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# Oscar Niemeyer: a misbehaved pupil of rationalism

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**Oscar Niemeyer, who will be 90 years old in December, holds an unique position among the great masters of twentieth-century world architecture. Whereas he is both admired and criticized for the formal liberties he takes, most critical commentaries centre upon the interpretation of orthodox modernism by this early disciple of Le Corbusier. Based upon the architect's written statements, as well as on a potential genealogy of his ideas, this paper seeks to assess Niemeyer's standing in the context of selected buildings.**

## Introduction

Oscar Niemeyer (Fig. 1) has returned to the limelight in recent years. Towards the end of 1987, UNESCO included Brasília in its register of cultural assets by declaring the city a world monument. In May 1988 Niemeyer was awarded the Pritzker Prize. He was also awarded the Prince of Asturias Prize in Spain and appointed an Honorary Fellow of the Royal Institute of British Architects. In fact, prize winning became an ordinary event in the more than 60-year professional career of the Brazilian architect. Even so, to begin this paper, a commentary on the repercussions of his latest awards seems quite timely.

The Pritzker Prize, which Niemeyer shared with the American architect Gordon Bunshaft, has had considerable effect. In an article, *Time* magazine referred to the twosome as 'unrepentant old modernists', and *Progressive Architecture* gave them praise in the editorial 'Honours of the Old Guard'. The selection of these two celebrities, featured in any dictionary or handbook of architecture, would not have seemed extraordinary

except for the fact that not only was the prize being shared for the first (and, so far, only) time in its nine years of existence, but also it was being shared by architects who earned most recognition among their peers in the 1950s and 1960s. Given the roster of award winners that previously included Philip Johnson (awarded in the year he presented his design for the AT&T building), Barragán, Stirling, Roche, Pei, Meier, Hollein, Böhm and Tange, the last three accolades (Tange, Bunshaft and Niemeyer) were viewed by Paul Goldberger of *The New York Times* as symbolic of the crisis of contemporary architecture. In turn, Doralice Boles of *Progressive Architecture* inferred that the selection 'suggests a desire on the part of the jury to endorse the style with which these architects are so completely identified'. Notwithstanding the subsequent awards to architects representing more recent trends, the question remains as to whether Niemeyer and Bunshaft actually profess the same architectural creed. Roberto Segre, of Cuba, was the first to protest against the shared prize:

Figure 1. Oscar Niemeyer (photograph by author).



Figure 2. Apartment building on the Praça da Liberdade, Belo Horizonte, 1954–55.



'A major mistake has been made by ranking Bunshaft and Niemeyer at the same level. We don't say this out of any Latin American chauvinism, but because in terms of international prominence, between Barragán [the Mexican architect awarded the prize in 1980] and Niemeyer, the latter was a more transcendent, worldwide renewing force of Latin American architecture. Consequently, a same plane cannot be occupied by a fine interpreter of Mies van der Rohe and multiplier of glass boxes extensively questioned by Tom Wolfe, and the creative zest of one of the leading pioneers of Latin American architecture'.<sup>1</sup>

By and large, recent reviews of US and European architecture have included Oscar Niemeyer among the forerunners of modern rationalism, though with a regional touch. In the 1950s, Gillo Dorfles referred to Brazilian architecture as 'neo-baroque' (Figs 2–4), while Reyner Banham called it the 'first national style in Modern Architecture'. Whether or not they meant praise, the question is, were these assessments sufficient to designate Brazilian architecture

as being an offshoot of European rationalism? In this sense, I believe that in the 1950s and 1960s European critics identified Niemeyer's work as an unique trend that could never be juxtaposed with the orthodox 'International Style'. Because of the peripheral character of Latin America, the world architecture establishment views his designs as either fiercely controversial or totally unimportant. Even so, he is admired by personalities as distinct as Rem Koolhaas, Christian de Portzamparc and Santiago Calatrava.



### Niemeyer and the challenge of rationalism

Oscar Niemeyer, who was born in 1907, belongs to the same generation of architects as Philip Johnson (born 1906), Kunio Maekawa (1905–86) and Giuseppe Terragni (1904–43). Among them, Terragni was the first to demonstrate his individual talent, with the Casa del Fascio in 1932. Niemeyer first attracted attention as a collaborator in the design of the Ministry of Education and Health building in Rio de Janeiro (1936), produced by a team of Brazilian architects headed by Lucio Costa with Le Corbusier as advisor. He came fully into his own with the building complex he designed in the district of Pampulha, in Belo Horizonte, beginning in 1939. In the period that immediately followed the end of World War 2, in Brazil – a country geographically remote from the area of struggle and which greatly benefited, in terms of foreign currency exchange, from the conflicts in Europe – the building industry expanded at an unprecedented rate. Such an intense activity in civil construction offered increased opportunities

for Brazilian architects to produce designs that attracted attention throughout the world.

In 1951, in addition to obtaining substantial acknowledgement worldwide, the São Paulo International Art Biennial served to publicize Brazilian architecture. As a result, visiting architects and artists offered their first commentaries on Brazilian architecture. In 1954, Gropius stated that Brazilians ‘have developed a modern architectural attitude of their own . . .’ and that ‘I do not believe that this is just a passing fashion but a vigorous movement . . .’<sup>2</sup> It was left to Swiss designer Max Bill to provide the first crushing reviews. He wrote:

‘Free-form shapes are purely decorative [. . .]. Initially the pilotis were straight, but now they are beginning to assume very baroque forms [. . .] (Fig. 5). Good architecture is that in which every element plays its designated role and no element is superfluous. To achieve such architecture the architect must be a fine artist. He must be an artist who has no need for whimsicalities in order to attract attention; one who, above all, is conscious of a responsibility towards the present and the future’.<sup>3</sup>

Max Bill – one of the propagating masterminds of Concrete art – also lamented the ‘whimsicality’ of Brazilian architecture, and initiated a worldwide crusade against all forms of ‘irrationalism’, the apogee of which is featured in reviews by Reyner Banham and Nicolas Pevsner at the turn of the 1960s.

Pevsner’s controversial conference, presented at the Royal Institute of British Architects in February

Figure 3. Canoas House, Rio de Janeiro, 1953–54.

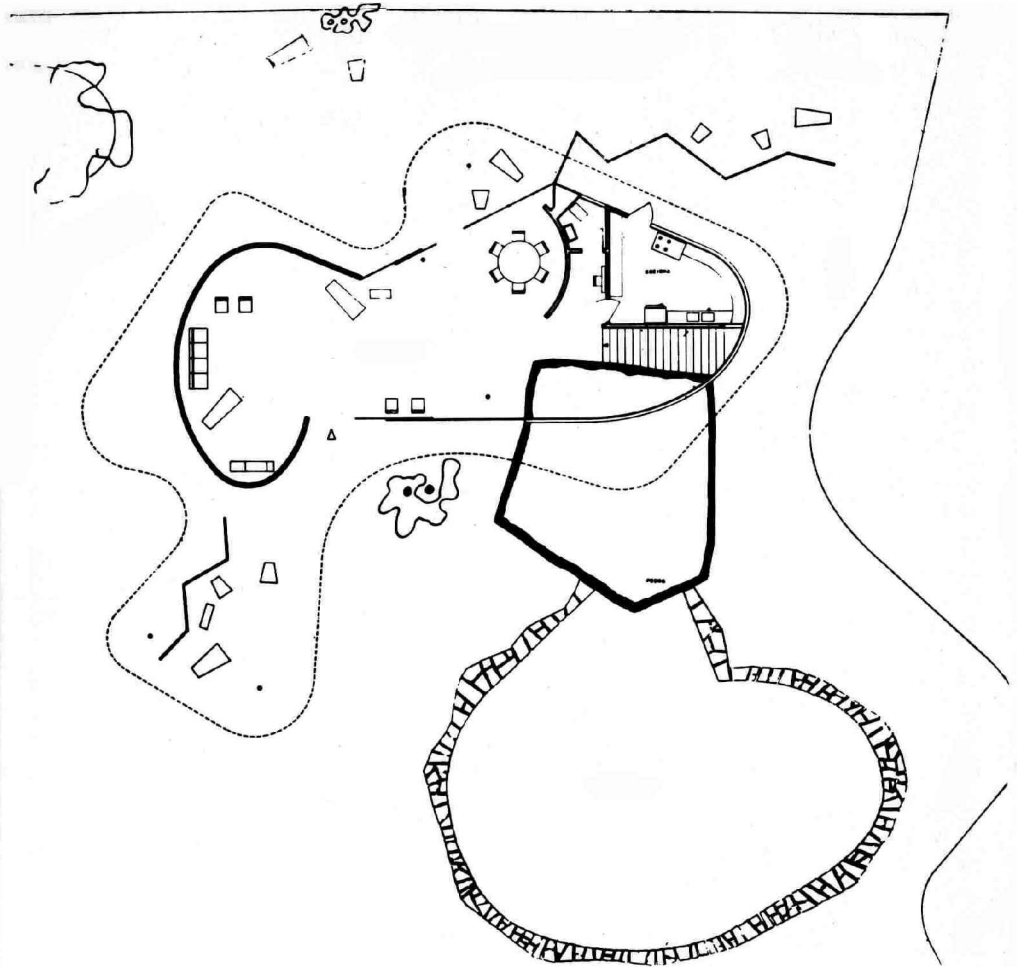


Figure 4. Canoas House plan (reproduced from Niemeyer, Belmont-sur-Lausanne, Alphabet, 1977).



Figure 5. Agriculture Pavilion at the Ibirapuera Park, S o Paulo, 1951–54.

1961, introduced the term *postmodern* in one of its various interpretations. In his lecture, the critic and historian remarked on a trend observed shortly before World War 2, which he viewed as ‘one of the least attractive developments of recent architecture’. In his lecture he stated:

‘The principle of 20C architecture [. . .] had been that of form following function, in the sense that a building must, first of all, function well and should have nothing in its exterior to reduce its well functioning, or, to put it the other way round, that the beauties of building exteriors and, for that matter, of their interior spaces as well, must be developed to the assurance of their well functioning’.

He commented further:

‘The new tendency is, if I am right, towards exteriors which are created not necessarily at the expense of function, although that is very often true too, but certainly at least with an expression which does not convey a sense of confidence in their well-functioning’.<sup>4</sup>

There is no need to emphasize Pevsner’s role as bulwark and pamphleteer of the International Style with two of his writings, *Pioneers of the Modern Movement* (1936) and *An Outline of European Architecture* (1934). However, though such a stance may sound outmoded to today’s readers, the debate must be situated in the context of history. Pevsner (and Reyner Banham by association) criticized supposedly historicizing trends – ‘imitation or inspiration rendered in recent style’ – which he qualified as a ‘retrocession’ of modern architecture. These trends included the Neoliberty movement (thus named by Paolo Portoghesi in 1958) of the second half of the 1950s, with works by Gae Aulenti, Vittorio Gregotti and Portoghesi himself, backed by another young architect, Aldo Rossi. Pevsner designated and illustrated a series of ‘neo’ styles; ‘neo-de Stijl’, ‘neo-School-of-Amsterdam’, ‘neo-German-Expressionism’, ‘neo-Gaudi’, ‘neo-sculptural’, ‘neo-plastic’, ‘neo-formalist’, ‘neo-expressionist’. Apart from this activity, the critic classified a postmodern anti-Rationalism which included architects such as Hans Sharoun,

Figure 6. St Francis Chapel at Pampulha, Belo Horizonte, 1934–44.



Figure 7. Hotel at Pampulha, Belo Horizonte, 1939 (not built).

Jørn Utzon, Felix Candela and . . . Oscar Niemeyer. To the latter, Pevsner devoted a special commentary:

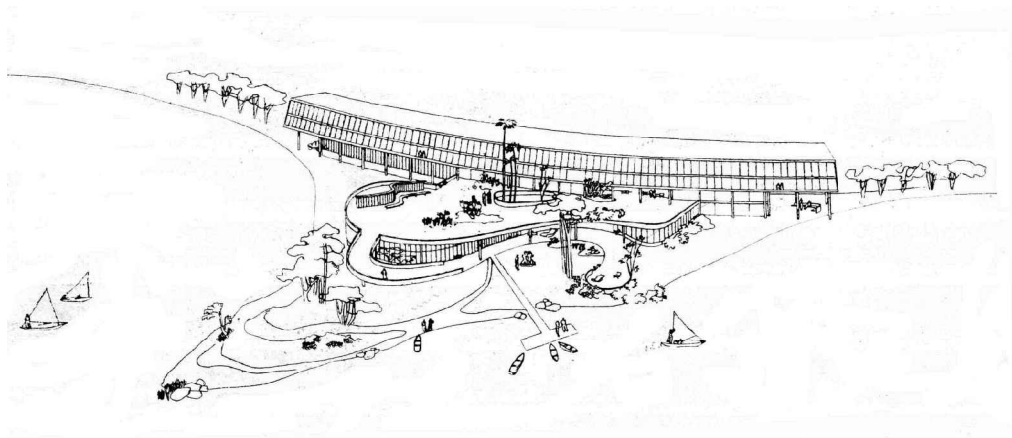
'But the fundamental matter to explain the return of historicism remains the fact that a change of architectural style took place from about 1938 or so. It appeared at first innocuous enough; the neo-accommodating of Scandinavian housing, and the Dutch Beton-Rococo in the work of Oud and others just before the war. But it suddenly gathered tremendous vigour when young Oscar Niemeyer got going in Brazil in 1942–43 (Figs 6–8). His are the earliest buildings which are emphatically no longer of the so-called International Style, and they are buildings that have a force, that have power, that have a great deal of originality, but they are, emphatically, anti-rational'.<sup>5</sup>

Nikolaus Pevsner thus identified, in Niemeyer's work of the late 1930s and early 1940s, the seeds of irrationalism.

### Niemeyer's 'irrational' concepts

Few architects have promoted their design principles in writing. In 1955 Niemeyer founded, in Rio de Janeiro, an architecture magazine called *Módulo* [Module], in which he published a significant selection of his works, thus disseminating ideas that were to unfold into creations by Brazilian architects in later years. In a statement written in 1955, Niemeyer responded to reviews while keeping in sight the opinions that Max Bill had disclosed in the previous year:

'We refuse to resort to a more rigid and cold architecture – of European characteristics – just as we



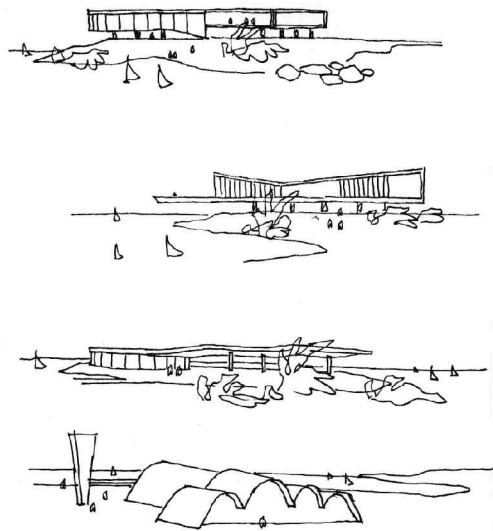


Figure 8. Pampulha complex buildings, 1939–42 (reproduced from Niemeyer, Belmont-sur-Lausanne, Alphabet, 1977).

Niemeyer pondered on his previous works and published a self-critical article. In that which he called 'a straightforward and dispassionate process of reviewing my work as an architect', after a trip that took him 'from Lisbon to Moscow', he admitted to having previously sought 'to adopt a trend that bent excessively towards originality'. He summed up with words the attitudes distilled through his reflection, which were to guide his projects, particularly those for Brasília. As his concern augmented, he wrote about his 'constant search for concision and purity' with the 'simplification of the form and its counterbalance with functional and constructive issues', all of which led him to be attentive to 'compact, simple and geometric solutions' and to 'the issues of hierarchy and those of architectural character; the convenience of unity and harmony among the buildings', and making sure that '[the buildings] no longer express themselves through their secondary elements; rather, they should express themselves through their very structure duly integrated into the original, imagined form' (Fig. 9). Furthermore, he intended to avoid 'cutout or multi-elemental compositions that could hardly be contained in a pure and well-defined form', save that he would strive 'not to fall into a false purism or a monotonous industrially driven form, while bearing in mind the extensive possibilities of reinforced concrete . . .'<sup>7</sup> Without relinquishing the past, and notwithstanding his apparent constraint, Niemeyer hardly altered his original pre-Brasília stance; however, he sought to review his formal repertoire without foregoing the basic principles that had guided his previous work.

refuse to resort to a "social architecture" in our living environment. By so doing, we would either be robbing our architecture of its innovative and creative aspects, or presenting it in a fake, artificial and demagogic manner'.<sup>6</sup>

He replied to the Swiss designer's charges, both in his innuendoes against free forms and in reference to the antisocial and élitist character that Bill attributed to Brazilian architecture. Niemeyer, himself a long-standing supporter of communism, has never agreed on the feasibility of social architecture in a capitalist country such as Brazil.

However, upon conceiving the most significant buildings for Brasília (beginning in 1957), Oscar

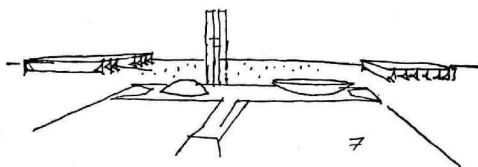


Figure 9. The Plaza of Three Powers (reproduced from O. Niemeyer, *Minha Experiência em Brasília*, Rio de Janeiro, Vitória, 1961).

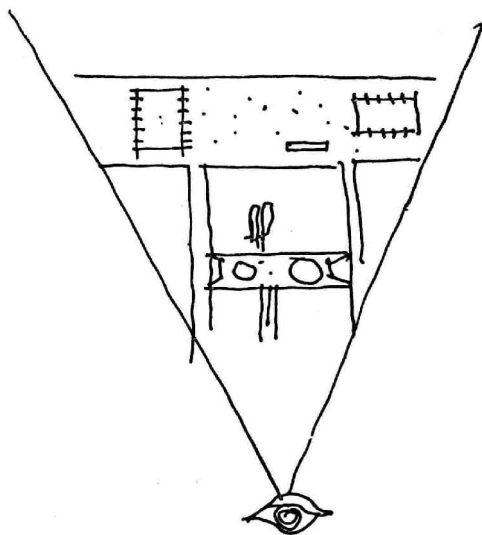


Figure 10. Metropolitan Cathedral, Brasília, 1959–70.



very newness and creativeness; a freedom that provides scope – when desirable – for moods of ecstasy, reverie and poetry' (Figs 10, 11).<sup>8</sup>

### **Kunstwollen and the aesthetics of structure**

Two years after the self-criticism, he asserted:

'I am in favour of an almost unlimited plastic freedom, a freedom that is not slavishly subordinate to the reasons of any given technique or of functionalism, but which makes an appeal to the imagination, to things that are new and beautiful, capable of arousing surprise and emotion by their

This declaration of love for form cannot be dissociated from a tribute to the conceptions of his first master, Lucio Costa, whom Niemeyer acknowledges as always having been consistently 'struggling from the early days of his career for an architecture that combined functional attributes and the deliberate, constant quest for beauty and plastic form'.<sup>9</sup> Lucio Costa was the great theoretician of modern Brazilian architecture. His definition of architecture results from the original presupposition that it is 'construction devised with the intention to organize space in a plastic manner, based on a certain time, a certain ambience, a certain technique and a certain programme'.<sup>10</sup> Here, Costa's affiliation to the concept of *Kunstwollen*, according to Alois Riegl, becomes quite evident. Along these same lines, Niemeyer argued for the autonomy of artistic creation, the singularity of individual creation, against a puritan and normative rationalism. Hence the dissociation that is usually



Figure 11. Metropolitan Cathedral (interior), Brasília, 1959–70.

established between Niemeyer the architect and Niemeyer the communist; the *Kunstwollen* follows paths that do not cross those of political will.

### Statics versus aesthetics

Max Bill chose to focus on Niemeyer's whimsical 'baroque form' pilotis. The invention of V-shaped pilotis to replace conventional columns dates from 1951, when these forms were introduced in the Ibirapuera Park structures and office buildings in São Paulo. Given that large and imposing buildings required a large number of supports, the ordinary rows of columns formed a palisade. Here the V-shaped supports served as transition structures that reduced to half or, possibly, to one third the number of points of contact between the building superstructure and the ground. Furthermore, these columns convey an unprecedented notion of space, distinct from the ambience defined by common upright supports, and, ultimately, encouraged a more productive use of the free ground-floor area (Figs 12, 13).

In his self-criticism, Niemeyer finally and literally elected structure, an element of fundamental

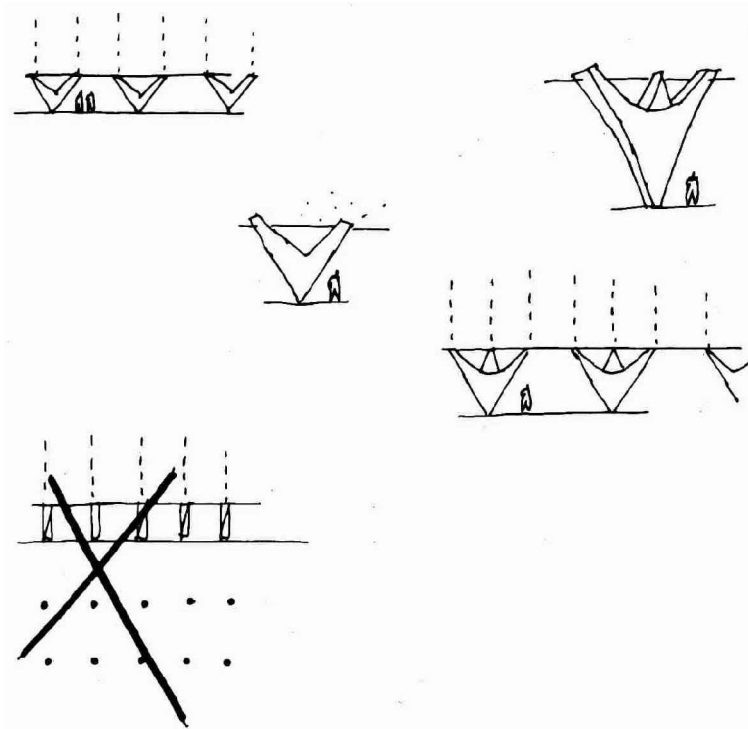
importance in his Brasília buildings, as the protagonist of his architectural style. Thus buildings owed their expression to structure duly integrated into the formal solution, rather than to secondary elements. From this standpoint we can have a better understanding of the Brasília palaces as well as Niemeyer's subsequent work.

It was not by chance that Brazilian architects adopted the reinforced concrete frame as a means of aesthetic expression. This construction system was introduced into the country at the turn of the century, and since then engineering courses and major public works have developed experimental and bold concrete structures. Because of the lack of a state-of-the-art steel industry capable of supplying structural elements like those used for building in the USA, Brazilians ended up developing a fine concrete technology. By the 1940s, the concrete technical standards in Brazil were more advanced than those in many foreign countries. Thanks to its innovative structural solutions, even the Ministry of Education and Health building became an issue for discussion in specialized international publications at the time of its inauguration in 1945.

The original materialization of Niemeyer's experiments with structural design was rendered possible through the architect's close collaboration with engineer Joaquim Cardozo (1878–1978). Together they designed the Pampulha complex in Belo Horizonte, beginning in 1941. In 1955, Cardozo commented on a few aspects of contemporary Brazilian architecture:

'It is clearly a tendency towards wide surfaces made into true concrete *sheets*. I say *sheets* because they

Figure 12. V-shaped supports against upright columns, forming a palisade (reproduced from Niemeyer, Belmont-sur-Lausanne, 1977).



form thin layers that suggest an intimate lightness that greatly resemble envelopes of hot-air balloons and dirigibles (Figs 14, 15). They are surfaces of variegated form and inclination that advance and widen, retreat or narrow down as they participate in a busy, nearly magical space, comparable only with the spatial expression of the baroque style . . .<sup>11</sup>

In his vigorous defence of arches, domes and shells, Cardozo emphasises the catchword *lightness* in

reference to structures, which turned out to be the trademark of his Brasília designs.

'Hierarchy' and 'architectural style' were the words that Niemeyer employed to justify the combination of structure and visual elements in his building designs:

'At the Palace of Dawn [the official presidential residence in Brasília], my objective was to define a mode that would characterize not only a residence, but also a true palace, with the quintessence



of grandeur and nobility required of it. To this end, I took advantage of the structure itself, the style of which permeates the entire construction, gave it lightness, dignity and this different aspect – as if it softly alighted on the ground. [...] In the National Congress building (Figs 16, 17), my objective was to locate visual elements in consonance with their various functions, while giving them their due importance and treating them as a set of pure and well-balanced forms. [...] For the Place of the Three Powers, where I focused on unity, I designed a structural element that could serve equally the two palaces – the presidential and the Supreme Court – thus securing for the complex the same atmosphere of sedateness as the great European squares, all true to the scale set by Lucio Costa's magnificent master plan'.<sup>12</sup>

Niemeyer's designs for buildings at Brasília sprang from the tension between structure and architecture:

'Within this architecture, I endeavour to shape my projects, characterizing them whenever possible by



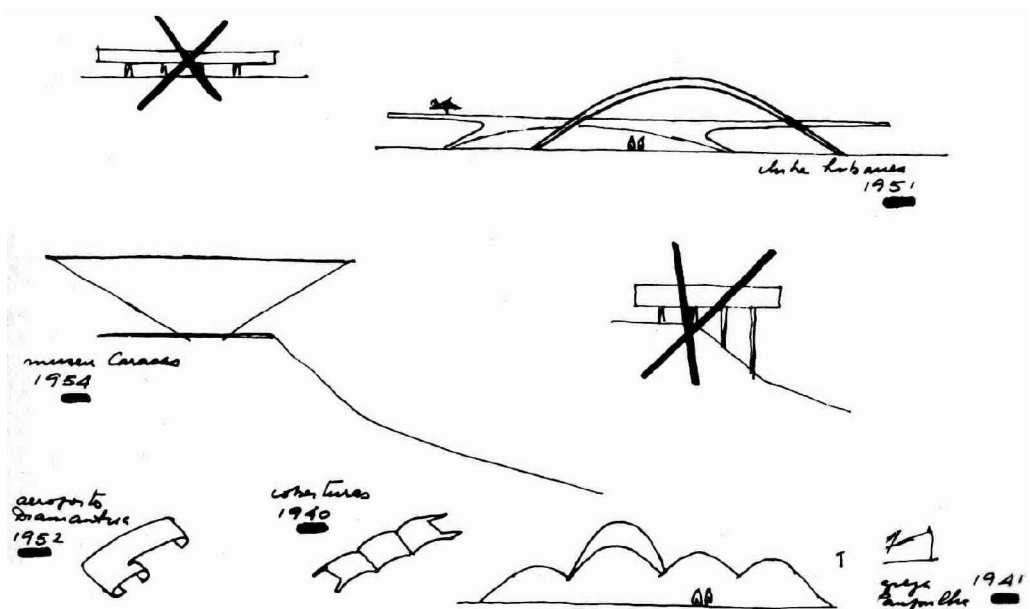
Figure 13. Juscelino Kubitschek Residential Complex, Belo Horizonte, 1951–58.

Figure 14. Middle School, Uberaba, 1954.

the structure itself, which is never based on the radical impositions of functionalism, but – and always – on a search for new and varied solutions, *logical if possible within the static system*. Therein, I fear no contradiction of form with technique and function, in the certitude that they alone remain the solutions that are beautiful, unexpected and harmonious. To this end, I accept any device, any compromise, convinced that *architecture is not just a matter of engineering, but an exteriorization of mind, imagination and poetry*'.<sup>13</sup> [my italics]

Niemeyer's poetic licence cost him severe admonishment from Pier Luigi Nervi. In an article published in *Casabella-Continuità* in 1959,<sup>14</sup> the Italian concrete designer criticized the principal Brasília palaces, arguing against the implied 'rationality' and the 'structural truth' of his forms. He noted that at the Palace of Dawn the colonnade on the main facade is interrupted at the main entrance ramp, thus not only discontinuing the logical sequence of load distribution at the portico but also symmetrically cutting in half the section of the columns on both sides of the ramp, without any

Figure 15. Arches, vaults and light structures (reproduced from Niemeyer, Belmont-sur-Lausanne, 1977).



visible reinforcement of the portico structure. At the Palace of the Uplands (the presidential seat), Niemeyer resorted to the same expedient; the line of columns erected at regular 12.50 m intervals is interrupted for 37.50 m at the entrance ramp without revealing any visual modification in the roof structure of the wide verandah that surrounds the building (Fig. 18). Despite his severe reviews, Nervi became extremely curious about the difficult technical resolution reached for the saucer-shaped roof of one of the National Congress buildings. Unfortunately, all of Cardozo's concrete structural designs have been lost. Another apparent struc-

tural/visual discrepancy is the arcade of the Palace of the Arches (the Ministry of Foreign Affairs building, Fig. 19). This structure is distinguished by its regular intercolumniation (as well as by the slenderness and elegance of the portico system), this suggesting a uniform peripheral load distribution all along its four identical fa ades. In reality, only two of these fa ades contribute to support of the roof because its structure is arranged longitudinally.

Joaquim Cardozo's structural designs were not constrained by technical standards. It might even be claimed that these standards were overlooked in the name of boldness of form, as if he was

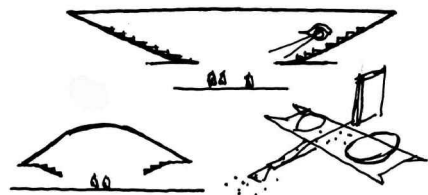
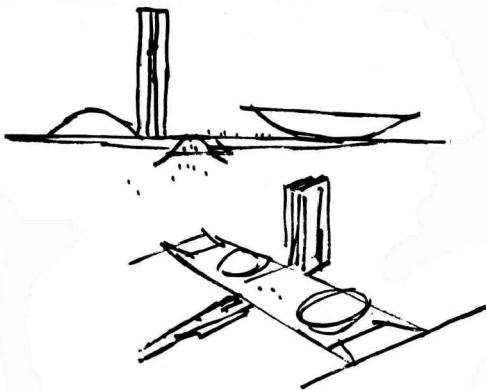


Figure 16. The National Congress Building (reproduced from Niemeyer, Belmont-sur-Lausanne, 1977).

Figure 17. National Congress towers, Brasília, 1958–60.

Figure 18. Palace of the Uplands, Brasília, 1958–60.



Figure 19. Palace of the Arches, Brasília, 1962–70.



Figure 20. The Palace of Uplands and the Palace of Supreme Court pillars (reproduced from Niemeyer, Belmont-sur-Lausanne, 1977).

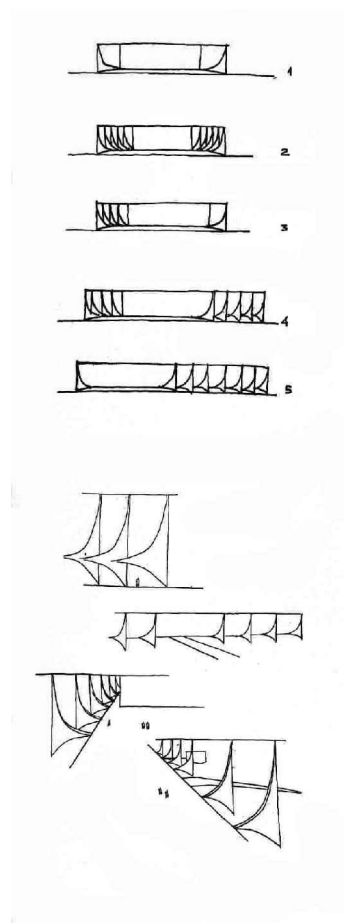
working in a land without construction regulations. The structural designs of the Brasília palaces required that not only the architect and structural designer, but also the builder, came up with creative solutions. It is known that, to allow for the slenderness of the Palace of the Uplands columns specified in the design, their bases were virtually transformed into encased steel structures, which were subsequently treated to prevent crumbling of the mortar coating (Fig. 20).<sup>15</sup> Decades later, Niemeyer stated that his structural engineer was not in the least troubled by these issues:

'I remember just how Cardozo used to react to this type of criticism: "one of these days I will finish my columns with solid steel elements. They will become lighter, which is enough to justify this process"'.<sup>16</sup>

Nervi criticized Niemeyer for his tendency to create structurally inconsistent forms – in terms of statics versus aesthetics – just as Jørn Utzon was criticized by the Italian engineer for the static and constructive anti-functional design of the Sydney Opera House in Australia (1957–74).<sup>17</sup> Both architects gave solutions other than those included in the formal repertoire of Western architecture.

### Architecture parlante and the quest for the new

Two years after the inauguration of Brasília, and following another trip to Europe, Niemeyer felt that the ongoing manifestations against orthodox rationalism further strengthened his position in his quest for 'different, beautiful and creative form'. Certainly the Brazilian architect was aware of the



debate conducted on one side by Banham, Pevsner and Zevi (in favour of a more orthodox functionalist posture) and Ernesto Rogers and the Neoliberty group in Italy on the other;<sup>18</sup> furthermore, he endorsed the historiographic rehabilitation of Gaudí (under way in the late 1950s) in terms of boldness

and fantasy (in his discourse Pevsner deplored the 'neo-Gaudí' trend). All this excitement perfectly matched the ideas of the Brazilian architect, who wrote:

'It also explains why certain architects evolve, as if led by intuition; they size their structures – columns, beams etc. – according to their fancy; they confer on them lightness, or yet a sturdiness, that deliberately counters, in one way or another, the strict requisites of reinforced concrete . . .'<sup>19</sup>

With this statement Niemeyer unconsciously postulated an argument along the Beaux Arts line; the exact scope of a structure resulting from an accurate design that meets all physical requirements does not in itself guarantee beautiful forms in a building. It is up to the architect to interfere so as to ensure a formal organization of the set – even if he interferes with the logic of statics – thus designating the building as an *architectural* design.

Another apparent 'reminiscence' of historicized encoding is found in Niemeyer's discourse against the repetition of architectural elements:

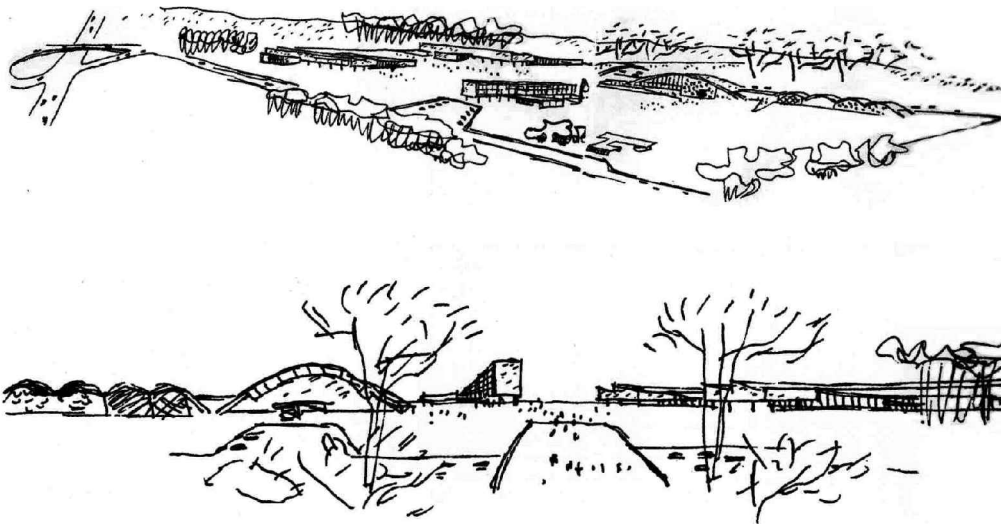
' . . . Stripping buildings of the indispensable character that should be suggested by what they are to be used for and by the suitability of the design. Thus public buildings, schools, theatres, museums, residences etc. all come to have an identical appearance, despite varying programmes, programmes that should lead to solutions of the utmost interest in which full use is made of the possibilities of modern techniques'.<sup>20</sup>

Although, here, Niemeyer presents a rhetorical defence of '*architecture parlante*', this is his last point of contact with both his Neoliberty peers and other 'historicizing' trends from which he differed in terms of formal approaches to architectural expression. To the Brazilian architect, 'the unlimited possibilities of contemporary technology' constitute the frontiers for incorporating tradition into architecture. Unlike Lucio Costa – who, since the 1930s and 1940s, had been designing houses with distinctly formal references to the Brazilian colonial style – Niemeyer resorts to abstract quotation from the past. He applies personal abstraction to subvert traditional forms and create, for example, columns of totally unprecedented design and roof canopies never before used for churches and schools: in short, forms that bear little or no trace of the remote or recent past, mainly because they were not feasible before the advent of reinforced concrete. Ultimately, these references become idiosyncratic or even self-referential. In this sense, Niemeyer's work has taken a course diagonal to the postmodern trends that adopt a mimetic approach in relation to the history of architecture.

### **Beyond the building**

During his pre-Brasília period Oscar Niemeyer seldom practised town planning. The buildings in the Pampulha district were the first large-scale designs he carried out to completion, but he was not responsible for the urban plan. The pioneer endeavour of urban-scale design was the CTA complex – Centro Técnico da Aeronáutica [Aeronautics Technical Centre] – a research campus located in the city of São José dos Campos, in the state of

Figure 21. CTA Complex, S o José dos Campos, 1947–55 (reproduced from A. Penedo, *Arquitetura Moderna S o José dos Campos*, S. José dos Campos, 1997).



S o Paulo, a public competition that he won in 1947 (Fig. 21). This urban programme was not unfamiliar to Niemeyer, who in 1936 had integrated a team led by Lucio Costa, which designed the university campus of Rio de Janeiro (unbuilt) – clearly influenced by Le Corbusier’s inventive notions of urban planning. The CTA plan contains references to this proposal.

It was particularly in Brasília that Niemeyer refined his syntax applied to building, ensemble and character, thereby crystallizing his view of the relationship between buildings and open spaces. The architect claims to have handled three different situations upon designing the new Brazilian capital:

‘... that of the isolated building, completely open to free fancy, despite the requirement to express its own distinctive features [Palace of Dawn, Fig. 22]; that of the monumental building, in which aesthetic details yield to the overall composition [the National Congress Building]; and finally, that of the building complex layout, which calls for unity and consistency, above all [administration blocks along the Ministerial Esplanade].’<sup>21</sup>

It should be noted that the urban plan of Brasília was designed exclusively by Lucio Costa. Oscar Niemeyer did not participate in this earlier stage of the city plan; instead, he was commissioned to design the main public buildings of the new

capital, and in this process gave his natural contribution in terms of establishing a dialogue between the architecture and the urban setting created by Costa.

When Niemeyer’s designs involve urban scale, the solution of buildings devised and organized to suit a functional hierarchy over an open territory is virtually unavoidable. As in Brasília, the ‘three situations’ described by Niemeyer regulate the mass plan and the formal appreciation of building components: the ‘ensemble solution’, involving standardized and repetitive structures with simple prismatic geometries (administration buildings, housing blocks e.g. ZAC in Grasse, France of 1972, or the Tietê Park in S o Paulo of 1982, Fig. 23); the ‘monumental building’, devised as a major composition to the detriment of plastic detail (e.g. the main towers of building complexes at the University of Constantine in Algeria, or the administration building at the Tietê Park); and the ‘isolated building’, of free composition and privileged, ‘special’ designation (e.g. cultural centres, auditoria and monuments such as the Pantheon of Liberty and Democracy in Brasília, Fig. 24). A fourth demand is placed together with these ‘three situations’: the articulation among buildings – ordinarily built at a reasonable distance from one another and separated by extensive lawns crossed by pedestrian paths, roads or even large patios and other paved areas – while taking into consideration all the traits,

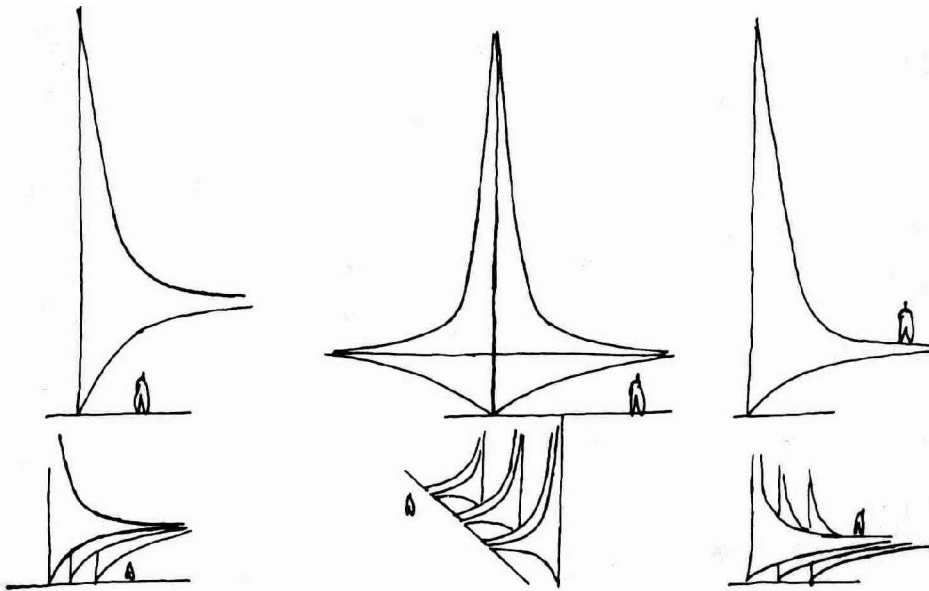


Figure 22. The Palace of Dawn and the Palace of Upland pillars (reproduced from Niemeyer, Belmont-sur-Lausanne, 1977).

virtues and drawbacks to which users of this type of city scheme are exposed.

Niemeyer's basic vocabulary of urban design is restricted to Le Corbusier's original repertoire, the Athens Charter and the experience of Brasília. Throughout his career the architect has specialized in designing plans for virgin land, where the void does not hinder the architect's freedom to intervene on untrammelled territory. The great affinity between Niemeyer's design and rationalist urban planning springs precisely from his ability to handle the void, eager as he is to arrange or rearrange spaces, overlooking previous urban tissues and forms, and following the order of open spaces dotted with buildings. This does not mean that Niemeyer has created many designs as *tabula rasa* interventions. However, when intervening in the urban context, his sketches and mock-ups clearly reveal his desire mentally to separate or disregard any pre-existing ambience. At times these insertions have generated controversial results, as for example at the House of Culture in Le Havre, France (1972–83), where Niemeyer's curved surfaces deliberately contrast with the buildings designed by August Perret for that port city; on the other hand, there are the Sambadrome, which Niemeyer designed for Rio de Janeiro's carnival parades (1983–84) and the Memorial to Latin America in

S o Paulo (1987–89), which provide coherence to the surroundings and the 'scar tissues' resulting from radical interventions in old urban areas (Fig. 25). Here the architect's attitude involved bestowing on these spaces new references and both functional and visual ordering.

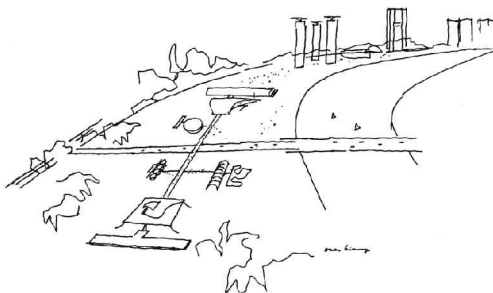
The Brazilian architect's strategy for urban design depends on favourable conditions. Furthermore, should the commission involve a building design no matter what its destination, place of implementation or even its relationship with the surroundings, it will be regarded and designed as an 'isolated' structure worthy of receiving all the aesthetic attributes that have distinguished his work. Oscar Niemeyer is a legitimate representative of the urbanism described in the Athens charter, without the *esprit de corps* of an urban theorist.

### Structure

It is unlikely that, upon reaching the age of 60, an architect is still prone to change, radically, his way of thinking. During the two decades that followed the Brasília designs, Niemeyer (who was just 50 years old when engaged on the new capital buildings) worked mostly in foreign locations, where he sought political exile following the 1964 military coup in Brazil. The architect's post-Brasília period has been characterized by the refinement of

Figure 23. Tietê Park, S o Paulo, 1982 (reproduced from O. Niemeyer, *Parque do Tietê, S o. Paulo*, Almed, 1986).

Figure 24. Pantheon of Liberty and Democracy, Brasília, 1985.



an aspect of his previous discourse, the appreciation of large-format reinforced-concrete structures. The architect acknowledges the quest for a technology to allow designs employing an increasing use of large cantilevers and free spans – besides including precast elements in his repertoire – without impairing his particular aesthetics. In his work the notion of lightness is conveyed by the ‘flight’ of vigorous structures.

The transitional milestone of this attitude is the headquarters of the Mondadori publishing group in Milan (1968–75). At the request of Giorgio Mondadori, Niemeyer designed the building as a clear reference to the Palace of the Arches in Brasília. However if, on the one hand, the design of the Brasília columns has been ‘quoted’, but with irregular intercolumniation, on the other hand the five storeys of the building, which hang from roof beams, charge the structure as a whole with increased loads (Figs 26, 27). In Milan, that which Niemeyer used to say in the 1950s became, literally, more concrete, ‘when the structure is finished, architecture is present’.

The design for the University of Constantine in Algeria (1969–72) incorporated other technical, reinforced concrete design skills; the classroom block was built with 6 m tall beams, 50 m wall spans and 25 m cantilevers. The auditorium is a bi-articulated portico spanning 60 m, supporting a double-vaulted shell that covers a 3500 m<sup>2</sup> area (Fig. 28). The Rio de Janeiro Music Centre (sketched in 1972 but unbuilt, Fig. 29) was planned in collaboration with a former critic of Niemeyer’s structures, Pier Luigi Nervi, who calculated a huge platform, hung from a single mast, with 50 m spans. Other illustrations of virtuosic structural design are the headquarters of Fata Engineering of Turin (1976–81, Fig. 30) and the Rio de Janeiro Sambadrome (1983–84), in terms of both sculptural versions in concrete of the great arch, and in the efficient employment of precasting of tiered seating structures. The most recent examples of these preoccupations are to be found in the buildings that integrate the memorial to Latin America in S o Paulo (1987–89): the function hall, which houses a 60 m span prestressed beam; and the library which has set a world record with its 90 m

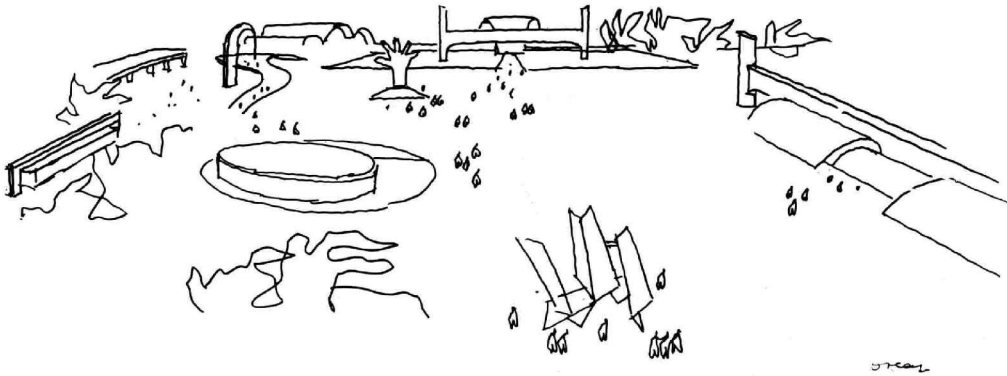


Figure 25. Memorial to Latin America, São Paulo, 1987–89. (Courtesy Memorial to Latin America)

span prestressed roof beam (Figs 31–33). In this proposal Niemeyer enjoyed complete architectural freedom, but the building composition, which includes vaulted structures that rest on this beam, does not offer a clear view of this unprecedented open space, nor do the features of the resulting library room mirror the major technical achievement. The greatest difficulty, however, was calculating the beam for the function hall, which is subjected to a horizontal force because it resists the thrust of the vaulted, concrete shell. Notwithstanding, the will to form still prevails, and the Memorial to Latin America complex stands as conspicuous witness of such preoccupation.

### Nonagenarian desires

Today, as he approaches his ninetieth birthday, Niemeyer is not much different from the Niemeyer of the 1950s – at least not in terms of his architectural reasoning. On occasion, the celebrated 'baroque' style attributed to him has been but a stereotyped image, for curvilinear planes and cutouts in themselves are not 'bar-

oque' traits though they might symbolize the 'irrationalism' attributed to the 'baroque' by classicizing mentalities. Although the 'baroque' may be characterized by excessive ornamentation, in his trajectory Niemeyer increasingly reduced the number of details, and appreciated structure as an aesthetic milestone *par excellence*. Even a distinguished characteristic of Brazilian architecture, the *brise-soleil* employing surprising elements (blades, sheets, hollowed blocks) and optical effects, was gradually eliminated from Niemeyer's façades to favour a formal simplification through suppression of elements juxtaposed to structure. But optical illusion is a baroque contrivance and, in Niemeyer, it is precisely the structural *trompe l'oeil* that so disturbed Nervi, which duly characterizes his inclination towards genuine baroque catchwords such as 'fantasy' and 'exuberance'. In his work there is no reference to the historical Baroque nor to a baroque-like historicism. The forms of his buildings do not make any reference to the history of architecture. Most of all, they are self-referentially modern, always seeking

Figure 26. Mondadori Headquarters, Milan, 1968–75 (reproduced from Niemeyer, Belmont-sur-Lausanne, 1977).

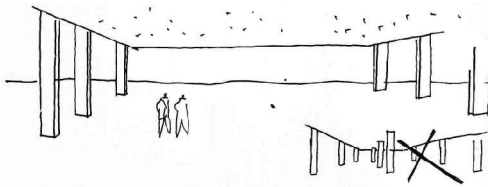
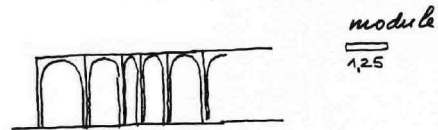
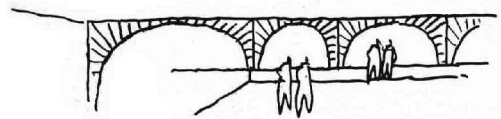
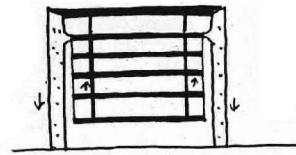
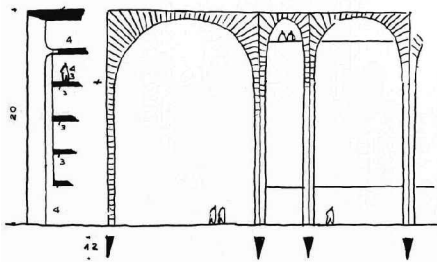


Figure 27. Mondadori Headquarters, Milan, 1968–75 (reproduced from Niemeyer, Belmont-sur-Lausanne, 1977).

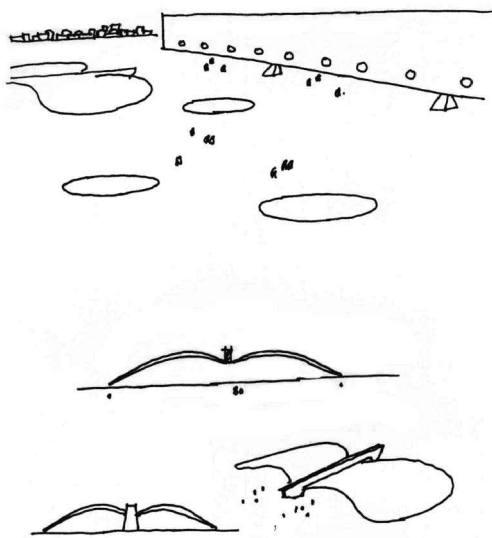


the new, the formal surprise, in cooperation with structural engineers and builders who have stretched their resources to meet the demands of his architecture. They have constructed columns that, beyond merely meeting static demands, respond to the seduction of form; beams that represent a truly structural and compositional *tour de force* beyond mere response to function; shells that display a love for curves rather than a rational alternative to straight lines. This is where Niemeyer's inventive and disturbing genius lies. In the architect's mind, the quest for beauty – which is for him a true 'function' as important as attending to the programmatic needs of a building – is an ancestral imperative. Furthermore, beauty has its own cosmogeny as the origin of each social personality that comprises the kaleidoscope of cultures on Earth.

The imposition of different types of homogeneous architectural 'logic' and 'consistency' were the major banners of the European Modern Movement. Niemeyer is not concerned with these issues.

Perhaps he is a 'proto-postmodern' architect who devises unusual forms that are not classified in accordance with the academicism of architectural rationality. He could be said to abide by the same nihilism as the so-called 'postmodern condition', as interpreted by an orthodox rationalist, although he has in fact nothing to do with it.

According to the principle of contradiction, 'it is impossible for something to be and not to be at the same time, in the same manner'. Niemeyer's work is full of such ambiguities; it results from non-transferable personal design and aesthetic predilections. Oscar Niemeyer is an experienced and



sought-after architect, and his patrons waive detailed accounts of his *oeuvres* – just as he waives criticism of his work. Apparently he needs no other justification, for Oscar Niemeyer has, himself, become living vindication.

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Figure 29. Rio de Janeiro Musical Centre, 1972 (reproduced from *Módulo*, 40, 1975).

Figure 30. Fata Engineering, Turin, 1976–81 (reproduced from G. Luigi and O. Niemeyer, *Une Esthétique de la Fluidité*, Marseilles, Parenthèses, 1987).

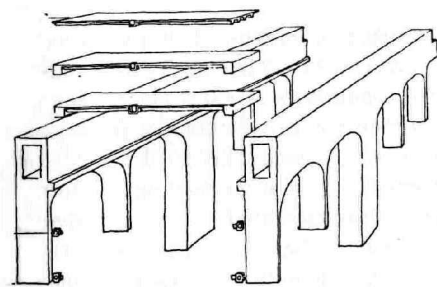


Figure 31. Function Hall of the Memorial to Latin America, S o Paulo, 1989.

Figure 32. Library of the Memorial to Latin America, S o Paulo, 1989.

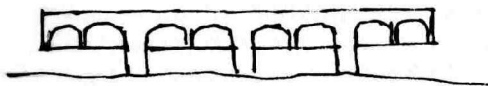


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