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Alternative Functions: Oscar Niemeyer and the Poetics of Modernity

Justin Read

In August 2003, a group of protesters stormed the Praça dos Três Poderes (“Plaza of the Three Powers”) in the center of Brasília.¹ All three branches of Brazil’s federal government have their main palaces around this great plaza at the southern tip of the capital’s “Monumental Axis;” the particular target on this day being the Congresso Nacional. At one point a small group among the hundreds of protesters around the Congress armed themselves with office chairs and whatever else they could find, and began to smash the large plate glass windows that form a wall along the northern flank of the structure. This violence was, of course, primarily political in nature, although it is doubtful that many of the protesters realized just how profoundly political it was. The immediate cause of their outrage was a severe diminution of state pension benefits proposed by the government of President Luiz Inácio “Lula” da Silva of the leftist Partido dos Trabalhadores (“Worker’s Party”). The protesters were current and retired state bureaucrats, a class of workers who have traditionally been promised rather exorbitant retirement benefits by every political regime (democratic and autocratic alike) since Getúlio Vargas’s modernizing Estado Novo (1937–46). Although Lula had been elected to the presidency as the representative of this bureaucratic class, immediately upon assuming his post he was faced with an impossible fiscal choice brought on by a pension system the nation could no longer afford: either betray his own constituency, or plunge Brazil into bankruptcy, destabilizing international finance markets in the process.²

The protesters in Brasília that day were making as much of a *poetic* statement as they were making a *political* one. My

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254 purpose in the present essay is to show how the aesthetics of modernism come to bear upon these sorts of political actions which are themselves the result of impossible economic choices. Modernist poetics has traditionally been theorized in terms of detachment; as Peter Bürger would have it, for instance, the avant-garde work of art refuses to provide coherent meaning, and only through extreme semantic difficulty does the work purport to initiate a radical change in the reader's life praxis.³ When viewed in relation to Brazilian modernism and its architecture, however, this sort of negatively-charged, deferred engagement with political praxis is not quite relevant. More to the point, the modernist architects who designed Brasília—most notably Oscar Niemeyer, the architect of the city's principle monumental structures—were directly commissioned by the nation-state to create their works. Brazilian modernism is thus inconceivable without reference to the international political economics of Brazil's development; in short, we will find that modernism always depends upon modernization. Yet the surfaces of Brasília—precisely those surfaces first imagined by Niemeyer and later fractured by the protesting bureaucrats—exhibit a form of lyricism that is also highly critical of developmentalist modernization. Ironically, in order to properly comprehend the link between modernism and modernization, it is necessary to link modernism to modernism, to enjoin architecture and poetry in a truly structural form of poetic close reading.

By smashing the plate glass of the Congresso Nacional, in other words, the protesting bureaucrats were “closing” a rather dizzying historical circuit between modernism and modernization. “Modernization” here may be understood as not just the development of an industrial economy, but also the consolidation of a national state under a forceful, centralized government, which itself facilitates economic development.⁴ Since the Estado Novo, such consolidation has been sought through state patronage of national aesthetic projects and state co-optation/incorporation of entire social classes such as industrial labor. In essence, a large state bureaucracy was created after 1930 as Brazil sought to modernize its political infrastructure. Members of this bureaucracy, in turn, have been incorporated into the state as a formal constituency—one that has been satisfied through the promise of a generous social security net. With this political base of the population (along with heavy borrowing from international development banks), the populist president, Juscelino Kubitschek, embarked on an aggressive path towards industrialization in the 1950s, and led efforts to build an entirely new capital in the interior of the country as a sign of Brazil's “great leap forward” into industrial modernity.⁵ Brasília was to shine as both an emblem of the nation's aesthetic and economic “maturity”—a sign that Brazil could produce the world's greatest art and industrial goods. In attacking the Congress building, therefore, the protesters were destroying part of a structure that could not have existed without their political support, even as it had come to symbolize the very debility of their own political power.

As concerns the aesthetics of the place, the bureaucrats were also physically disrupting a “pure” architectural surface that had been intentionally placed there by Niemeyer in accordance with the precepts of functionalist style. We may find it ironically poetic (or poetically ironic?) that government functionaries would so violently clash

with the architectural functionalism of the Congresso Nacional. There is another link between poetry and architecture, however, on which I wish to elaborate. It is still not clear whether we can speak of a common “modernism” in architecture and literature, or whether we must think in terms of plural modernisms.⁶ Recent studies by Jeffrey Schnapp,⁷ Mark Wigley,⁸ and Charles Perrone⁹ (among others) point to strong links between urban architecture, literary-cultural studies, and state formation in the past century. Modernist architects, for instance, especially in the early phases of the International Style (ca. 1925–35) often directly served the “modernizing” political regimes of the day, as Schnapp has convincingly demonstrated in the case of fascist Italy. Perrone has shown in the specific case of Brazil that the advent of its poetic *modernismo* after 1920 is inconceivable without the rapid urbanization of the country, particularly in São Paulo. Modernist poets actively sought the re-fashioning of national identity, and in many cases they were co-opted into Vargas’s proto-fascist Estado Novo.¹⁰

Thus, in spite of the disparities between their respective art-forms, both modernist architects and modernist poets in Brazil may be linked in terms of their official institutionalization by the state. This is nowhere more apparent than in the professionalization initiatives after 1930. One of the hallmarks of the Estado Novo was the formalization of professional higher education. It was in this period that the Faculdade de Letras would be founded at the Universidade de São Paulo (USP) under the leadership of the great literary scholar, Antônio Cândido; and that the architectural school of the Escola Nacional de Belas Artes in Rio de Janeiro would be created under the directorship of the poet Lúcio Costa. A discernibly Brazilian aesthetic sensibility would emerge in the first generations educated in these institutions. Cândido’s disciples at USP, the poets Haroldo de Campos and Augusto de Campos, would lead the charge of the “cannibalistic” *poesia concreta* which they formulated as members of the Noigandres group: the “concrete” of the concrete poetry, however, being a direct reference to Brazilian architecture and its predilection for reinforced concrete. Costa would collaborate with his first (and greatest) disciple, Oscar Niemeyer, in the construction of the Brazilian Pavilion at the 1939 New York World’s Fair, a work that would establish the young Niemeyer as a rising star of international modernism. In the 1940s Niemeyer received commissions throughout the Western Hemisphere, and would work with Le Corbusier on the initial plans for the United Nations headquarters in Manhattan. Perhaps most significantly, Niemeyer grabbed the attention of the then-governor of the Brazilian state of Minas Gerais, Juscelino Kubitschek, who commissioned several works from him for the state capital, Belo Horizonte. When Kubitschek assumed the presidency in 1955, he spearheaded efforts to design and build Brasília as part of his program to advance Brazil “50 years in five.” The distinctive urban plan of the new capital, of course, would be designed by Lúcio Costa; and the majority of the city’s monumental projects would be awarded to none other than Oscar Niemeyer.

The monuments of Brasília are the showcase of an architect who had recently come into his own fully mature, individual style—particularly in the exquisite curvature that is now so characteristic of Niemeyer’s work. Yet this style can only be properly understood within the context of Niemeyer’s formation as an architect. In addition to his affiliation

256 with the Escola Nacional de Belas Artes, Lúcio Costa was also the first Brazilian representative in the Congr s Internationale de l'Architecture Moderne (CIAM). Costa became particularly close (personally and professionally) to Le Corbusier, and as such he became a strong proponent of the functionalism at the center of CIAM's so-called "International Style."¹¹

This particular type of functionalism serves as the backdrop to the "poetry" of Niemeyer's work, and thus merits a brief digression. We are inclined to think of functionalism as a theory of use. Modernist architecture can be described as functional in the way it strives to accommodate the intended uses for which it has been charged or commissioned, such that all elements of design serve rational and utilitarian ends; or as Louis Henry Sullivan succinctly and alliteratively put it, "form follows function." However, as it was originally imagined by CIAM after 1925, functionalism is much more a theory of production than use. Chief among the functionalist tenets of the International Style were: an understanding of structure in terms of geometric volume (grids, matrices, cubes) in order to economize structural stability and maximize interior space; a utilization of regularized and standardized elements in construction in order to promote the use of pre-fabricated components and also as a way to drive down construction costs; and an elimination of decoration except as functional "integral ornamentation," which effectively eliminates the need for highly paid artisans in construction.¹² In the heyday of the International Style (1925–50), projects of similar stature were produced in Europe and the United States following these tendencies: for one, the so-called "cult of whiteness" or "Purism" emphasized pure white and clear glass surfaces and constructions utilizing regular linear forms or quadrilateral volumes in particular. In all respects, it is necessary to underscore that the intention of CIAM was always to re-scale urban architecture according to the exigencies of mass production and industrial pre-fabrication.

Indeed, in one of the first theoretical manifestations of the International Style, *Towards a New Architecture* (1927), Le Corbusier consistently refers to "architecture" not as an "art" or as a "craft," but as an "industry." He intends his new architecture to bring this "industry" into the age of mass production:

Industry has created its tools.
Business has modified its habits and customs.
Construction has found new means.
Architecture finds itself confronted with new laws.¹³

Unmistakably, Le Corbusier's perspective is epitomized here in the iconic connections his characteristically aphoristic style establishes. "Architecture" is to be (re-)conceived in line with the other grammatical subjects that precede it on the page: "Construction," "Business," and "Industry." The overt goal of Le Corbusier's theories, moreover, was to utilize modern architecture towards utopian ends—as a constructed "rational" environment that would lead to civilization, peace, and prosperity. Le Corbusier's architectural revolution, in other words, is geared to put an end to violent military or

political revolutions. Such statements are often made in *Towards a New Architecture* through the iconic juxtaposition of Le Corbusier's text and rather peculiar visual images. For instance, the chapter from which the above citation has been taken, "Architecture or Revolution," ends with a rather disturbing image: a drawing of a briar pipe.¹⁴ The purpose of this image could not be clearer: by design the pipe fits comfortably into the hand, but its design is also so simple that the pipe is suitable for mass-production; because mass-produced, furthermore, the pipe becomes an affordable commodity that allows every man the luxury and relaxation of smoking tobacco. In essence, the briar pipe is the very epitome of both functionalist design and all the "civilizing" benefits made possible by industrialization.

Yet the aesthetic pleasure of the briar pipe as presented by the Swiss architect would seem antithetical to modernist poetry. In response to Le Corbusier's image of the pipe, for instance, we can find René Magritte's 1929 work, "Treachery of Images"—an image of a briar pipe underlined by the words, "Ceci n'est pas une pipe." No doubt this coincidence has received attention elsewhere. While Le Corbusier remains firmly focused on concrete materiality, Magritte's words attempt to convince us of the utter immateriality of the poetic—or rather, of the reality of the canvas as opposed to the unreality of what is spoken by it. The poetic sense of Magritte's work derives from the literal meaning of words puncturing the lack of literal meaning in the image; while we seemed trained to think of the relation between the object represented and the image representing it as one of tautological equivalence, the words in Magritte's painting compel us to view this relation in terms of metaphorical difference.¹⁵ This action may carry over into the general relation between modern architecture and modern poetry. There is no place in Le Corbusier's usage of the briar pipe for the sorts of poetic effects achieved by Magritte's usage of the briar pipe. Since Le Corbusier uses the image iconically to utopian ends, there is no room in his usage for a full-scale failure of reference and substantiality. On the other hand, Magritte's poetry may serve to critique Le Corbusier's utilitarianism, but this critique is not necessary to the immanent functionalism of the briar pipe. The relation between the two is casual, not causal. In general terms, then, lyricism could be construed as superfluous to the explicit aims of functionalism—and not just in the lack of ornamentation in functionalist design, but more generally to the civilizing ends of industrial architecture. Would the imputed superfluity of poetry vis-à-vis architecture thus negate the possibility of meaningful critique? And would it necessarily translate into mutual exclusion between poetry and architecture?

As alluded to earlier, Niemeyer's work seems born of an ironic relationship to the kinds of industrial modernization in the immediate background of functionalist design. Niemeyer's earliest projects seem perfectly situated within the Le Corbusier, Purist line of modernism. The lines and color of the 1930s Costa-Niemeyer collaborations, such as the Ministry of Education and Health (Rio de Janeiro, 1937) and New York World's Fair Brazilian Pavilion (1939), resemble nothing so much as Le Corbusier's work of the late 1920s and 1930s. Niemeyer's first solo commissions, as for example the Grande Hotel Ouro Preto (Minas Gerais, 1941), are likewise marked by the predominance of stark straight lines and flat white surfaces. Indeed, in working with Le Corbusier in the late

258 1940s on the initial site plans for the United Nations Headquarters, Niemeyer worked quite comfortably within the limits of the Swiss architect's modular design scales of the time. However, as Niemeyer progressed into the 1950s, he also began to veer noticeably from the International Style. The Praça da Liberdade apartment building in Belo Horizonte (1955) appears like a "stack" of cantilevered concrete slabs ringed around an amoeba-shaped tower lacking any sharp corners. (Fig. 1) The contrast of linear horizontal striation and fluid vertical curvature on the structure's exterior produces a sort of vibrating gestalt when viewed from the street. A similar contrast occurs in the complex of exposition spaces that Niemeyer built for São Paulo's Ibirapuera Park. Here, in what amounts to São Paulo's Central Park, we find three quadrilateral structures and a dome arrayed in a rectangle relative to one another; yet the four structures are linked by a giant, free-form canopy made of reinforced concrete that covers the pathways connecting the structures. Viewed from the air, the Ibirapuera complex literally looks like an element from a Miró canvas.

In fact, surrealism—and certainly not something like "pragmatism" or "utilitarianism"—would appear to be the guiding principle in Niemeyer's work after Brasília. The headquarters of the French Communist Party in Paris (1967) is essentially a glass-and-concrete quadrilateral akin to any number of urban constructions of the time; yet this one seems to have been warped or melted such that it twists around its site, such that parallel lines on its surface almost appear skewed. Subsequent works in France and Algeria are notable in their almost hallucinatory use of reinforced concrete. The Cultural Center in Le Havre (1972), for example, creates the illusion of being a single, mammoth slab of concrete forming a plaza set just below the level of the landscape around it; out of this plaza two irregularly-shaped "mesas" appear to spout up from the plaza as if pushed upwards from beneath the plaza floor. The plan for the National Mosque in Algiers (1968, not executed) is, in my estimation at least, the strangest of all of Niemeyer's work—a flattened tear-drop shaped structure with an ovate opening as its entrance, which would have seemed to hover over a pond surrounding it like a UFO. In designing all of these projects, Niemeyer has behaved more like an abstract sculptor than a functionalist architect. Perhaps in the twenty first century we have already become accustomed to architectural irregularity and wild curvature à la Frank Gehry's Bilbao Guggenheim or the Disney Concert Hall in Los Angeles. Yet we must remind ourselves that unlike Gehry, Niemeyer had no recourse to AutoCAD for the execution of his drafts, nor any recourse to computer technology to calculate the structural loads of his designs. Most all of Niemeyer's projects have been executed manually, as if by sheer intuition. They are "analogue" structures, not "digital" ones.

It is within this trajectory of Niemeyer's oeuvre, then, that I locate Brasília as a decisive break with contemporary European design philosophies that dominated the architectural world at the time, even as many of Brasília's monuments adhere to the International Style. Niemeyer's Brasília, in other words, represents a moment of maximum ambivalence on the part of the architect with respect to his contemporaries both in Brazil and abroad. Brasília itself exhibits many of the tendencies of International Style functionalism (e.g., open-use volume, linear geometry, and pure surface).

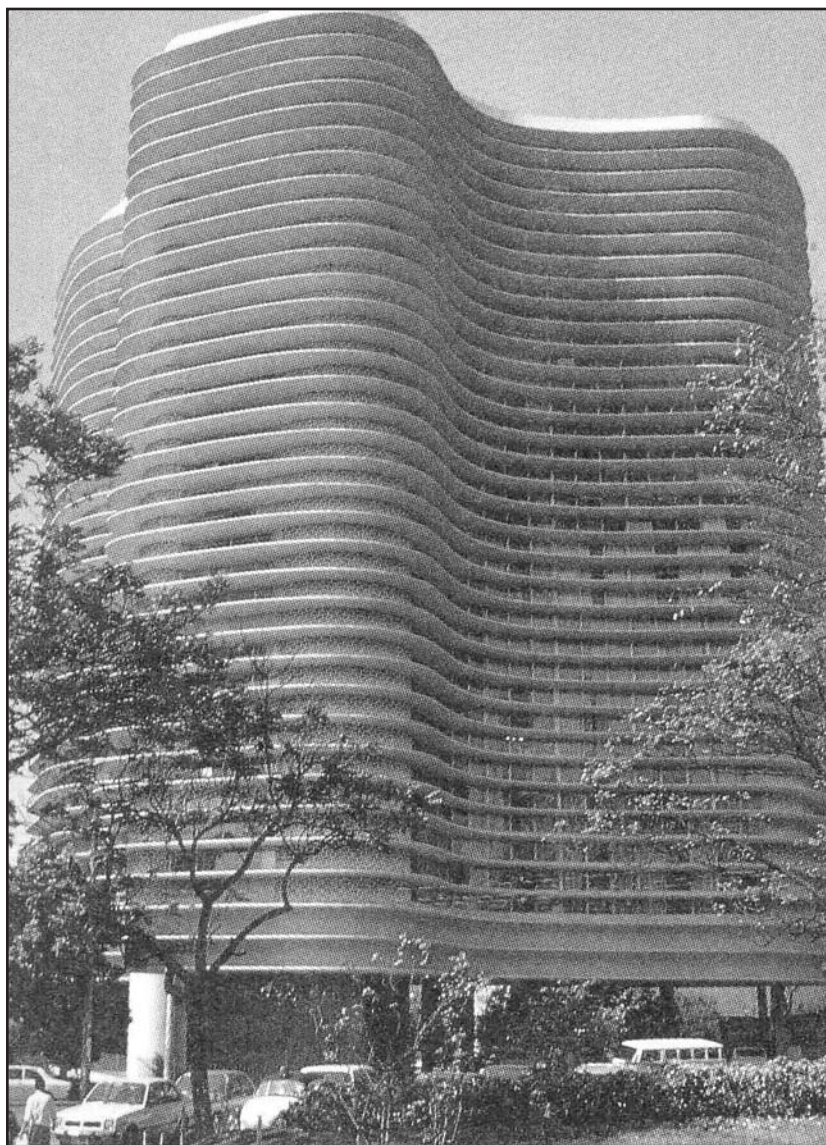


Fig. 1. Oscar Niemeyer, Praça da Liberdade apartment building (Belo Horizonte, 1955). Image by David Underwood.

Lúcio Costa's famous "Pilot Plan" for the city consists of two basic geometric figures: a segment of a line (the Eixo Monumental, or "Monumental Axis") intersected with an arc (to form two residential "wings," the Asa Norte and the Asa Sul.) Almost all of Niemeyer's monumental government palaces in the Distrito Federal—the Congresso Nacional (Fig. 2), the Palácio do Planalto (Fig. 3), the Supremo Tribunal Federal (Fig. 4), the Palácio da Alvorada, and the Cathedral Metropolitan (Fig. 5)—are concentrated at the southern "tip" of the Eixo Monumental after the intersection of the Pilot Plan, as one approaches the Praça dos Três Poderes (the Plaza of the Three Powers). And

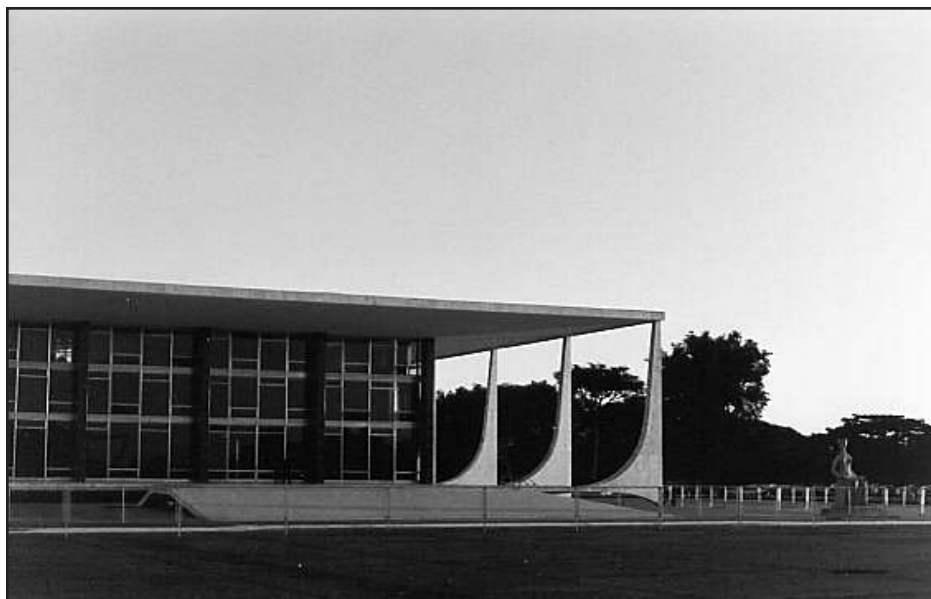


Fig. 2. Oscar Niemeyer, Congresso Nacional (Brasília, 1960). Image by Odile Cisneros.



Fig. 3. Oscar Niemeyer, Palácio do Planalto (Brasília, 1960). Image by Augusto Areal.

almost all of these structures are based on core repetitions of quadrilateral volumes (cubes and boxes), such that the roofs of the buildings cut straight horizontally parallel to the ground. (An exception to this rule is the Catedral Metropolitana, based on the figure of a cone.) Furthermore, these quadrilaterals are made primarily of glass and reinforced concrete. Glass and concrete surfaces are typically left bare, with little extraneous markings beyond marble facing. Reinforced concrete also serves as a cost-effective material that, particularly when mixed with asbestos, has proven remarkably



▲
Fig. 4. Oscar Niemeyer, Supremo Tribunal Federal (Brasília, 1960). Image by Odile Cisneros.



◀
Fig. 5. Oscar Niemeyer, Catedral Municipal (Brasília, 1969). Image by Augusto Areal.

durable in tropical climates. Within the buildings, Niemeyer's interiors are also typically "open-use"—large volumes not divided by permanent walls, but rather open to any number of semi-permanent variations depending upon the immediate requirements or desires of the buildings' occupants.

Although these aspects indicate certain economical considerations in Niemeyer's designs, however, their economy is not necessarily indicative of industrialization. Architectural functionalism must invariably be viewed as an aesthetic of the first world—of industrialized societies with extant capacities for the pre-fabrication of components. We may now be accustomed to a world in which even "underdeveloped" nations are now fully industrialized, but this certainly was not the case in mid-twentieth-century

262 Brazil. Indeed it is the very lack of industrialization that we can recognize in the highly poetic effects of Niemeyer's work in Brasília.

Niemeyer himself has placed lyricism at the center of his general aesthetic principles. In his acceptance speech for the 1988 Pritzker Prize for Architecture, for instance, Niemeyer states:

First were the thick stone walls, the arches, then the domes and vaults—of the architect, searching out for wider spaces.

Now it is reinforced concrete that gives our imagination flight with its soaring spans and uncommon cantilevers. Concrete, to which architecture is integrated, through which it is able to discard the foregone conclusions of rationalism, with its monotony and repetitious solutions.

A concern for beauty, a zest for fantasy, and an ever-present element of surprise bear witness that today's architecture is not a minor craft bound to straight-edge rules, but an architecture imbued with technology: light, creative and unfettered, seeking out its architectural scene.

As Charles Baudelaire once said, "The unexpected, the irregular, the surprise, the amazing are an essential part and characteristic of beauty."

And this, my friends, is what I have to say about architecture, a practice that has held me fast over the years, to my drawing board, at the beck and call of governments in compliance with the ruling classes, indignant at the misery that weighs upon a world socially unjust, a misery ignored, which our profession is powerless to better.

It is with regret that I am unable to attend the ceremony, and with great pleasure that I receive the prize with which I have been honored.¹⁶

Niemeyer here exposes the paradoxes in which he operates. His work relies upon the patronage of the ruling classes to whom he is at "the beck and call," and at the same time he remains attuned to social injustice. Despite his indignation, Niemeyer continued to provide designs for Brasília after the military assumed power in 1964, and was commissioned by the very right-wing dictators who were violently repressing political dissent at the time—strange for a Marxist-Leninist who in the speech just cited feels compelled to remember the incredible misery that surrounds him. Nevertheless, nowhere in these statements does the architect point to industrialization and modernization as a panacea to his nation's misery. Instead he underscores the importance of lyrical surprise. His buildings have been designed to stun and amaze the occupant or visitor; and to this end reinforced concrete, with its ability to support "uncommon" structure (bold curvatures and cantilevers above all), is the perfect medium with which to disrupt the rational expectations of the beholder. Perhaps most surprising of all, Niemeyer ties surprise to the experience of pure beauty; and indeed, he quotes a nineteenth-century French symbolist poet to justify his own modernist position.

Perhaps the apparent contradiction of an "aestheticist modernism" fits well in Brasília. As the exemplary modernist city in the world, Brasília's only purpose for being has always been its symbolism.¹⁷ The Pilot Plan was never intended to function merely towards the efficient transit between work and residence, or towards the rational zoning of services. In literal terms, Brasília is a colossal concrete poem, and as such its

dominant trope is metaphor. Brasília is a giant airplane in the subtropical high plains of Brazil. Brasília is the re-centering of the state, and therefore represents the re-ordering of the nation. Brasília is, furthermore, the industry of Brazil thrown into high gear in order to achieve velocities unprecedented in Brazil's history. Obviously, the metaphorical sloganeering I have provided here is highly suspect—except as an index to the desires of the capital's founders. Yet the metaphors inherent in Brasília does allow us to gauge Niemeyer's stance vis-à-vis the International Style: to wit, Niemeyer sets architectural structure in Brasília against poetic structure—relaying functionalist architecture into the terms of the poetic function as proposed by Roman Jakobson: "The poetic function projects the principle of equivalence from the axis of selection to the axis of continuity."¹⁸

When analyzing what Niemeyer has done in Brasília, in other words, one needs to pay attention to the ways in which metaphor slips into metonymy, differential similarity into contiguity. The starting-point for this analysis must be Niemeyer's anti-rationalism, marked in his radical use of curvature. To repeat, Niemeyer's constructions often approximate dream-scapes in which discrete elements are distributed in space in a fashion similar to the disposition of objects in surrealist painting. Indeed, in discussing his plans for the Praça dos Três Poderes, he has stated:

Yet, when thinking out the forms for those Palaces, I also bore in mind the kind of mood they would impart to the Plaza of the Three Powers. It should not seem, as I saw it, cold and technical, ruled by the classical, hard and already obvious purity of straight lines. On the contrary, I visualized it with a richness of forms, dreams and poetry, like the mysterious paintings by Carzou, new forms, startling visitors by their lightness and creative liberty.¹⁹

This is evident particularly in his designs for the Praça, in the linear geometry (the "purity of straight lines") of the edifice often interrupted by curvilinear elements "draped" over the main structure—elements Niemeyer himself equates with "dreams and poetry." In the case of the Palácio do Planalto (the palace of the executive branch), the roof and floor-levels of the palace appear as two horizontal planes of reinforced concrete that extend several meters beyond the sides of the main structure—a glass-and-concrete "box." These two planes are, in turn, connected with a series of thin, curved concrete columns (faced with marble) that appear to flow between the upper and lower levels. (see detail, Fig. 6) In effect, these curving columns of the Palácio do Planalto serve dual functions. They are first and foremost load-bearing, serving to hold the entire structure upright. Paradoxically, beyond merely buttressing the structure against the forces of gravity, they have also been given their particular form in order to defy gravity and to create space around the structure's mass. To repeat, the extension of the roof- and floor-planes beyond the area of the "box" creates a portico surrounding the entire palace, the space of which is delimited by thin columns. These columns, however, assume the shape of asymptotic segments of hyperbolas which begin horizontally from points along the lower plane and then "fly" both upwards towards roof-level and downwards to the level of the Praça. In this way the columns create the illusion that the entire structure, surrounded as it is by an airy portico, floats just above the grounds of the plaza. It



Fig. 6. Detail of the colonnade on the front of the Palácio do Planalto. Image by Toni Cumella and Ramon Sirvent.

seems perched rather delicately upon the few minimal points of its columns—columns which are themselves attached to the structure only at a few minimal points of contact. Significantly, these contact points occur at the asymptotes of the hyperbolas—that is, precisely at the segment of the figure which reaches an infinite limit.

Such a juxtaposition of quadrilateral and curvilinear figures in Brasília is not unique to the Palácio do Planalto. Niemeyer's Supremo Tribunal Federal (Brazil's Supreme Court which lies directly opposite the Palácio do Planalto on the plaza) repeats the use of hyperbolic columns to “float” the building above the ground. The Palácio da Alvorada (the president's residence, located just beyond the Plano Piloto) likewise uses hyperbolic columns to support its otherwise quadrilateral form. The Congresso Nacional at the entrance of the plaza (perhaps the most famous structure in Brasília) consists of the two chambers of Congress (Assembléia dos Deputados and Senado) at ground level of the city, separated by two thin rectilinear office towers that rise well above any other structure in the Plano Piloto.²⁰ Yet against the rectilinear form of the office building we find that both chamber houses are in fact paraboloid “bowls”—one paraboloid that widens downward, and one that bowls upward.

Such contrasts/unities of line and curve reach their maximum expression in the Catedral Metropolitana at the entrance of the esplanade leading to the Praça dos Três Poderes. The Catedral consists of 16 reinforced concrete columns interspersed with glass. The Catedral has no doors at its entry, merely a ramp under the small mote that rings the structure which leads underground and into the main chapel (the floor of

which lies below ground-level.) At first glance, the Cathedral comes into view as a cone that points to the sky, surrounded by the columns that lend the appearance of hands crossed in prayer, or of a crown of thorns. In point of fact, this “cone” does not exist at all, but is rather an optical illusion suggested by the structure of the building. That is to say, the structure of the Cathedral is only the 16 reinforced concrete columns that balance against one another at the top of the structure; these columns do not rest on top of a “cone” of glass underneath, but in fact support the glass itself. And each column, it should now come as no surprise, comes in the form of the asymptote of a hyperbola.

How can we account for this obsessive reiteration of hyperboloid and paraboloid figures? We are not in the habit of considering the preponderance of quadrilateral volumes in European architecture as obsessive; the use of such forms is pragmatic in the sense that they tend to be stable and thus easy to build with a minimum of structural deficiencies. Thus we might conclude that Niemeyer shuns pragmatism, since he has incorporated curvilinear forms simply because he can. Curvature serves as an expressive element of design that is both functional and anti-functionalist: reinforced concrete does function to support stable structures, yet this is not to say that Niemeyer’s use of reinforced concrete to support hyperboloid or paraboloid figures serves any function beyond its own being. The true “function” of curvature in Brasília’s monuments is simple, and therefore, surprising: curves ornament the site, curves are beautiful.

Niemeyer’s buildings in Brasília are, literally, flights of fancy. In the case of the two Palácios on the Praça dos Três Poderes, the hyperbolic columns have been incorporated only to lend a sense of lightness to the general aesthetic effect of the buildings. Rather than utilizing “heavy” cylindrical columns, both palaces have been designed to appear as floating on a few minimal points above the ground and reaching to infinity.²¹ These buildings, in turn, form part of a complex of monuments marked by a sense of irregularity. Certain forms repeat from structure to structure, but these forms in one monument are seldom symmetrical with respect to those in another. The arrangement of the monuments on site, moreover, leaves ample space between buildings for the natural landscape around the city to come into view. (Fig. 7) One is constantly reminded, in other words, that the swirling architectonic forms of the capital have been planted in the tropical horizons of Brazil.²² Despite the fundamental distinction between the thoroughly “artificial” environment of Brasília and the “natural” environment in which the city has been constructed, both environments must be seen in tandem at any point along the Monumental Axis. Wherever one’s line of sight originates, then, the site itself seems to invite what we might call “disruptive continuities.” Structures exhibit similar motifs, but not in a pattern that one might deem regular or symmetrical. This asymmetry also appears to play in the relation between the structures and the landscape. As a sign of “modernity,” Niemeyer’s buildings would seem fundamentally different from the landscape, itself a sign of “primordial” nature. Yet his architecture is not completely differentiated from the landscape: it doesn’t block it from view. Rather, the differences between Niemeyer’s architecture and Brazilian nature—differences we could only call “metaphorical” since they are signs of something else—are always poised on the verge of metonymical contiguity as the viewer beholds them together in the same space. Such



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Fig. 7. The Eixo Monumental (Monumental Axis) of Brasília, as seen from the city's television tower. The Congresso Nacional and Praça dos Três Poderes lies directly in center. Image by Augusto Areal

contiguity of differences between metaphor and metonymy—"disruptive continuity" between "primordial" tropics and "modern" concrete structure—produces a sensation that can be identified as quintessentially Brazilian.

This kind of poetic production should not be confused with any sort of escape from reality. On the contrary, the lyricism of Niemeyer's constructions arises as a means to cope with the social and economic disequilibria of Brazil. Brasília, we should recall, was built for a nation that had not fully "modernized" by the time the capital opened in 1960; at the same time, it is precisely the urge to modernize that produced a city that seemed far more "modern" than any other at the time, either in the third world or the first. Paradoxically, much of the sense of modernity surrounding it stems from Niemeyer's employment of "surreal" curved forms—to produce the sense that something "new" had been built unlike anything built before. These curvatures most likely would not have been possible in Europe or the United States. Because Niemeyer operated in a semi-industrialized context, he could not be confined to the rigidity of regular pre-fabricated components. On the contrary, the most cost-effective building materials at his disposal were those that could be assembled on-site—concrete poured over steel frames,²³ precisely the technique which allows maximum flexibility for experimentation with curvature. The architect's use of unconventional forms in Brasília thus stands as a direct index to the nation's level of industrialization at mid-twentieth century. Since many parts and components could not be pre-fabricated, Niemeyer was forced to improvise, which in turn promoted an architecture of improvisation.²⁴ In short, Niemeyer's work of the period could not have been functionalist per se, since it was situated in the context of a political economy of underdevelopment: a modern "third world" economy that does not itself "function properly."

Niemeyer's work is intended for those who actually live in this precise economic predicament of semi-industrialization, for those who strive to function in a decidedly "dysfunctional" situation. The exemplary case of this may be found in the middle of the Praça dos Três Poderes, between the Palácio do Planalto and the Supremo Tribunal Federal, the very center of state power in Brazil. Here we find a rather strange columnar "statue" (for lack of a better term) known as the "Pombal." (Fig. 8) The Pombal

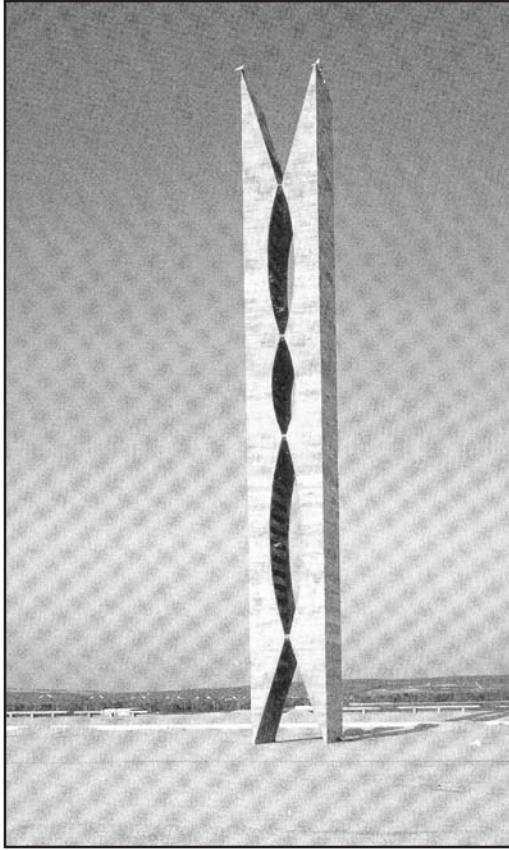


Fig. 8. Oscar Niemeyer, O Pombal (Brasília, 1960). Image by Marcel Gautherot.

consists of two conjoined slabs of exposed concrete that stand some 10 meters high and a meter or two wide. The two slabs connect to one another at four symmetrically distributed points to create oblong ovate openings up the sides of the structure; these openings in turn give way to open space running up the core of the entire statue. Each slab tapers diagonally towards the exterior side of the structure at both the top and at the bottom, such that the Pombal appears as a kind of gigantic clothespin delicately balanced upside down upon the grounds of the Praça. Most importantly, the interior of either slab has been “lined” with rows of thin horizontal shelves—in actuality, concrete shelves that are integral to the slabs themselves. These shelves are the perfect size to give the hundreds of birds that live in the Praça a place to roost.

Indeed, the Pombal has been designed precisely for this reason, as a dovecote for the pigeons (*os pombos*) that give the structure its name. Niemeyer’s dovecote, however, bears no resemblance to the cottage-like structures of rural Scotland which one would typically associate with a “dovecote.” The Pombal by comparison appears more of an abstract sculpture than a quaint, rustic home. In this sense, the most prescient feature of the Pombal is its economy. Without paint or color, and with a reduced number of elements, the Pombal serves its function with minimal distraction: its inhabitants are left just enough space to enter the structure, and just enough “open-use” space integrated into the structure to use as they please. As a home for wayward pigeons, then,

268 the Pombal responds to the first world dictum that “form follows function” with a kind of post-colonial response: “*Obedeço, mas não cumpro*” (“I obey but I do not comply”), the motto of colonial subjects in the Americas who received imperial orders yet refused to abide by them. The form of the Pombal, in other words, adheres quite forcefully to the formal restrictions of functionalist modernism, it is merely that the function itself is superfluous. As a result, the spectator is left with certain residual structural effects beyond the structure’s own inherent functionality: whimsy, humor, brief moments of respite from the austerity of the concrete, an accidental surprise in encountering the object that may in turn lead to a momentary suspension of other preoccupations.

The spectator may be stunned, moreover, by the architect’s audacity in placing such a structure as the Pombal in such an important place. Seemingly balanced on its end, the structure itself balances great significance with utter insignificance. The Pombal, placed at the heart of human power in Brazil, provides a home for the lowliest of creatures, the *pombos* of the Praça. But can we not also hear the name “Pombal” and not also think immediately of the Marquês de Pombal?²⁵ And so, what is the relation between enlightened dictatorial Bourbon regents of eighteenth-century Portugal, and pigeons and clothespins in twentieth-century Brazil?

In name, the connection between the Pombal and the Marquês de Pombal may be entirely accidental. If so, the accident would only accentuate its force. The goal of functionalism from its outset was to eliminate accidents altogether: not only would the surface of the architectural mass be cleansed of ornamentation (“accidental” accents), the “new” architecture would also promote social order and rationalism in order to mitigate political and military revolution (and other such social “accidents,” or collisions.) By its very form, Pombal (the dovecote, not the dictator) works with great efficiency, yet the real work performed by the Pombal is symbolic or rhetorical. The shape of the structure bears metaphorical similarity to a tool (the clothespin) utilized in the basic forms of labor by which many Brazilians attempt to survive: manual service labor, or rather domestic manual labor (laundry) usually coded as “feminine.” (At the very least, laundry has been assigned to women in Brazil from its colonial period up to the present.) We can imagine, then, senators and presidents and justices looking onto the Praça and being forced to confront a symbol of the nation’s poverty. If the Pombal serves to “air Brazil’s dirty laundry,” it also does this by means of another trope. That is, the metaphorical presence of the structure just as quickly establishes metonymic contiguities to one of the main achievements of Pombal (the dictator, not the dovecote): the reconstruction of Lisbon after the earthquake of 1755 which left the Portuguese capital in rubble. The result was the construction of a “new” Lisbon built according to the “rational” lines of the late Enlightenment. In its name, then, the Pombal establishes a historical contiguity between the re-construction of the colonizer’s capital (Lisbon) and the re-placement (re-positioning) of the post-colonial capital (Brasília) two centuries later. The symbolism of the dovecote may not function in terms of similar differences so much as it functions in terms of historical connections of the body-politic over time. The Pombal may thus lead us to reflect on a certain irony between colonizer and colonized: between the powerful despot of the nation that colonized Brazil (Pombal) and the common pigeons that now colonize Brasília (in the Pombal).

Brasília clearly functions not only to house political and economic power, but it also serves to materialize this power in a particular configuration. This is unquestionably the function for which the city was commissioned, and for which Niemeyer made his designs. Yet the architect has just as clearly superseded Brasília's purely functionalist concerns. "Excessive" or "superfluous" elements of his structures serve purely aesthetic aims: to surprise, to give delight. In turn, these delightful elements, wholly integrated into the overall design, may draw symbolic contiguities with the history of the nation. And most significantly, beyond metaphors or even metonymies of national triumph, the superfluous accidents in Niemeyer's designs lead directly to ironic displacement—ironic moments in which the ideology of the place itself may be recognized—and critiqued.

It makes sense here to return to the moment of breakdown with which I began. The use of plate glass in modernist architectural constructions, the use of a transparent, industrially manufactured material that is integrated into the structure rather than merely adorning it, speaks to notions of aesthetic "cleanliness" and "progress" that have dominated over the past century's modernism. Shattering of the plate glass of the Congresso Nacional can therefore be read as a moment of rupture with respect to both the aesthetics of the building as well as the power that operates within it. The temptation would be strong, I think, to read this act of popular protest as a moment of postmodern fragmentation, signaling a definitive end to "elite" forms of modernism.

Brasília is often viewed, moreover, as a colossal failure of modernist and functionalist aesthetics. Earlier I mentioned Niemeyer's connection to surrealism, and indeed when walking through Brasília one may feel as if inhabiting a Miró canvas. Yet a more accurate point of reference for the experience might be one that is more plastic than concrete: Tomorrowland at Disney World. That is, Niemeyer's Brasília has largely been conserved to this day as a nostalgic futurism, a bygone vision of the future from 50 years ago. And this vision remains incomplete: construction has not yet been completed along the residential Wings of the Pilot Plan; the metro was never built, and it is doubtful that it ever will; it is impossible to circulate around the city without a car, and the city's rigid zoning (built into the Pilot Plan) makes it difficult to access essential services by foot. In essence, Brasília has never been allowed to grow properly. Civic leaders remain intent upon maintaining the original Pilot Plan, like a kind of museum piece hung on the terrain, even though Brasília has grown far larger than the population capacity for which it was originally conceived. These same leaders are nonetheless content to regulate poorly all the spaces outside the Pilot Plan, in the Distrito Federal. Developers have been given free-reign to build architecturally ghastly suburban sprawl. And where developers haven't built, the land has been occupied by the dreadful *favela*.

Brasília may be a failure, but it is too easy to dismiss it as a dead relic. If people continue to move to Brasília as they do, it stands to reason that they have some purpose for doing so. That is to say, Brasília is not a dead city even in the slightest sense, but is rather a place where important potentially world-changing events are taking place every day. Along with China and India, Brazil has emerged over the past decade as a major global economic power. It has recently overtaken the United States as the larg-

270 est agricultural producer in the world; it is one of the largest steel producers on the planet, and one of the world's top ten heavy industrial manufacturers. There are also strong indications that Brazil is poised to become a nuclear power in the near future. Modernization for Brazil is not a *passé* free-market Chicago School theory doled out by the IMF and IADB in the 1950s; quite the opposite, modernization is only now reaching its full force there. Significantly, the center for concrete policy decisions regarding the nation's continued modernization remains inside the modernist reinforced concrete of Niemeyer's architecture.

I do not at all mean to imply that these "developments" have erased the gross iniquities in Brazilian society. The country remains a zone of horrifying contrasts. Brasília's elite tend to fly first-class every weekend on Brazilian-made jets, fleeing the rather boring capital for Rio or São Paulo or other cities, yet their ennui cannot hide the truth. Brazil is one of the richest countries in the world, but suffers one of the worst distributions of wealth in the world as well. The minimum wage in Brazil is currently about US\$ 80 per month, with an estimated 40 million people (or one-quarter of the total population) earning less than US\$ 40 per month. An estimated 23 million Brazilians live in "extreme poverty," meaning they lack money to feed themselves properly.²⁶ Illiteracy rates remain high, and malnutrition is epidemic. The protesting bureaucrats that I began with thus represent the middle socioeconomic sector of society, but the pension benefits for which they were fighting could only be called "exorbitant" with respect to the pittance that any one of them would most likely receive over a lifetime. Most of them were therefore fighting for their livelihood. I cannot emphasize enough here that the Brazilian experience of modernity is thoroughly ambivalent—ambivalent on the verge of schizophrenia. In this sense, I have attempted to display Niemeyer's work as a kind of concrete hallucination, which when read as a form of literature might open meaningful ideological possibilities for those who come in contact with it. Brasília remains, after all, a site of violent contestation—violence played out against the city's architecture.

Brazilian modernism exists because of modernization, and in turn modernism has come to promote modernization, and even house modernization. We might well say that Brazilian modernism and modernization are functions of one another. Yet to say this alone would be insufficient, since Niemeyer has encoded a typically Brazilian ambivalence into his constructions. Niemeyer's modernism, in this sense, is not the mute servant or foot soldier of modernization, but can in fact serve as a site of resistance, as a dysfunction of modernity. Given the increasing strength of globalization, our main problem is not that Brasília merely exists as a concrete failure of modernity. Our main problem is rather how to find ways to read the concrete that continues to exist there in relation to continual processes of modernization. Globalization, in other words, compels us to think concretely in terms of the persistence of modernism, the very world which we inhabit.

Notes

1. "Foes of Pension Cuts Attack Brazil's Congress." *New York Times*, August 7, 2003, A11.
2. The negative repercussions of the latter option are not just felt in the international markets, although loss of capital is unfortunate. Rather, the main effects are felt on the national level, as evidenced by the devastating pension crisis suffered by Argentina earlier in 2001.
3. Peter Bürger, *Theory of the Avant-Garde*, trans. Michael Shaw (Minneapolis: University of Minnesota Press, 1984).
4. Brazil, like other Latin American nations, has historically been dominated by strong regional powers ruled by landed oligarchs. It was not until the early- to mid-twentieth century, however, that broad-based, often technocratic federal governments would emerge (such as began under Getúlio Vargas in Brazil) that could be capable of asserting dominance over regional interests.
5. I cannot fail to note, however, that the construction of Brasília under Kubitschek eventually bankrupted the federal government, causing Brazil to default on its debts to international development banks in the early 1960s. The ensuing political and economic crisis would lead directly to the military coup d'état of 1964 and a series of repressive, authoritarian military regimes that maintained power until 1985.
6. While literary modernism seems to have reached definitive closure some four or five decades ago, architectural modernism is still the dominant aesthetic mode, as the recent high-end monumental works of Richard Meier and Santiago Calatrava attest. Moreover, it remains doubtful as to whether we can even speak of a singular literary modernism: to what extent is an Anglo-American modernist like Ezra Pound relevant to a subsequent Brazilian modernist like João Cabral de Melo Neto, or indeed previous nineteenth-century Spanish-American aesthetes like Rubén Darío?
7. Jeffrey T. Schnapp, "Excavating the Corporatist City," *Modernism/Modernity* 11.1 (2004): 89–104. See also, "Three Pieces of Asphalt," *Grey Room* 11 (Spring 2003): 5–21.
8. Mark Wigley, "Network Fever," *Grey Room* 04 (Summer 2001): 82–122.
9. Charles Perrone, "Presentation and Representation of Self and City in *Paulicéia Desvairada*," *Chasqui: Revista de Literatura Latinoamericana* 31.1 (May 2002): 18–27.
10. Randal Johnson, "The Institutionalization of Brazilian Modernism," *Brasil/Brazil: Revista de Literatura Brasileira/Journal of Brazilian Literature* 3.4 (1990): 5–23.
11. "Functionalism" as a concept may in fact be a Brazilian invention, having first been utilized (among modernists at least) by Costa in his "Manifesto of Functional Architecture" published in 1925—several years before the work usually cited as the concept's launch-point, Alberto Sartoris's *Gli elementi dell'architettura funzionale*. Cf. Stamo Papadaki, *Oscar Niemeyer* (New York: George Braziller, Inc., 1960), 10. In any event, it is important to clarify that architectural functionalism is not equivalent to other sorts of functionalism in use at roughly the same time in other fields. Although we may be able to draw relations to philosophical functionalism and sociological/anthropological structural-functionalism, "functionalism" as it is employed in the present study should be understood as specific to architecture.
12. Andrew Ballantyne: "International Style," *The Grove Dictionary of Art Online*, (Oxford University Press, Accessed [18 March 2004]) <http://www.groveart.com>.
13. Le Corbusier, *Towards a New Architecture*, trans. Frederick Etchells (New York: Praeger Publishers, 1960), 263.
14. *Ibid.*, 269.
15. That is, "this image is a pipe" is really a metaphor since an image is an image and a pipe is an object; but "this is not a pipe" in Magritte's painting is true.
16. Oscar Niemeyer, "Acceptance Speech for the 1988 Pritzker Prize," <http://www.pritzkerprize.com/bunnei.htm>. The speech is quoted in its entirety.
17. As David Underwood has commented: "The [Pilot Plan]—two axes intersecting to form a cross—directly and monumentally asserts a territorial acquisition that reflects the Renaissance ideals of the Iberian conquistadores. Costa described it as "a deliberate act of conquest, a gesture of pioneers acting in the spirit of their colonial traditions." The plan conflated colonial symbolism with Catholic imagery and established a baroque hierarchy of primary and secondary axes that intersect at

272 the modern traffic interchange of a multilane highway. Costa's plan thus recasts traditional elements in modern terms. Whether one sees a bird or an airplane, Costa's "pilot" plan conveys an unmistakable image of flight wholly appropriate to Kubitschek's emphasis on modern speed, as well as his promotion of Brazil's fledgling aviation and automotive industries." David Underwood, *Oscar Niemeyer and the Architecture of Brazil* (New York: Rizzoli International Publications, Inc., 1994), 99.

18. Roman Jakobson, "Linguistics and Poetics," *Language in Literature* (Cambridge, MA: The Belknap Press of Harvard University Press), 71.

19. Oscar Niemeyer, "Thoughts on Brasília," *Brasília*, ed. Willy Stäubli (London: Leonard Hill Books, 1966), 23.

20. In actuality, these "twin" towers are but one structure. The two "shafts" of the structure are connected by a horizontal "bridge" of several floors that extend across both shafts, to form what is an "H"-shaped building.

21. As Niemeyer has commented: "[F]orms that would seem not to rest heavily on the ground as required by technical reason but make the Palaces look airy, floating light and white in the endless nights of the Brazilian highland; surprising and breathtaking forms that would lift the visitor, if only for a little while, above the hard and sometimes insuperable problems which life puts into everyone's path." (Niemeyer, op. cit. (1966), 23)

22. Such an urban arrangement might be compared to that of New York City or São Paulo, cities in which the natural landscape has been leveled and highly compacted skyscrapers often block the horizon (or form their own horizon). In contrast, although Brasília has a high population density—housing well over a million inhabitants in a fairly small space—one always has visual access to the terrain in which the city is set, due in large part to Niemeyer's site plans. A key distinction between Brasília and these other cities, however, is that the "natural" landscape around the Pilot Plan is man-made, replete with artificial lakes and forested green spaces.

23. "The technology already existed in Brazil, however, for the development of the new architecture: reinforced concrete frames had been used since the 1910s for large-scale constructions. The first tall buildings in Rio de Janeiro and São Paulo, at the turn of the century, had been built with steel frames, along with bridges and similar structures. Steel proved to be an expensive system in Brazil, however. There were no rolling facilities for structural steel members in Brazil; these, and the technical supervision of the construction, had to be imported from the United States. Although Brazil did not initially produce cement or reinforcing rods, reinforced concrete had the advantages of being prepared on site and of not requiring specialized labour, which greatly reduced cost." Zilah Quezado Dekker, *Brazil Built: The Architecture of the Modern Movement in Brazil* (London: Spoon Press, 2001), 13.

24. As Niemeyer stated just prior to the building of Brasília:

Our [i.e. Brazilian] modern architecture reflects the social contradictions in which we live and in which it has developed. Presented to clients not interested in problems of a general building economy and to a governmental body that shies from plans of national dimensions and from large scale construction projects, our architecture is forced to make improvisation its basic element . . . Some of these buildings are often appreciated from a design point of view but they always reflect the social disequilibrium of the country with a majority of its citizens living in the most miserable quarters. The great variety of forms that is seen in our architecture stems from the lack of an effective social and economic basis. The absence of a large building industry with prefabricated assemblies and parts further encourages the development of a wealth of individualistic architectural forms and solutions.

Oscar Niemeyer, "Notes on Brazilian Architecture" in Stamo Papadaki, *Oscar Niemeyer: Works in Progress* (New York: Reinhold Publishing Corporation, 1956), 12.

25. Marquês de Pombal, aka Sebastião José Carvalho e Melo Pombal, absolutist chief minister of the Portuguese crown, 1756–77.

26. "Targeting the Poor," *The Economist*, August 14, 2003.