João Batista Vilanova Artigas: Elementos Para a Compreensão de Um Caminho da Arquitetura Brasileira, 1938-1967. São Paulo: Editora Senac, 2011. Print.

Calder, Barnabas. Raw Concrete: The Beauty of Brutalism. London: William Heinemann, 2016. Print.

Clement, Alexander. Brutalism: Post-War British Architecture. Wiltshire: Crowood, 2011. Print.

Crinson, Mark. Alison and Peter Smithson. Liverpool: Historic England, 2018. Print.

Crockett, Karilyn. People before Highways: Boston Activists, Urban Planners, and a New Movement for City Making. Amherst: U of Massachusetts P, 2018. Print.

Eckardt, Wolf von. “Boston Builds Challenge to Dulles Terminal.” Washington Post 2 Apr. 1967, D1. Print.

---. “In All Its Dead-End Glory.” Washington Post 5 May 1973, C1. Print.

---. “L’Enfant Plaza Is a Triumph.” Washington Post 9 June 1968, D1. Print.

Elser, Oliver, Philip Kurz, and Peter Cachola Schmal, eds. SOS Brutalism: A Global Survey. Zürich: Park, 2017. Print.

Fischer, Sabine von. “Lina Bo Bardi’s Horizonte – das Museu de Arte de São Paulo im Spiegel europäischer Architekturkonzepte der Nachkriegszeit.” Lina Bo Bardi 100: Brazil’s Alternative Path to Modernism. Ed. Andres Lepik and Vera Simone Bader. Berlin: Hatje Cantz, 2015. 100-17. Print.

Formisano, Ronald P. Boston against Bussing: Class, Race, and Ethnicity in the 1960s and 1970s. Chapel Hill: U of North Carolina P, 2004. Print.

Fox, Stephen. “The New Brutalism: The Houston Interpretation.” Cite 40: The Architecture and Design Review of Houston (1997-1998): 18-23.

Gillette, Howard. Between Justice and Beauty: Race, Planning, and the Failure of Urban Policy in Washington, D.C. Baltimore, MD: Johns Hopkins UP, 1995. Print.

Goldhagen, Sarah W. Louis Kahn’s Situated Modernism. New Haven, CT: Yale UP, 2001. Print.

Grindrod, John. Concretopia: A Journey around the Rebuilding of Postwar Britain. Brecon: Old St., 2013. Print.

Gutheim, Frederick, and Antoinette J. Lee. Worthy of the Nation: Washington, D.C., from L’Enfant to the National Capital Planning Commission. 1977. Baltimore, MD: Johns Hopkins UP, 2006. Print.
Hall, Jane. *Breaking Ground: Architecture by Women*. London: Phaidon 2019. Print.

Hardy, Dennis. *From Garden Cities to New Towns: Campaigning for Town and Country Planning 1899-1946*. Abingdon: Taylor & Francis, 1991. Print.

Harris, Dianne. “Race, Space, and the Destabilization of Practice.” *Landscape Journal* 26 (2007): 1-9. Print.

Harvey, David. *The Condition of Postmodernity: An Enquiry into the Origins of Cultural Change*. Oxford: Blackwell, 1989. Print.

Harwood, Elain. *Space, Hope, and Brutalism: English Architecture, 1945-1975*. New Haven, CT: Yale UP, 2015. Print.

Hayden, Dolores. *The Power of Place: Urban Landscapes as Public History*. Cambridge, MA: MIT Press, 1997. Print.

Heuvel, Dirk van den. “Brutalismus pur: Zwei Ansätze. Die Smithsons und Banham.” *Brutalismus: Beiträge des internationalen Symposiums in Berlin 2012*. Ed. Dorothea Deschermeier, Wüstenrot Stiftung. Zürich: Park, 2017. 30-37. Print.

Heyer, Paul. *Architects on Architecture: New Directions in America*. New York: Walker, 1966. Print.

Highmore, Ben. “‘Streets in the Air.’ *Neo-Avant-Garde and Postmodern: Postwar Architecture in Britain and Beyond*. Ed. Clare Zimmerman and Mark Crinson. New Haven, CT: Yale UP. 79-100. Print.

Huxtable, Ada Loise. *On Architecture: Collected Reflections on a Century of Change*. New York: Walker, 2008. Print.

Jacobs, Jane. *The Death and Life of Great American Cities*. New York: Random House, 1961. Print.

Klotz, Heinrich. *The History of Postmodern Architecture*. Cambridge, MA: MIT Press, 1988. Print.

Kruh, David. *Scolley Square*. Mount Pleasant, SC: Arcadia, 2004. Print.

Kruh, David. *Scolley Square*. Mount Pleasant, SC: Arcadia, 2004. Print.

Lefebvre, Henri. *The Production of Space*. Oxford: Blackwell, 1991. Print.

Lepik, Andres, and Vera Simone Bader, eds. *Lina Bo Bardi 100: Brazil’s Alternative Path to Modernism*. Berlin: Hatje Cantz, 2015. Print.

Lichtenstein, Claude, and Thomas Schregenberger. *As Found: The Discovery of the Ordinary*. Baden: Lars Müller, 2001. Print.

Linhares, Maria Yedda, et al. *História Geral do Brasil*. Rio de Janeiro: Editora Campus, 2000. Print.

Marmaras, Emmanuel V. *Planning London for the Post-War Era 1945-1965*. Heidelberg: Springer, 2015. Print.

Medrano, Leandro. *Vilanova Artigas: Habitação e Cidade na Modernização Brasileira*. Campinas: Editora Unicamp, 2013. Print.

Mumford, Eric. *The CIAM Discourse on Urbanism, 1928-1960*. Cambridge, MA: MIT Press, 2000. Print.

Muschamp, Herbert. “An Architect Who Rethought the Modern City.” *New York Times* 7 Nov. 1993, sec. 2:38+. Print.

New Towns Act 1946, c. 68. Web. 15 Aug. 2019. https://www.legislation.gov.uk/ukpga/1946/68/contents/enacted.

Ockmann, Joan. “The School of Brutalism: From Great Britain to Boston (and Beyond).” *Heroic: Concrete Architecture and the New Boston*. Ed. Mark Pasnik, Michael Kubo, and Chris Grimley. New York: Monacelli, 2015. 30-47. Print.

O’Connor, Thomas H. *Building a New Boston: Politics and Urban Renewal 1950-1970*. Boston, MA: Northeastern UP, 1993. Print.

Orazi, Steffi. *The Barbican Estate*. London: Batsford, 2018. Print.

Pasnik, Mark. “Kallmann, McKinnell and Knowles: Boston City Hall.” *Heroic: Concrete Architecture and the New Boston*. Ed. Mark Pasnik, Michael Kubo, and Chris Grimley. New York: Monacelli, 2015. 94-105. Print.
Pasnik, Mark, Michael Kubo, and Chris Grimley. "Becoming Heroic." *Heroic: Concrete Architecture and the New Boston*. Ed. Mark Pasnik, Michael Kubo, and Chris Grimley. New York: Monacelli, 2015. 14-29. Print.
Ravetz, Alison. *Council Housing and Culture: The History of a Social Experiment*. London: Routledge, 2001. Print.
Rohan, Timothy M. *The Architecture of Paul Rudolph*. New Haven, CT: Yale UP, 2014. Print.
---. "Rendering the Surface: Paul Rudolph’s Art and Architecture Building at Yale." *Grey Room* 1 (2000): 84-107.
Shand-Tucci, Douglass. “Boston Granite, Heroic Concrete: A Speaking Aristocracy in the Face of a Listening Democracy.” *Heroic: Concrete Architecture and the New Boston*. Ed. Mark Pasnik, Michael Kubo, and Chris Grimley. New York: Monacelli, 2015. 78-91. Print.
Smithson, Alison, and Peter Smithson. *The Charged Void: Architecture*. Köln: Walther Köln, 2001. Print.
---. *The Charged Void: Urbanism*. Köln: Walther Köln, 2005. Print.
---. "Cluster City: A New Shape for the Community." *Architectural Review* 122 (1957): 333-36. Print.
Smithson, Alison, et al. "Conversation on Brutalism." *Zodiac* 4 (1959): 73-81. Rpt. in *October* 136 (2011): 38-46. Print.
Spiro, Annette. *Paulo Mendes da Rocha: Bauten und Projekte / Works and Projects*. Salenstein: Niggli, 2007. Print.
Stalder, Laurent. “Vor dem Brutalismus: Die Schule in Hunstanton von Alison und Peter Smithson.” *Brutalismus: Beiträge des internationalen Symposiums in Berlin* 2012. Ed. Dorothea Deschermeier, Wüstenrot Stiftung, Zürich: Park, 2017. 129-36. Print.
Steiner, Hadas. “Life at the Threshold.” *October* 136 (2011): 133-55. Print.
Thoburn, Nicholas. “Concrete and Council Housing: The Class Architecture of Brutalism ‘as found’ at Robin Hood Gardens.” *City* 22.5-6 (2018): 612-32. Print.
*Town and Country Planning Act 1947*, c. 51. Web. 15. Aug. 2019. http://www. legislation.gov.uk/ukpga/1947/51/contents/enacted.
Twombly, Robert, ed. *Louis Kahn: Essential Texts*. New York: Norton, 2003. Print.
Veikos, Cathrine. *Lina Bo Bardi: The Theory of Architectural Practice*. London: Routledge, 2014. Print.
Verde Zein, Ruth. “A Arquitetura da Escola Paulista Brutalista 1953-1973.” Diss. Universidade Federal do Rio Grande do Sul, 2001. Print.
---. “Brazil.” *Latin American in Construction: Architecture 1955-1980*. Ed. Barry Bergdoll et al. New York: Museum of Modern Art, 2015. 124-53. Print.
---. *Brutalist Connections: A Refreshed Approach to Debates & Buildings*. Lanham, MD: Altamira, 2000. Print.
---. “Fakultät für Architektur und Städtebau, Universität São Paulo (FAU-USP)." *SOS Brutalism: A Global Survey*. Ed. Oliver Elser, Philip Kurz, and Peter Cachola Schmal. Zürich: Park, 2017. 164-67. Print.
---. “Lateinamerika." *SOS Brutalism: A Global Survey*. Ed. Oliver Elser, Philip Kurz, and Peter Cachola Schmal. Zürich: Park, 2017. 152-57. Print.
Wiseman, Carter. *I. M. Pei: A Profile in American Architecture*. New York: H. N. Abrams, 1990. Print.
Zeckendorf, William, Jr. *Developing: My Life*. New York: Andrea Monfried, 2016. Print.
Zipp, Samuel. *Manhattan Projects: The Rise and Fall of Urban Renewal in Cold War New York*. New York: Oxford UP, 2010. Print.