Modern Again: Tradition and Modernity in the Pedregulho Housing Complex in Rio de Janeiro

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This essay traces the history of the Pedregulho Housing Complex in Rio de Janeiro, Brazil, from its design and construction through the ongoing challenge of its preservation. Designed in 1948 by the city's Department of Popular Housing, Pedregulho became a cornerstone work of modern Latin American architecture. Hailed by historians, the winner of several awards, and featured in countless specialized journals around the world, a major portion of it was finally restored in 2015. As this article will show, the renovation work has given new impetus to interpretations of tradition in modern Brazilian architecture, both stretching its meaning and reiterating some of its most significant elements.

The Pedregulho Housing Complex in Rio de Janeiro is one of the most recognizable and most published works of modern Brazilian architecture. Conceived in 1946, it was built between 1948 and 1960 by the city's Departamento de Habitação Popular [Department of Popular Housing, or DHP], under the direction of the feminist Carmen Portinho and the architect Affonso Eduardo Reidy. Comprising 522 units and offering a range of amenities and community services, the Pedregulho complex was originally intended to house low-wage city employees. It was further conceived as part of a larger social housing plan for the city developed by the DHP, with the aim of addressing the growing and alarming problem of housing in the then capital of Brazil (**FIG.1**).

Since its construction, the history of Pedregulho has featured both government neglect and expressions of great affection toward it by residents. At the same time, the project has continued to be celebrated by architects from Brazil and around the world, who have praised it and the story of Portinho and Reidy, partners both in life and in urban projects.[1] In the 2000s a new chapter to this story was added as part of a process of heritage-making. And the heritage status of the Pedregulho complex was confirmed in 2010 when

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renovation work began on its iconic Block A. Following a strong preservationist campaign, the restoration marked the first such effort directed at a public housing project in Latin America.

This article will discuss the history of the Pedregulho complex — through its design, construction and restoration — as an example of the tensions between social housing policies, the history and social sensibility of modern Brazilian architecture, and the challenge of memory-construction inherent to heritage preservation. At the center of the debate is the special place that the housing complex holds in the history of Brazilian architecture as one of the most eloquent examples of the relationship between tradition and modernity.

PEDREGULHO'S PLACE IN MODERN BRAZILIAN ARCHITECTURE: BETWEEN TRADITION AND MODERNITY

When the Department of Popular Housing was created in 1946, the narratives of modern Brazilian architecture were already well established. This work had received widespread recognition and promotion in 1943 through an exhibition at the Museum of Modern Art in New York (MoMa) and a related book entitled *Brazil Builds*, which solidified a particular interpretation of the relationship it embodied between tradition and modernity. Carlos Martins has described how this relationship would become a recurrent theme in Brazilian historiography, and how such a linkage reflected the need for ideological affirmation of the federal apparatus under the Getúlio Vargas dictatorship. According to this view, the building that housed the Ministry of Education and Public Health in Rio de Janeiro — currently known as the Capanema Palace — was a miracle of the new architecture, and the architect Oscar Niemeyer was its most iconic protagonist. For a long time, however, this view obliterated the rest of the vast Brazilian pro-

duction associated with modernist ideas. And, in particular, a key theme for modernists, social housing, was mostly ignored, as were other topics such as the building of schools.[2]

The architect Lucio Costa was a key figure in what Martins has referred to as the "narrative plot" of Brazilian architecture. Costa's texts "Razões da nova arquitetura" ["Reasons for the New Architecture"] (1935) and "Depoimento de um arquiteto carioca" ["Testimonial from a Carioca Architect"] (1948) wove the canonical version of Brazilian architectural history. This was corroborated and confirmed by Philip Goodwin in *Brazil Builds* (1942), Henrique Mindlin in *Arquitetura moderna no Brasil* [*Modern Architecture in Brazil*] (1956), and Yves Bruand in *Arquitetura contemporânea no Brasil* [*Contemporary Architecture in Brazil*] (1979).[3] As a story, it highlighted the innovations of Brazilian architecture in relation to their surroundings, such as through the use of sun screens and ventilating devices (*brises soleils* and *cobogós*). And it emphasized the fundamental role of colonial architecture, while overlooking the entire architectural output of the nineteenth century. Instead, the events associated with the 1936 contest for the design of the Ministry of Education and Public Health (Ministério da Educação e Saúde Pública, or MESP) and the visit by Le Corbusier to Brazil in 1929 were interpreted as crucial. This view was reinforced by the primacy accorded to architects from Rio as opposed to the minor role played by their colleagues from São Paulo — and, above all, by the prominence attributed to Niemeyer.

Debates about the relationship between tradition and modernity in Brazilian architecture were not new in the 1930s. Since the beginning of the century, intellectuals had been looking for the roots of a "national architecture," and this would eventually be traced back to the Portuguese colonization period (sixteenth to eighteenth century). Reemphasizing the colonial past provided sustainability and legitimacy to traditionalist architectural expressions; and, brimming with nationalist values, the subsequent neocolonial movement at-

tempted to create a national tradition based on a reinterpretation of colonial forms and expressions.[4] Making a clear break with what were referred to as retrospective styles, modern Brazilian architecture thus established a claim to national importance without breaking with the notion that legitimacy is achieved through the past. A rediscovery of the past, as Eric Hobsbawm and Terrence Ranger have shown, is a crucial element in the fabrication of national identity.[5]

From the 1930s onward, a series of so-called discoveries of Brazil were thus made possible by modernist intellectuals — authors, artists, historians and others — who played a prominent role in the new Ministry of Education and Public Health. These individuals looked for folklore, authentic expressions, works of art, historical monuments, and cultural manifestations that were capable of capturing the character of the "Brazilian people." The new ministry headquarters, MESP, considered to be the cornerstone of the new modern architecture, also emerged as a symbol of national modernity.

The historiography of the Pedregulho Housing Complex and the story of its restoration are inseparable from such interpretations of the relationship between tradition and modernity in Brazilian architecture. In practice, tradition became a key element of the country's modern architectural identity through a reinterpretation of colonial architecture and by inspiring solutions to technical issues in tropical architecture using such elements as *cobogós* and *brises soleils*. The forms were obviously the most tangible results of the singular interpretation of Brazilian tradition. But so-called colonial architecture also served the purpose of providing historical roots, giving substance and meaning to a modern view of the future. As Nezar

AlSayyad has put it, modernity and tradition are born together and remain bound together dialectically, as different facets of the same modernization process.[6] In the Brazilian case, the gesture of turning toward the past — whether to reinterpret elements aimed at containing nature or to rediscover colonial architectural precedents — was often referred to as a unique, singular action in the context of the Modern Movement.

The Pedregulho Housing Complex was, and perhaps continues to be, a nearly "ideal" architectural representation of these narratives. Its formal plasticity appears rooted in the solutions to environmental challenges, as exemplified by the construction of the meandering Block A, with its *cobogós* and *brises soleils* of various different shapes. Meanwhile, all these elements serve an unquestionably important social function (**FIGS. 2, 3**).

Yet, apart from the focus on the Pedregulho complex, more than 400 estates were built across the country under the housing programs of the Retirements and Pensions Institutes (as organized by various groups of workers). And the vast majority of these have not been studied until recently. As highlighted by Nabil Bonduki and Ana Paula Koury, this has effectively excluded them from the logic of national architectural modernity.[7] Meanwhile, Pedregulho has continued to be a singular subject of attention and discussion, ever since it first gained a reputation for excellence and exceptionality in trade magazines from Brazil and abroad in the 1950s. As a representation of new housing themes in postwar reconstruction, it was described in articles in *Architectural Forum* (1947), *Domus* (1948, 1951), *L'Architecture d'Aujourd'hui* (1949, 1954), *Architectural Record* (1950, 1952, 1958), *Architectural Review*

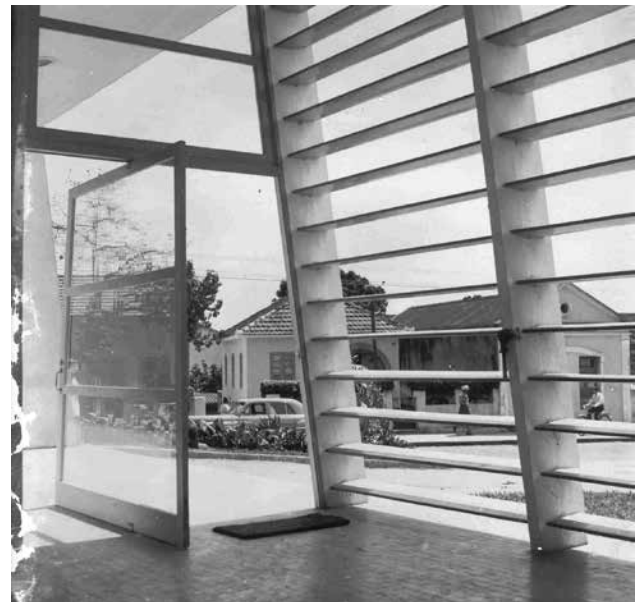**FIGURE 2.** Cobogó *panel in the school building, c. 1950. Source: Centro de Documentação Syvio de Vasconcellos, UFMG.*

FIGURE 3. *Interior view of the market building at Pedregulho showing the circulation system and the* brise soleil, *c. 1950s. Source: Carmen Portinho's private collection.*

(1950, 1952, 1954), *Tecniques et Architecture* (1951), *El Emara &
Fonoun* (1952), *Werk* (1953), *Progressive Arquitecture* (1955), *Ar-
chitect & Buildings News* (1956), *Arquitetura México* (1957/1958),
Aujourd'hui, Art et Architecture (1955), and *Zodiac* (1960).[8]

International criticism of excessive formalism in hous-
ing and of a commensurate lack of social commitment, which
had first appeared in the 1940s, would confirm Pedregulho's
exceptional place within Brazilian housing construction.
The Swiss designer Max Bill kick-started this narrative in a
special feature entitled "Report on Brazil," published by *The
Architectural Review*, after Pedregulho was presented an award
at the First São Paulo Biennial, in 1951. Bill was categorical:
". . . architecture in your country stands in danger of falling
into a parlous state of anti-social academicism." As he then
pronounced, ". . . architecture is a social art. It should serve
man." Yet, despite his many criticisms, Bill noted the follow-
ing: ". . . the famous Pedregulho development in Rio . . . [is]
a work as completely successful from the standpoint of town
planning as it is architecturally and socially."[9] In the same
Architectural Review feature, *Casabella* editor Ernesto Rogers
also attacked Brazilian architecture. Oscar Niemeyer's Casa
das Canoas, for example, was deemed too formalist; but Reidy
and Pedregulho were said to represent a growing maturity,
linked to the country's natural and cultural traditions.[10]

The reference to a "Brazilian tradition" echoed the view
that one of the hallmarks of modern Brazilian architecture
was the formal creation and use of elements in dialogue with
their surroundings.[11] And, little by little, the complex came to
be understood (or, actually, misunderstood[12]) as an honorable
exception to a history of large public-works projects commis-
sioned by a government that (supposedly) had not dedicated
much effort to building public housing. Meanwhile, the un-
deniably urban phenomenon of the spread of slums (*favelas*)
in the 1940s turned them into the subject of a vast academic
literature. Produced by the fields of sociology, geography and
political science, this largely muted references to the Depart-
ment of Popular Housing within the history of Brazilian
housing policies.[13] One could easily come to the misunder-
standing that the Brazilian modernist movement was neither
hegemonic nor capable of balancing the different voices dis-
cussing solutions for the housing crisis.

In fact, the creation of the DHP by Rio de Janeiro's City
Hall in 1946 brought the promise of more effective measures
to deal with the popular housing issue in the city. For one,
it had the clear purpose of providing homes to "low-income
social groups," which initially included city employees who
lived in dismal conditions across several neighborhoods.[14] In
its first year the DHP was focused primarily on licensing and
supervising the construction of informal popular dwellings.
But its founding decree also explicitly stated that one of its
other main functions was to build collective housing, known
as "residential groups." Formerly, under the Departamento
de Construções Proletárias [Department of Proletarian Build-
ings], which had preceded the DHP, the main purpose of the

FIGURE 4. *Carmen Portinho, c. 1950s. Source: Carmen Portinho's
private collection.*

city's housing policy had been limited to the free concession
of licenses to build single-family homes.

Following DHP's creation, however, the urbanist and
engineer Carmen Portinho was named head of its Social Ser-
vices Section, and she would go on to become the biggest ad-
vocate for collective housing projects.[15] An activist in Brazil's
feminist movement, Portinho had graduated as a civil engi-
neer in 1926 from the former Universidade do Brasil, and had
begun her work as an urbanist in 1939. Along with her com-
panion, the architect Affonso Eduardo Reidy, in the 1940s she
had approached the Modern Movement and the concepts of
social housing with growing interest. And in 1944 she ap-
plied for a scholarship offered by the British government to
study the postwar reconstruction effort. After six months in
England, Portinho then returned to Brazil and became deeply
involved with the theme of housing projects (**FIG.4**).[16]

At the time, the housing crisis and the spread of the
slums were the subject of much public debate and attention
in Rio de Janeiro from City Hall, the media, and intellectuals.
Yet, for several reasons, the group of architects and urban
planners from the DHP also found space to implement their
ideas for modern architecture and urbanism, as well as social
housing. Carmen Portinho's activism was a key factor in
making that possible.

Upon returning from Europe, Portinho published a
series of articles entitled "Habitação popular" ["Popular
Housing"] in the newspaper *Correio da Manhã*, advocating in
favor of organizing and carrying out a plan for building low-
income housing.[17] In them she argued that a comprehensive
approach to the housing issue was required, and that hous-
ing, transportation, work and leisure should be viewed as in-
terdependent and inseparable functions. In the third article
of the *Correio da Manhã* series, the key expression was "hous-
ing unit." Located near where people work, this new form of
residence would also be sited within a short distance of social

services, medical facilities, and schools. The detached home was thus discarded as an ideal living space; not only was it more expensive, but it led to individualistic behavior. Collective housing, on the other hand, stimulated life in society and allowed for large open areas to be set aside for sports activities. To exemplify the housing model to which she referred, Portinho summarized the contents of a book entitled *Modern Housing*, by Catherine Bauer (1934), which provided minimum standards for collective housing.[18]

The DHP's housing models also included proposals submitted by other departments involved with the housing issue (such as the Pensions and Retirements Institutes). Broadly speaking, these aligned with the ideals of modern town planning and the International Congresses of Modern Architecture (CIAM).[19] Such proposals were typically based on "neighborhood units" that would provide a mix of homes and services to meet the basic needs of residents. Residents would thus be able to run daily errands such as shopping, washing clothes, and going to the doctor within a short distance of their homes (**FIG.5**). Ideally, each neighborhood would also be sized to accommodate its local population.

The DHP team's plan presented an ideal concept for a modern city, which was only partially implemented in four housing complexes in Rio de Janeiro, since none of them were fully completed. The four projects were Pedregulho, Paquetá (the smallest of the four, located on an island in the Guanabara Bay), Vila Isabel (on the site of the former zoo), and Marquês de São Vicente (in the city's most affluent area, the South Zone, where a provisional proletarian park had already been built) (**FIGS.6,7**).

All four projects displayed a clear concern for their surroundings (respecting the specific characteristics of each site and the natural environment), and they used elements aimed at mitigating the tropical climate. Moreover, they highlighted the explorations of the DHP architects responsible for them — Affonso Eduardo Reidy and Francisco Bolonha — with regard to the link between tradition and modern architecture, helping to solidify what became known as the "carioca school."

PEDREGULHO AS A HOUSING PARADIGM: FROM FORMAL SPECTACLE TO THE DISCOURSE OF DECAY

The first collective housing project developed by the DHP was the Conjunto Residencial Prefeito Mendes de Moraes, more commonly known as "Pedregulho." Its big, meandering central block stands out in the landscape not only on account of its privileged location (atop a hill it is named after — providing it with an amazing view of the North Zone of Rio, its docks area, and the Maçiço da Tijuca hills), but also for its particular architectural solution. The neighborhood where the building is located had been the site of the residence of the Brazilian Imperial Family during the nineteenth century, and it was one of the first areas to be occupied in the North Zone. Far from the city's beaches, it was designated in the 1920s for residential and industrial use, and it later became an industrial neighborhood housing a working-class population who sought work in the area's factories and service businesses. At the time its housing stock largely took the form of villas, detached homes, and incipient slums set amidst large leisure facilities, museums, and gardens. Neighboring structures included the former residence of the imperial family (destroyed by a fire in 2018), a soccer stadium from the 1930s, a nineteenth-century water reservoir, a food market, and an important fair for migrants from northeastern Brazil (**FIG.8**).

Pedregulho's original plan provided all the key elements necessary for a well-functioning neighborhood unit: a school, a market, a laundry, a health clinic, residential blocks with

FIGURE 6 (RIGHT). *Marquês de São Vicente Housing Complex in the South Zone of Rio. The former favela and provisional proletarian park in front of it had just been removed, c. 1960s. Source: Arquivo Geral da Cidade do Rio de Janeiro.*

FIGURE 7. (BELOW) *Paquetá Housing Complex on Paquetá Island in the middle of Guanabara Bay. The complex consists of 27 duplex houses organized in a row, c. 1950. Source: Pioneers of Social Housing Archives.*
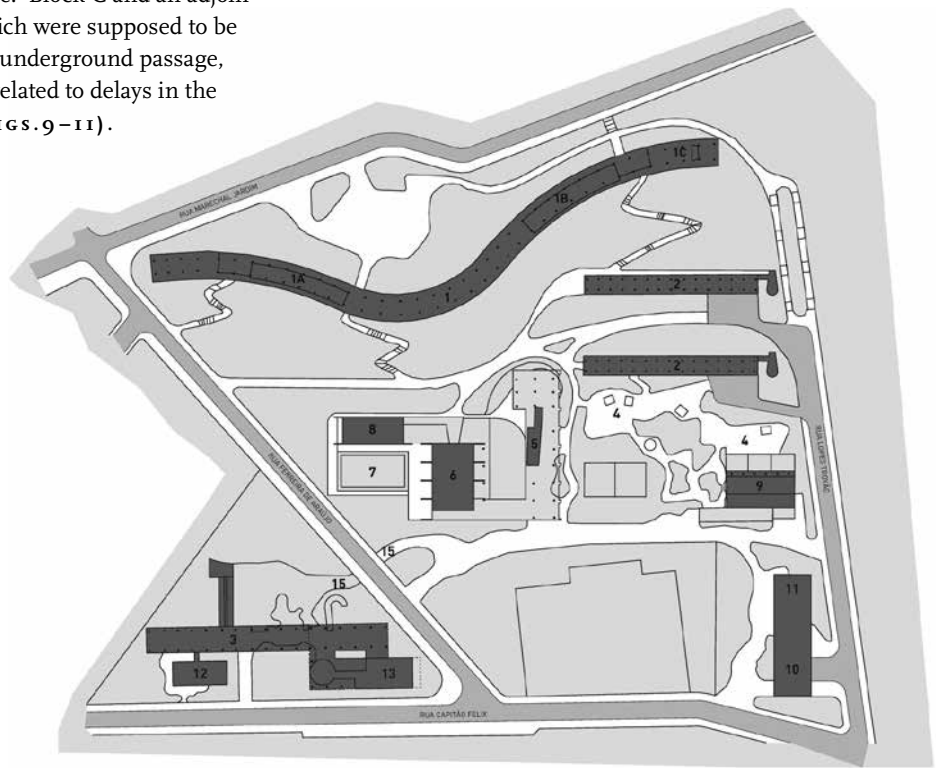

duplex apartments, a swimming pool with changing rooms, a gymnasium, a sports court, and large gardens incorporating playground, club, and day care areas. Its first phase was completed in 1950, featuring two residential blocks (B1 and B2) with 56 four-bedroom duplex apartments, along with a market, a laundry, and a health center. It also included gardens designed by Roberto Burle Marx and a mural by Anísio Medeiros at the health center.[20] A school, a swimming pool, changing rooms and a gymnasium (with a Candido Portinari mural[21]), and a health clinic opened in 1951.

FIGURE 8. *Block A before restoration. In the background, the Maciço da Tijuca Mountains. Source: Pioneers of Social Housing Archives, 2000s.*

The curvilinear Block A was partially delivered in 1958, but it wasn't fully occupied until the 1960s, after Reidy and Carmen had retired from city service. Block C and an adjoining nursery and day care center, which were supposed to be connected to the other blocks by an underground passage, were never built due cost overruns related to delays in the construction the other buildings (**FIGS. 9–11**).

FIGURE 9. *Final plan of the Pedregulho Housing Complex, 1948. Drawing by author, 2011.*

1- Block A
Intermediate Paviment
1A - Nursery Shcool
1B - Kindergarten
1C Auditorium
2- Blocks B1 and B2
3- Block C
4- Playground
5- Primary school

6- Pool
7- Dressing Room
8- Healthcare Center
9- Market
10- Laundry
12- Crèche
13- Maternal School
11- Comercial area
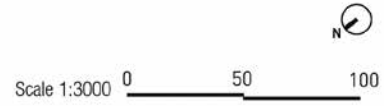**11-** Underpass

Scale 1:3000   0   50   100

FIGURE 10. *Gymnasium and Block A near completion, 1950s. Source: Arquivo Geral da Cidade do Rio de Janeiro.*

FIGURE 11. *Market and laundry building just after completion, c. 1950. Source: Pioneers of Social Housing Archives.*

Residents of the smaller B blocks, who roughly met the criteria established by the social workers, occupied these buildings as soon as they were completed. Coming from precarious rental situations, they were usually city workers (such as the mayor's driver or a zoo employee), and their rent was deducted from their paychecks.[22] Carmen Portinho and a team of social workers from the DHP were tasked with selecting these residents and monitoring the occupation.[23]

Since the apartments were rented, and the department believed strongly in the concept of housing as a public service, the DHP also established a program to teach residents how to live correctly in their new modern environment. Preparing residents for the move and helping them adapt to the new conditions was one of the hallmarks of the housing development. To that end, social workers were expected to educate residents on making proper use of resources in the project, as well as fostering a "spirit of community and unity." Since the architects and city planners had designed the buildings based on a tight spatial agenda, they could not risk their premature disintegration due to disorderly use. According to Portinho, workers had to be educated for life in society, and she was often seen around the housing complex giving instructions to residents to ensure that Pedregulho was seen as a model of effective public administration (**FIGS.12,13**).[24] As she wrote,

First and foremost, workers need to be educated for life in society, which will be relatively easy, provided they are given the necessary means of education along with decent living conditions.[25]

As soon as Pedregulho opened, it faced fierce criticism over the lavishness of the homes and equipment it provided to people who had sometimes been relocated there from the *favelas*. But despite mounting scrutiny, the complex earned various international accolades and awards. In particular, the formal plasticity and richness of the architectural solutions impressed architectural reviewers. In the 1950s the work of Affonso Reidy also grew in importance, and the housing complex became an object of pilgrimage for national and foreign architects. The complex was especially noted for the way Block A's 260-meter-long meandering form integrated into the mountainous landscape of Rio de Janeiro. The project was thus seen as a vivid embodiment of the ideas of Brazilian modern architecture of the 1940s and 1950s — in terms of plasticity, integration between the arts, high building standards, and modern urban planning.[26]

The international celebration of Brazilian architecture and the important role of Pedregulho, however, did not soften tensions and internal difficulties during the final stages of the project. These setbacks mostly reflected resentment at the amount of public funds that had gone into its construction. But the finished buildings also faced administrative problems such as with its laundry facility, a lack of cleanliness in its common areas, and disputes over water and electricity bills. In addition, the criteria established by social workers from the DHP were never applied in the selection of residents for Building A; people instead arrived there little by little, without having gone through the same orientation to the neighborhood unit experience.[27]

FIGURE 12. *Open area and gardens designed by Roberto Burle Marx, already in a state of disrepair. In the background, the school building, c. 1950s. Source: Pioneers of Social Housing Archives.*

FIGURE 13. *Playground area next to Block B apartment building, c. 1950. The* cobogó *panels can be seen. Source: Arquivo Geral da Cidade do Rio de Janeiro.*

FIGURE 14. *Block A in the 1970s, already in a state of disrepair. The woman is carrying water, a sign of poor water supply in the complex. Source: Arquivo Nacional, Rio de Janeiro.*

In 1960 political changes also led to the dismissal of Carmen Portinho as director and to the dissolution of the department, thus ending the dream of the autonomous neighborhood unit. Instead, the residential blocks and service facilities began to be managed by different institutions, and gradually the latter began to be used for unplanned and inappropriate purposes. The laundry — a key part of the project — was taken out of commission, and was transformed into a garage. And although the small area next to the school and Building B1 was renovated in the 1980s, the landscape design by Burle Marx disappeared over the years. The government's abdication of its former obligation to manage and maintain the complex also soon became evident in the physical deterioration of facades and common spaces. Time and weather further led to the buildings' decline, so that by the 1970s they already looked much different than when pictures of them had first appeared in various publications (**FIG.14**).

Carmen Portinho, Affonso Reidy, and most of the DHP staff were aware that the goals they set out to achieve through Pedregulho were not self-sustaining. In order for the complex to function properly, they not only needed to overcome ideological barriers but protect their positions within the administration. Throughout the existence of the DHP they fought to put their ideals into action by building residential units and trying to manage them properly — which was not always possible. But the international community continued to applaud their architectural achievement. For example, in 1962, Le Corbusier sang the praises of Pedregulho during his third visit to Brazil, asserting that Brazilians had produced a more complete work in it than he himself was capable of.[28]

BUILDING NEW LINKS BETWEEN TRADITION AND MODERNITY IN THE RESTORATION OF PEDREGULHO

By the 1980s the perception of the past and the constructed memory of modern Brazilian architecture would allow new insights into the housing complex, which constitutes a significant achievement within the historical legacy of its generation. As in many other countries, the 1980s was a crucial decade for building the memory of modern architecture. Responding to harsh criticism, social organizations, professional associations, preservationists, and preservation agencies stood up in defense of twentieth-century heritage in general — or, more specifically, of the heritage of the Modern Movement. The organization Docomomo (Documentation and Conservation of the Modern Movement), established in 1989 in the Netherlands, quickly brought together many interested people around the world, who gathered in biannual conferences to defend the modernist legacy.

In Brazil, the architectural community moved right to building the memory of its great masters. And the preservation of modern architecture in Brazil in the 1980s, during the country's re-democratization period, took on a celebratory tone. This reawakening of interest in modern architecture was evidenced by the great success of Docomomo-Brasil, which organized several national and international meetings that inspired a vast academic literature on the subject.[29]

The possibility of providing legal protection to the Pedregulho complex arose hand in hand with a broader movement to recognize the value of modern Brazilian architecture.[30] Interest in Pedregulho, however, had remained alive since the 1950s, and the complex had continued to be visited by Brazilian architects and architecture students who hoped that it could serve as a model for how to overcome inequalities in urban centers — a problem which had only deepened since its construction. Discomfort with the contrast between the ideal of Pedregulho, as disseminated through images of its new, still unused buildings, and the effects of its actual occupation, with all the contradictions and difficulties that ensued, led to demands from experts and residents for its restoration.[31]

In the vacuum created by government neglect, residents had appropriated the buildings and made renovations and interior adaptations over the years, despite having never been granted title to their apartments. According to data gathered by Helga Santos in the 2000s, about 50 percent of the residents of Block A had arrived during the first waves of occupation in the 1960s, and consisted mostly of service providers, industry workers, and government employees.[32] These people were mainly from a working class that had experienced upward mobility during Brazil's period of economic stability, and they had experienced the increased access to consumer goods that then symbolized the country's social transformation.[33] However, since the apartments technically still belonged to the Rio de Janeiro state government, which had never managed their occupation, other units had been trans-

ferred or sold through contracts between private parties. It was amidst this scenario, in which residents were faced by government inaction but continued to be visited by many different architects who praised the project's original ideals, that expectations grew for the restoration.[34]

Various social and physical changes that the buildings had seen over the years also justified calls for restoration. These included the abandonment of adjacent buildings such as the laundry facility, the health center, and the day care center; the isolation of the school from the rest of the complex; and a growing social and economic division between residents of winding Block A and Blocks B1 and B2. All these conditions eventually created a scenario in which the restoration of Block A in the 2000s was proposed as a first step in the recovery of the complex (FIG.15).

FIGURE 15. *Block A, showing the* cobogó *facade and the intermediate level, c. 2000s. Source: Pioneers of Social Housing Archives.*

The decision to undertake the restoration project — which has to this date actually only been carried out in Block A, the showcase building — was ultimately triggered by inadequate maintenance work by the public authority that owned the complex. This deficiency ignited a movement to restore the building and acknowledge it as a cultural asset, led by the architect, professor, and architectural historian Alfredo Britto. Also important has been the advocacy of the residents' association, through its president Hamilton Marinho (a long-time resident of the complex), and the involvement of professional associations and public authorities. It was this movement that finally pushed the government to come up with a project and carry out the necessary works.[35]

In 2005 a strategic plan for the work was developed by Britto (who played a major role in the entire preservation process). It described the architectural problems of each building in the complex, as well as the main demands of the community.[36] And in December 2010 work began on Block A, including emergency structural restoration of the first-floor slab, the removal of garbage that had been accumulating for decades on the ground floor, an overhaul of the building's plumbing and its roof, and an attempt to allow better thermal enclosure and air-conditioning within the complex. It is important to note that residents remained in their apartments throughout this entire project, keeping a close eye on the process and dealing with the inconveniences it created. After so many years of abandonment, expectations surrounding the restoration were enormous. The size of the project presented all sorts of challenges to the team, residents and workers (FIG.16).[37] The work ultimately lasted through 2015, and cost a total of 45 million reais.

Restoration of the complex also gave new impetus to interpretations of tradition in modern Brazilian architecture. These have both stretched its meaning and reiterated some of its most significant elements. For many years the design of its windows and *cobogós* were regarded as emblematic of "modern carioca architecture" and its relationship with the tropical climate. And problems related to its apartment windows were seen as particularly representative of the challenges posed by this relationship. The inventive details originally devised to open and close these windows had proven difficult to maintain and use. Indeed, many of them had been replaced over time. Yet, as the replacement parts made the facade look like a "patchwork quilt," these windows had become a symbol of the supposed degradation of the complex. Constant use and lack of maintenance also led to the progressive replacement of the original wooden frames, whose complex design featuring articulating shutters and glass panels was impractical and offered poor thermal efficiency.

When the restoration project began, only eight of the 272 original frames were still in place. After long negotiations with the residents, who viewed their replacement frames as a rightful improvement, both sides agreed to the installation of all new aluminum windows, painted the same shade of blue

as the original wood ones (FIGS. 17, 18). This solution, widely debated among experts, was aimed at rescuing the original design while at the same time ensuring a longer life for the historic buildings by using more durable materials. On the other hand, the solution showed how the appropriation and use of residential buildings over time may give new meaning to modern design paradigms, such as the concern with thermal comfort in the carioca school of architecture. Thus, even though the new windows may be different in many ways from the original ones, they can be seen as a response to social demand, and the restoration can be understood as a critical act.

If the windows allowed for reinterpretation of the architectural tradition of the carioca school, the solution for the *cobogós* and *brises soleils* was to replace them with identical replicas. As mentioned above, the *cobogó* was a very special element in the composition of the Pedregulho Housing Complex, and together with *brises soleils*, it was used in almost all buildings of the complex to enclose circulation areas or passages.[38] In Block A, *cobogós* were, for example, installed along the corridors leading to the housing units. These long, winding corridors have been widely photographed and publicized. But by the time the restoration project got underway, they had been degraded by heavy usage and normal decay over time.

Since the original ceramic pieces that composed the *cobogós* were no longer available on the market, the decision was made to replace them using newly manufactured pieces of various different formats. The decision provided an important commitment to the original language of the project, as the residents sought to keep the building's unique features intact as much as possible. The "patchwork" aspect created

FIGURE 17. *Block A before renovation, showing how most of the windows had already been changed by the residents, 2004. Photo by author.*

FIGURE 18. *Block A with new aluminum windows painted in blue, 2016. Photo by author.*

FIGURE 19. *Block A apartments corridor, showing a new* cobogó *panel in the process of being assembled, 2015. Photo by Alfredo Britto.*

by panels with missing or randomly replaced parts had been one of the aspects that most bothered visitors. However, faced with the enormous difficulty of finding suppliers to make new parts (a process that took two years), the restoration team chose to replace most of the *cobogó* panels entirely. Since it was only financially viable to have new parts made if they were acquired in large quantities, the project team ordered approximately 8,000 pieces. Some of the originals were, however, removed, cleaned and reinstalled in single new *cobogó* panels (**FIG.19**).[39]

The restoration work had a direct impact on the daily lives of residents, beginning with work that had to be done inside their apartments. According to reports, nearly all units had some type of renovation work done to them during the restoration project, especially in rooms that were deemed most fragile, their kitchens and bathrooms.[40] However, the renovations did not increase the market value of the units significantly, since residents still did not hold legal title to them. Nevertheless, it is believed that once the ownership issue is resolved, the apartments will increase in value, and be worth about as much as similar apartments in the São Cristóvão neighborhood.

Other issues with the buildings also remain, and may require further significant alterations. These have become particularly evident as residents have begun to age, and accessibility has become an issue. Located atop a steep mountain, with no elevators, and with internal staircases in the duplex apartments, the ability to move around the complex is an increasing concern for those who have lived there since the 1960s. With that in mind, Marinho, the residents' association president for many years, hopes for further changes.

Here lies one of the biggest contradictions of the housing project: the collapse of a public initiative largely on account of the government's abdication of responsibility for it. Ever since its construction, local residents have had to take respon-

sibility for most management tasks related to the complex. One consequence has been that spaces within it have increasingly reverted to private market control, albeit not entirely.

Apart from residents' affection for and appreciation of the complex, there are basically two conditions that have contributed to keeping them in their apartments. Despite the failure of the neighborhood unit to function as planned, these have also helped maintain certain aspects of the project's original social character. First has been its geographical location in Rio. While generally considered to be a good area, Pedregulho's industrial setting is far from a coveted middle-class neighborhood. Second has been the lack of ownership. Pedregulho is still a publicly owned building, and increases in the value of its units are a reality that has yet to arrive. Meanwhile, there is little risk that its residents will be removed, given their continuous use and occupation of their units over the years. But feelings of insecurity and expectations of ownership are both evident.[41]

Demands for ownership remain a constant preoccupation of residents, and many expect to obtain legal title to their properties at some point in the future. This will likely involve the creation of an official condominium association responsible for collecting building fees, maintaining proper administration, and managing the newly restored buildings. The need for additional work and maintenance is already real. Currently, residents pay nothing to the state. About half of them make voluntary contributions to the residents' association — which, despite its unofficial status, provides them with trash removal and mail distribution services. The architect Alfredo Britto, who oversaw the restoration project, also suggested the formation of a permanent building committee, after the work was completed, to provide for ongoing maintenance the buildings never had.[42]

Many of the residents' demands were largely assuaged by the restoration project. However, many of them still rely on makeshift solutions to meet their basic needs. One of the clearest examples of this is the laundry, which was designed to be a collective facility, but which is currently out of commission. The lack of a laundry facility is one of the key complaints from residents. After decades without it, they resorted to private solutions such as installing washtubs and washing machines in their bathrooms and hanging their clothes to dry on exterior clotheslines on the southeast facades of the duplex apartments and the northeast facades of the adjoining apartments. In addition to creating conflicts among residents, the clotheslines compromised the building's visual identity and physical integrity (as they required replacing the original wooden and Venetian windows to improve access to them). Because of the restoration work, residents have basically stopped hanging clothes outside, which is seen as a positive. But the complete functional separation between common-use buildings (such as the laundry) and residential buildings in the complex is now well-established (**FIG.20**).

UPDATING TRADITION

To come to a conclusion, it is important to see tradition as a concept that lends itself to multiple meanings, rather than one single interpretation.[43] Tradition was closely associated with the Modern Movement in the context of Brazilian architecture of the 1940s and 50s. This linkage may have emerged because they were parts of the same whole, or because the same people were in charge of making heritage policies and modern architecture. The relationship between tradition and modernity certainly legitimized national-identity projects that were based on state cultural-heritage policies. But the pairing of the two concepts also helped qualify modern buildings as genuinely Brazilian. It is in this sense that the restoration of Pedregulho has forced a confrontation with sensitive issues within the historiography of the Modern Movement in Brazil. And it has done this most notably by touching upon some of the dearest and most characteristic points of the formal expression of tradition in its relationship with modernity.

Regardless of its actual importance to residents and their living conditions, the restoration project has also revived and reiterated interest in the complex, reaffirming its central place in the history of Brazilian architecture. The alleged obsolescence of Pedregulho had come to stand in stark contrast to images of it as a newly opened complex that won over the world. But nostalgia for the loss of something that cannot be regained, and that may never really have existed except as an element of a constantly reproduced narrative, does not present a stance for future action.

Likewise, constantly blaming the residents for the building's transformation only reiterates a monumentalizing and idealized view of it as an architectural work without considering how it has been appropriated and used over the years. By respecting the passage of time and the demands of residents, the restoration of Block A has allowed for new solutions that have made their daily lives a little easier. New window systems that provide better thermal enclosure and permit the units to be more efficiently air-conditioned were installed in response to such demands. Yet the installation of identical replica *cobogós* and the meticulous care taken to repair the *brises soleils* have underlined the crucial importance of these elements in discourses on the relationship between tradition and modernity.

Both solutions go right to the core of the questions surrounding tradition and modernity in Brazilian architecture studies, which have been posed and reiterated since the 1980s. At the same time, as it helps reveal the paths and detours taken by modern architecture and urbanism, the restored work also ascribes new meanings to the future of Brazilian architecture, thus fulfilling the role of tradition in connecting multiple generations.

REFERENCE NOTES

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2. C.A.F. Martins, "Hay algo de irracional. . .," Block, No.4 (December 1999), pp.8–22
3. Ibid.; and N. Tinem, *O alvo do olhar estrangeiro: o Brasil na historiografia da arquitetura moderna* (João Pessoa: Universitária, 2006).
4. J. Silva, "A construção do nacional: Ricardo Severo e a Campanha de Arte Tradicional no Brasil (1910–1930)," *Varia Historia*, Vol.35 No.68 (2019), pp.597–629; and M.L. Pinheiro, *Neocolonial, modernismo e preservaçao do patrimonio no debate cultural dos anos 1920 no Brasil* (São Paulo: Edusp, 2011).
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7. Over the last decade the bibliographic work of the research group Pioneiros da Habitação Social no Brasil [Pioneers of Social Housing in Brazil] has shown the importance and the scope of social housing production in Brazil. See N. Bonduki and A. Koury, eds., *Os pioneiros da habitação social* (São Paulo: Editora da Unesp/Sesc, 2014). On the role of the Institute of Retirement and Pensions, see N. Aravecchia-Botas, *Estado, arquitetura e desenvolvimento: a ação habitacional do Iapi* (São Paulo: Editora Fap Unifesp, 2016).

8. Brazilian architecture had drawn worldwide attention during World War II, which resulted in an exhibition at the Museum of Modern Art in New York, followed by a catalog, and several bibliographical citations. See Z. Quezado-Decker, *Brazil Built: The Architecture of the Modern Movement in Brazil* (London/New York: Spon Press, 2001); and P. Goodwin, *Brazil Builds: Architecture New and Old 1652–1942* (New York: The Museum of Modern Art, 1943).
9. M. Bill, "Report on Brazil," *The Architectural Review*, Vol.116 No.694 (October 1954), pp.235–40.
10. Ibid., p.240.
11. Martins, "Hay algo de irracional..."; and Tinem, *O alvo do olhar estrangeiro.*
12. For a detailed inventory of social housing in Brazil, refer to Bonduki and Koury, eds., *Pioneiros da Habitação Social.* Ana Paula Koury has also offered fundamental insights into the importance of modern Brazilian housing production in her article "Modern Housing Estates and the Production of the Brazilian City (1937–1960)," *Planning Perspectives*, Vol.24 (2019).
13. A classic text by the Sociedade para Análise Gráfica e Mecanográfica Aplicada aos Complexos Sociais [The Society for Graphic and Mechanographic Analysis Applied to Social Complexes] on the human aspects of Rio's slums, published in 1960, mentioned projects prior to those of the Department of Popular Housing (such as the Proletarian Parks), and referred to the DHP as a licensor of workers' housing. The DHP was only included at the end, in a discussion of short-term solutions to the slum problem. This inclusion may be due to the influence of Helio Modesto, who was editor of the section on urbanization and had worked at the DHP shortly after graduating from college. SAGMACS, "Aspectos humanos da favela carioca," *O Estado de São Paulo*, special supplement, April 1960, part 2, pp.41–43. Works from the 1960s and 1970s dedicated to Rio's slums, such as the texts by Lucien Parisse and Leeds & Leeds, were silent about the DHP. Indeed, the text by the Leeds couple mentioned it only to demonstrate the administrative discontinuity in the Federal District's City Hall, without explaining its role in the municipal bureaucracy. In the 1980s and 90s, texts such as those by Nísia Lima and Vincent Valla either did not mention the department or only did so in passing. See L. Parisse, *Favelas do Rio de Janeiro: Evolução e sentido*, Cadernos do CENPHA, No.5 (1969); V. Valla, ed., *Educação e favela: Políticas para as favelas do Rio de Janeiro, 1940–1985* (Petrópolis: Vozes, 1986), p.45; N. Lima, "O Movimento dos Favelados no Rio de Janeiro: políticas

do Estado e Lutas Sociais (1954–1973)," Master's thesis, IUPERJ, Rio de Janeiro, 1989; and A. Leeds and E. Leeds, *A sociologia do Brasil urbano* (Rio de Janeiro: Zahar, 1978), p.200.
14. According to Decree 9124, issued on April 4, 1946, the department's main goals were: ". . . the solution of the housing problem for low-income social groups, including, initially, employees of the Federal District City Hall, by building residential groups at a reasonable rent."
15. For example, in 1946, Francisco Lopes, an engineer who was also head of services at DHP (where he worked for many years supervising buildings, licenses and legalization) published an article in the magazine *Revista Municipal de Engenharia* in which he defended building workers' homes close to the downtown area and existing residential neighborhoods. F. Lopes, "Um aspecto da habitação proletária," *Revista Municipal de Engenharia* (January 1947), pp.57–62.
16. For more on Carmen Portinho, see A.L. Nobre, *Carmen Portinho: o moderno em construção* (Rio de Janeiro: Relume Dumará/PCRJ, 1999); and C. Portinho, *Por toda minha vida: depoimento a Geraldo Edson de Andrade* (Rio de Janeiro: EdUERJ, 1999).
17. C. Portinho, "Habitação Popular," *Correio da Manhã*, Rio de Janeiro, March 10, 1946; C. Portinho, "Habitação Popular," *Correio da Manhã*, Rio de Janeiro March 17, 1946; C. Portinho, "Habitação Popular," *Correio da Manhã*, Rio de Janeiro, March 27, 1946; C. Portinho, "Habitação Popular," *Correio da Manhã*, Rio de Janeiro, March 31, 1946; C. Portinho, "Habitação Popular," *Correio da Manhã*, Rio de Janeiro, April 7, 1946; C. Portinho, "Habitação Popular," *Correio da Manhã*, Rio de Janeiro, April 14, 1946; C. Portinho, "Trabalho Feminino," *Correio da Manhã*, Rio de Janeiro, June 2, 1946; and C. Portinho, "Escola Maternal e Jardim de Infância," *Correio da Manhã*, Rio de Janeiro, Sunday Supplement, July 14, 1946.
18. C. Bauer, *Modern Housing* (Boston/New York: The Riverside Press/Houghton Mifflin Co., 1934).
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20. Anísio Medeiros studied architecture at Faculdade Nacional de Arquitetura, and was a student when Reidy invited him to design the murals for the complex. His career was devoted to scenography and the fine arts. He created tile murals that were installed in Francisco Bologna's buildings in Cataguases and Marcos Konder Neto's Monument to the Brazilian Soldiers of World War II in Flamengo Park along Guanabara Bay. Personal interview,

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21. Personal communication between Carmen Portinho and Portinari. *Arquivo Particular Carmen Portinho*; Projeto Portinari, *Programa Depoimento, Entrevista com Carmen Portinho* (Rio de Janeiro: April 7, 1983), pp.24–30.

22. DHP, *Relatório do Setor de Serviço Social* (Rio de Janeiro: mimeo, 1961) (PDF); and *Regulamento do Conjunto Residencial Prefeito Mendes de Morais* (Rio de Janeiro: Departamento de Habitação Popular, 1950).

23. DHP, *Relatório do Setor de Serviço Social*; and personal interview with Anna Augusta Almeida, January 24, 2002.

24. Y. Jean, "Um conjunto residencial modelo," *Correio da Manhã*, Rio de Janeiro, April 8, 1951 (PDF); *Regulamento do Conjunto Residencial Prefeito Mendes de Morais*; and *Regimento do Conjunto Residencial Prefeito Mendes de Morais* (Rio de Janeiro: Departamento de Habitação Popular, 1950).

25. Portinho, "Habitação Popular," March 17, 1946.

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