Hard and soft revisited

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RESEARCH ARTICLE

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ABSTRACT

In the postscript to *The Social Logic of Space* (1984), Bill Hillier and Julienne Hanson argue that there are two versions of modernism in urban space: hard and soft. The former invests in continuity and density of the urban fabric, but with a proliferation of barriers resulting in labyrinthine schemes typical of housing estates. The latter invests in distances, discontinuities, sprawl and vast tracts of open unoccupied land. Brazil's federal capital, Brasília, presents both versions. Over time, the hard version became predominant in the gated communities of satellite dormitory nuclei; the soft version materialized in the Pilot Plan designed by Lucio Costa. Hard parallels deserted public spaces; soft teems with life and is accordingly highly praised by inhabitants. This flatly contradicts the tenets of the critical international literature on Brasília.

摘要

重新审视现代主义城市空间的两个版本：硬的和软的。*Area Development and Policy*. 在《空间的社会逻辑》的后记中，希利尔和汉森认为现代主义在城市空间建设中有两个版本：硬的和软的。硬的投资于城市结构的连续性和密度，但随着障碍的增加，形成了典型的住宅区迷宫式方案。软的投资于距离，主张不连续的、无计划扩张和开发大片未开发的土地。巴西首都巴西利亚同时呈现了这两个版本。随着时间的推移，硬版本在卫星宿舍核封闭社区中占主导地位，软版本则在卢西奥·科斯塔设计的试点计划中得以实现。硬的等同于荒芜的公共空间，软的使生活充满活力，因此受到居民的高度赞扬。这完全与巴西利亚的批判性国际文学宗旨相矛盾。

关键词
巴西利亚；现代城市；卫星核；城市历史；空间应用

RESUMEN

Revisión de la versiones dura y blanda. *Area Development and Policy*. En el epílogo de The Social Logic of Space (1984), Bill Hillier y Julienne Hanson argumentan que existen dos versiones del modernismo en el espacio urbano: dura y blanda. La primera está orientada en la continuidad y la densidad del tejido urbano, pero con una proliferación de obstáculos que se convierten en esquemas laberínticos típicos de complejos de viviendas. La última está orientada en las distancias, discontinuidades, expansión y grandes extensiones de terrenos desocupados y abiertos. Brasilia, la capital federal de Brasil, presenta ambas versiones. Con el

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tiempo, la versión dura fue predominante en las comunidades cerradas de los núcleos de dormitorios satélites, mientras que la versión blanda se materializa en el Plan Piloto diseñado por Lucio Costa. La versión dura equivale a espacios públicos desiertos; la versión blanda está llena de vida y en consecuencia es muy valorada por los ciudadanos. Esto contradice categóricamente los principios de la bibliografía internacional crítica sobre Brasilia.

PALABRAS CLAVE
Brasilia, ciudad moderna, núcleos satélite, historia urbana, uso del espacio

АННОТАЦИЯ
Возвращаясь к жесткой и мягкой версиям модернизма. *Area Development and Policy*. В постскриптуме к 'Социальной логике пространства' (1984) Хильер и Хансон утверждают, что в городском пространстве существуют две версии модернизма: жесткая и мягкая. Первая подразумевает инвестиции в непрерывность и плотность городской ткани, но с созданием барьеров, приводящих к лабиринтным схемам, типичным для жилых комплексов. Последняя подразумевает инвестиции в расстояния, разрывы, разрастания и обширные участки открытой незанятой земли. Федеральная столица Бразилии, Бразилиа, воплощает обе версии. Со временем жесткая версия стала преобладать в закрытых сообществах городов-спутников, а мягкая версия материализуется в пилотном плане, разработанном Лусио Костой. Жесткая дополняет пустынные общественные пространства; мягкая сочетается с жизнью и соответственно высоко ценится жителями. Это полностью противоречит выводам критической международной литературы по Бразилиа.

КЛЮЧЕВЫЕ СЛОВА
Бразилиа, современный город, города-спутники, городская история, использование пространства

To Bill Hillier
In memoriam

INTRODUCTION

On 21 April 2019, Brazil's 'modernistic' federal capital celebrated the 59th anniversary of its inauguration as the seat of federal government. Why use inverted commas? Praised as perhaps the most important city-scale manifestation of the Modern Movement in architecture, Brasília's configuration by far surpasses orthodoxy. Its baroque perspectives and monumentality were anathema to modern theorists, some of whom had seen in the blueprint a manifestation of 'decaying formalism' (Frampton, 1980). Lucio Costa's proposal also presents other traits inspired by late 1950s' urban design trends, which include, nevertheless, some heterodoxies: the neighbourhood unit is not inward looking, as was the canon; there are traces of 'main streets' in local shopping areas; demographic densities are lower; and high-rise buildings are limited to the urban core and absent from the residential tissue, in contrast with Le Corbusier's *unités d'habitation*, which were about three times higher, etc.

This did not prevent Jan Gehl's acid remarks:

When I was a student, Brasilia was considered the ideal city. It was fantastic from a plane, designed in the shape of a big eagle, with the head being the parliament building. It was beautiful! Especially if you travel by helicopter you can see the government buildings designed by [Oscar] Niemeyer, you can see huge blocks. In a helicopter it's great, but down below where people live, Brasilia is shit. (Gehl, 2017)

Taking a stance from the discipline of anthropology, James Holston was no less critical:

> In Brasília, the outdoor city public of other Brazilian cities has all but disappeared. … Social life oscillates unremittingly between work and residence. … Hence, the overwhelming sense of monotony and sameness that Brasilienses experience in the city. (Holston, 1989, pp. 153, 163, 312)

Among other things, the present paper rebuts such statements. The above authors refer to Costa's Plan; this paper will include it, but refer to the actual city today, that is, that constituted by the totality of the municipality's urban fabric, which goes far beyond Costa's ideas – and ideals. True, the capital was supposed to develop through satellite nuclei, maintaining the 'physiognomy' of the original Pilot Plan (henceforth 'Plan') unstained: the Plan, as the metropolitan core, should be forever clearly identifiable in the landscape, in contrast to whatever would constitute its further developments beyond a rigorously preserved green belt. This remains to date. And yet, in the city as a whole (henceforth, 'Brasília', in contrast with 'Plan', its core), one witnesses something like a palimpsest more akin to cities that are centuries old than to a capital designed from scratch and implemented on no-man's land from 1957 onwards; other nicknames are 'morphological mosaic' (Kohlsdorf & Kohlsdorf, 2017) and 'patchwork city' (Medeiros, 2013; Medeiros & Holanda, 2007), both conveying similar ideas. (There were two small urban nuclei, one dating from the 1850s, the other from the 1930s, to which this paper shall return.)

If Costa's Plan were open to heterodoxies vis-à-vis the Modern Movement, more diversified still would be the 'patches of the quilt' that have unevenly covered the territory of the federal district (which coincides with the Municipality of Brasília), Costa's Plan having become one of its boroughs, admittedly the most important politically, symbolically and economically. This paper will not dwell upon the patches in detail, but rather focus on the title's dichotomy: with some minor inconsistencies, we witness today the 'soft' urban design of Costa's Plan in contrast with the 'hard' solution of both the low- and high-rise gated communities around it (norms prevent fencing off areas in the Plan's area), plus solutions in between.

Hard and soft strategies are typical trends in urban space in contemporary cities, as put forward by Bill Hillier and Julienne Hanson in the postscript to *The Social Logic of Space* (1984). The former invests in the continuity and density of the urban fabric, but with a proliferation of barriers resulting in labyrinthine schemes typical of housing estates. The latter invests in distances, discontinuities, sprawl. The authors argue that both are coherent with the social structure of contemporary societies, and that, if they differ in configuration, they converge in the pernicious effects they have on sociability. In a later text, Hillier has exemplified par excellence the hard trend in studies of housing estates in Islington, London (Hillier, 1996, esp. ch. 5) and the impact that urban transformations have had on moving and static people in streets: a well-integrated open street layout with buildings opening directly onto public space has been replaced by a quasi-labyrinthine scheme in which short segments, frequent changes in direction and blind walls abound. Pre- and post-renovation patterns of people in open space contrast sharply: while in the pre-renovated areas spaces were mixed in terms of gender and generational use, a clear specialized use of space emerged in the post-renovated situation, in which there appeared places with a large predominance of women or children.

The soft trend has also been explored by the Modern Movement. In this case low densities, sparseness, proliferation of voids and large distances predominate. Likewise, there is a proliferation of barriers – the common element in both – but in the latter case they are formed by spatial discontinuities – i.e., voids – rather than by blind walls and frequent twists and turns, in a topologically fragmented albeit continuous urban fabric (see further on the concept of *integration* from Space Syntax Theory). This is the trend preferred in the design of English garden cities. On the cover of Gordon Cullens's *The Concise Townscape* (1971) a gentleman

'draws' something like a pre-modern city fabric on the pavement of what is clearly a huge span of open public space in one of these garden cities. If they differ in configuration, both damage dense, informal, daily, secular encounter systems. *Mutatis mutandis*, in the amazing fictional short story, *The Two Kings and the Two Labyrinths* (1986), the great Argentinian poet Jorge Luís Borges called the hard solution the 'labyrinth of walls' and the soft solution the 'labyrinth of the desert'. The analogy is mine, not his, but the description of both and of their consequences is so precise that it looks as if he were talking about modern urban design and Hillier and Hanson's two trends.

But why so? Why do two apparently so distinct formal options have their say in modern architecture? Because, Hillier and Hanson suggest, both contribute to the workings of the strongly hierarchical social forms of 'industrial bureaucracies', the concept that encapsulated, in 1984 when the book was written, both Eastern ('real socialism') and Western ('capitalism') social formations: while the hard trend responds to the needs of the forces of capitalist production, strengthening the extraction of surplus value in the production of city space, soft solutions invest in the reproduction of social ties – read this as *weakening* of social ties – which are a precondition for the production of surplus value. Planners have long been fooling themselves by appearances, thinking highly of themselves as revolutionaries while designing 'soft ambiences', while in fact they have been acting in another dimension of the same status quo. (I hope Hillier and Hanson will forgive my strong words, for this is not a literal reading of their text.) This clash between the ideology of state officials and the builders' wish for greater densities (and ever taller high-rise schemes, of which Águas Claras – see below – is a telling example) are, in Brasília, as clear, pervasive, permanent and old as the city itself.

This paper revisits these seminal ideas. Some say Brasília is too young to be assessed as far as the appropriation of its space is concerned: the city still has no 'history'; and six decades is much less than infancy in urban life. The I differ and try to test Hillier and Hanson's ideas by confronting them with daily life in the public spaces of the capital, as well as on special occasions, when tens of thousands of people have occupied street lanes, pavements and lawns, and which have intensified in the last few years. But let us go back a bit in the argument. First, I start from the picture of the city I drew about 20 years ago, in *Exceptional Space*. The work explores settlement architecture mainly as a *dependent* variable: the aim was to establish relations between places separated among themselves by a huge span of both space and time, and to enquire whether affinities might be drawn among such apparently diverse sites as Mayan ceremonial centres, Zulu Warriors' *kraal*s, feudal castles and a modern capital, as determined by similar social forces at work.

Second, I explore Brasília as a contemporary ethnographer, peripatetically wandering about a sample of the most telling sites of the municipality, covering as much as possible the varied patches of the quilt, the images of which formed the basis for my documentary film *Brasília: Symphony of a Capital* (Holanda & Holanda, 2018). I somehow invert normal relations between writing and filming: writing usually comes first, in the form of a screenplay, but here it was the other way around. This paper is inspired by my whereabouts in the capital while shooting the film in 2017 and 2018, and the opportunities it provided to visit places I had never visited before. Two languages are involved: the language of films where ideas are conveyed through pure sequential images in time, without narration (Coutinho, 1972); and the language of words, numbers, tables and graphs, though some figures are stills taken from the film.

In exploring such places as they already exist, space is now seen as an *independent* variable. I thus work within a 'post-determination' framework: the boomerang that was once launched by determining social forces is hitting the subjects back in ways which were largely unforeseen – or weren't they? The question then becomes: ok, this is here and now, let us suspend *causes* and ask how does the place affect people? If I first started from the picture of the city I drew 20 years ago, now I reassess my interpretation of 10 years ago, when I published the book *Brasília: cidade*

moderna, cidade eterna (Brasília: modern city, eternal city) (Holanda, 2010), in which *effects* come to the fore. I am now ready to profit from research findings of the last decade, some of which are included here, but which, for reasons of space, are only explored at length in my new book *Construtores de mim* (Makers of my Self) (Holanda, 2019). Ten years seem to be a fair enough time module for authored books on this complex and fascinating architectural reality.

In fact, this is just an analytical trick: analysing architecture through its determinations or through its effects involves a rational abstraction that places reasoning at a certain point in the *virtuous circle of design*, or, for that matter, the virtuous circle of human agency. As Giddens (1986) put it, we are dealing with a continuous process of design/implementation/critique/re-design etc., in something that should be understood as a conjecture-test process (Hillier, 1996, esp. ch. 11). Figure 1 illustrates the idea. The upper part is constituted by the traditional Marxist triad – economic, political and ideological – to which I have added environmental determinations. The bottom part is constituted by the taxonomy of architectural performance composed of eight aspects, with which I have been working, with slight variations, for more than 20 years (Holanda, 2002, 2011a). But again, beware as this is an intellectual construct that abstracts from empirical processes. In actual fact, 'determinations' are defined because certain 'effects' are expected, and unintended or unexpected 'effects' change – 'determine' – ensuing 'determinations', thus indefinitely making the wheel turn.

Exceptional Space dealt with the upper part of the circle. My later writings have been dealing with the lower bit (e.g., Holanda, 2007, 2010, 2011b, 2019). This will be the focus of the present paper. I will try to unravel the results of the diverse configurational patches of the quilt on people by identifying the differential influence that hard and soft trends have on
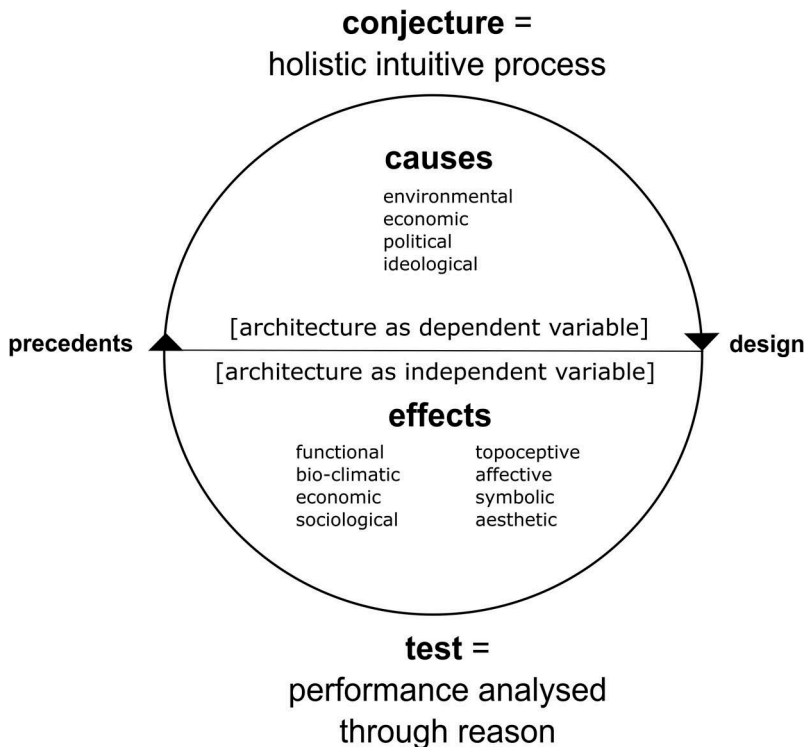

conjecture =
holistic intuitive process

causes
environmental
economic
political
ideological

[architecture as dependent variable]

precedents ◄──────────────────────► design

[architecture as independent variable]

effects

functional	topoceptive
bio-climatic	affective
economic	symbolic
sociological	aesthetic

test =
performance analysed
through reason

Figure 1. The virtuous circle of design as a conjecture-test process.
Source: Author inspired by Hillier (1996) and Giddens (1986).

subjects, particularly on their co-presence in space, at the periphery and at the metropolitan core: Brasília's Pilot Plan.

Finally, the problems that this sort of thinking makes us capable of unravelling have allowed the formulation of design proposals confronting both strategies as they are found in Brasília, by students and by our research staff, which are explored elsewhere (Holanda, 2019).

EXCEPTIONAL SPACE

I moved to Brasília in 1972, coming from Rio de Janeiro. My first essays naturally confronted the intense public life on Rio's streets with the calm, to say the least, of Brasília's public space. The essays concerned the urban core, which amazed newcomers particularly because of its archipelago-like configuration: sectors were not only specialized by use – banks, hotels, offices – but also were strongly separated among themselves by express roads, huge parking lots, differences in level, lack of 'active façades' etc. An 'architecture of additions', to use the expression of the Chilean architect Rodrigo Peres de Arce (Peres de Arce, 2015), to fill in voids and establish a minimum continuity among such 'islands' was something that first came to one's 'urbanite' mind.

However, it was a trip to Mexico at the end of 1975, while visiting the archaeological site of Teotihuacán, that had a great impact on my vision of Brasília and of architecture in general. The strong similarities, physical and semantical – i.e., the configuration of spaces and buildings, and the social labels attached to them (Holanda, 2017) – between the so-called Avenue of the Dead (nobody knows its original name) in Teotihuacán, and the Esplanade of Ministries in Brasília, struck me most. Both are 2000 m-long axial spaces and harbour only super-structural labels of the social order – governmental, religious, cultural. My first thought was: I am in an eighth century AD Brasília! Following from that, the apparent similarity has resulted, first in my MSc thesis and then in my PhD dissertation, *Exceptional Space* (2002, 2011a). The research hypothesis was: similar social determination had to exist to bring together the two types of sites, underneath 'cosmetic' differences in materials, construction systems, physical dimensions and form of individual buildings, etc. And the research question was: what was it?

It turned out that similar solutions had occurred in other places and times in history, and that the corresponding social formations had attributes in common: a special relation between the infrastructural and super-structural dimensions of social order established strong separations in space and time that set apart subjects related to the one or to the other, with clearly 'economic' agents, on the one hand, and an almost pure 'symbolic class', which did not mingle with production, on the other. In societies with more developed processes of division of labour, as today's Brazil, such cleavage revealed itself in terms of a strong state cut off from a fragile underlying civil society (Faoro, 1976).

Physical strategies for enhancing such separation took several forms historically, but for what matters here they could be either hard or soft. Around 'classical' Mayan ceremonial centres (circa first to eighth centuries AD), 'barriers' were distances amongst widely scattered structures in the landscape – therefore a soft strategy; in a warrior's Zulu *kraal* in pre-colonial Africa, as in a French feudal castle, the barrier was a real enough wall which fenced off the building from the surrounding countryside; in Imperial Beijing, concentric walls defined successive environments hierarchically positioned around the city around, to which determinate social categories had access in accordance with their position in the social structure. In the three latter cases, therefore, the hard strategy prevailed. In all cases, strong rules of access to such exceptional spaces were established, depending either on the permanent social position held by subjects, or on the non-permanent social role people might eventually perform, for

example, as family heads transmuted temporarily into ceremonial officials during the religious Mayan calendar, or as adult males while strongly capable as warriors, among the Zulu.

In Brasília, we witness both strategies. The hard dimension is constituted by the fragmentation of the urban fabric, at both scales, of the city as a whole and of its parts. The irregularity of both road and street layouts, constituted by a relatively large number of small segments which cross at various angles, implies a precariously integrated system, by which from one point to all others in the city, on average, we must perform frequent twists and turns (see below). The soft dimension is constituted by an urban tissue formed by isolated patches in the landscape, with large tracts of open, unoccupied spaces in between.

But exceptional spaces are not only defined *syntactically* but also *semantically*. In the first case – *syntax* – I refer to the *physicality* of settlements, which, in such cases, is constituted by the isolation of particular structures in the landscape, either by means of distance (in sparse examples) or by means of a proliferation of material barriers to subjects' movements (in dense examples); in the second case – *semantics* – I refer specifically to the *labels* ascribed to structures, something over and above the physicality of the buildings, which refer not simply to land use but to more abstract, deeper social categories as *infrastructure* (economy) or *superstructure* (politics/ideology) (Hillier & Hanson, 1984; Holanda, 2017). Notwithstanding particularities, there is only *ceremony* and *politics* – not *economy* – in exceptional spaces, from Mayan ceremonial centres to Brasília.

However, how does the historical 'separation game' show in daily life as well as on special occasions, such as religious ceremonies or political rallies? If the separation game applies to pre-modern social formations, how does it apply to the 'class structure of advanced societies' – which is the case – to use Giddens' (1973) expression? Do hard and soft versions of modernism manifest themselves differently at the metropolitan core as compared with the distant periphery? Before commenting on specific patches of the quilt, let us have a look at the city structure as a *whole*, or, in space syntax jargon, at the *global* scale of the settlement. Figure 2 shows the approximate territory of Brasília's municipality and the places that will be discussed.

THE CITY AS A WHOLE

Brasília was born both as a *fragmented* and as a *dispersed* city: the first satellite nuclei date from before the city's inauguration in 1960, for example, Taguatinga, 1958, 25 km from the city core. The set of patches of the quilt are poorly articulated. This is revealed by the Space Syntax Theory measure of *integration* (Hillier & Hanson, 1984), which shows how easily can one navigate, on average, from one point to every other point in the city ('ease' meaning a smaller number of route inflections). In a worldwide sample of 164 cases, Medeiros (2013) has shown that Brazilian cities are, on average, amongst the bottom third of less integrated ones. Using Medeiros' data, I have performed a normalization procedure and found that, using a normalized integration measure ranging from 0 to 100, Brazilian cities measure 23.21 on average, whereas Brasília is even lower at 19.61.

In a more recent work, Coelho (2017) has presented the most comprehensive vehicular axial map of the municipality of Brasília so far. Based on data for 2015, the result was a map with 164,189 axial lines, or 299,669 street segments, encompassing urban and rural areas. Figure 3 illustrates the fragmentation of Brasília by showing the plethora of small segments and the irregularity of the layout.

The integration measure is a topological analytical category, that is, it dismisses geometrical distances amongst urban patches. However, to depict Brasília's attributes more fully, distances must be considered. Thus, we have used Bertaud and Malpezzi's (2003) dispersion index, which depicts how inhabitants are distributed in the territory vis-
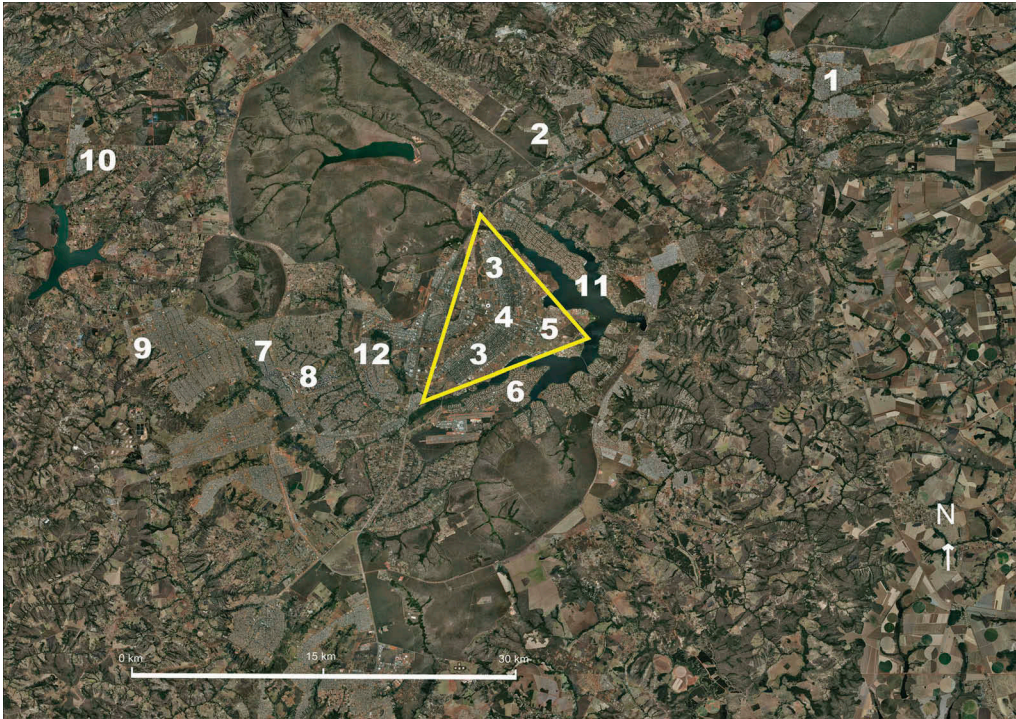
Figure 2. Brasília's municipality territory and the places referred to in the text: (1) Planaltina; (2) Great Colorado borough; (3) Pilot Plan's residential wings, north and south; (4) Road Platform (Bus Station); (5) Esplanade of Ministries and Three Powers Plaza; (6) South Lake borough; (7) Taguatinga; (8) Águas Claras (Clear Waters); (9) Sol Nascente (Rising Sun); 10, Brazlândia; 11, Parque das Garças (Herons' Park); and 12, Guará. The yellow triangle marks approximately the area in which Costa's original design was implemented.
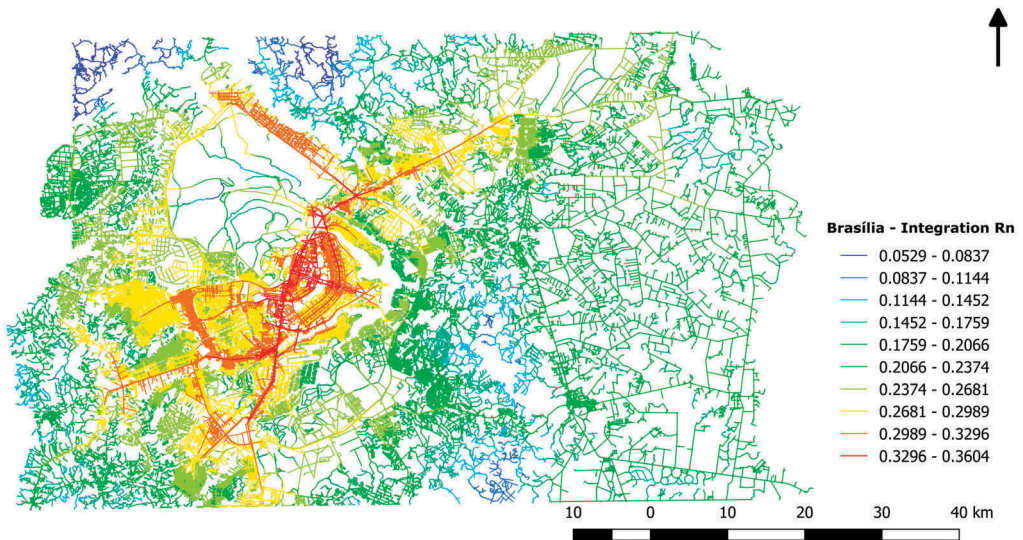

Figure 3. Municipality of Brasília.
Drawing: Axial map, integration Rn.Source: Coelho (2017.)

Figure 4. Nineteenth-century Planaltina, within the borders of the current municipality of Brasília.

Figure 5. Sol Nascente *favela*.

à-vis their distance to the urban centre. We started from Bertaud and Malpezzi's analysis of 48 cities around the world, complemented their sample with nine more Brazilian state capitals, and found out that Brasília, with an index of 2.62, is the second most dispersed city of all, losing pride of place to Mumbai, India (da Costa Ribeiro & Holanda, 2006).

Fragmentation and dispersion in Brasília imply higher social costs for the population. Even though Brasília has a sophisticated road system, average travel time from home to work is higher in Brasília than in other Brazilian cities of approximate population sizes: 34.8 min in Brasília; 31.7 min in Fortaleza and 27.7 min in Porto Alegre (Pereira & Schwanen, 2013). Average travel distances to work are even more telling: 15 km in Brasília, 8 km in São Paulo and 7 km in Fortaleza and Porto Alegre (Baratto, 2019).

In the case of socio-spatial stratification, the picture is also gloomy. Zechin (2014) computed Gini coefficients to identify the five most unequal Brazilian cities as Goiânia (Gini = 0.65), Fortaleza (0.61), Belo Horizonte (0.61), Brasília (0.60) and Curitiba (0.59) (Table 1). Only cities in South Africa are more unequal (Zechin, 2014, p. 195). By applying the *centrographic method* (Greene & Pick, 2012), Zechin (2014) compared the distances to the urban centre of both the top

Figure 6. Low-rise gated community, Great Colorado borough.

Table 1. Most unequal Brazilian cities.

City	Gini	Population, 2010	Average distance of the top income layers to the CBD (km)[a]	Average distance of the bottom income layers to the CBD (km)[a]	Distance between the centroids of the lower and higher income levels (km)
Goiânia	0.65	1,302,001	1.7	5.8	5.7
Fortaleza	0.61	2,452,185	4.4	7.4	6.9
Belo Horizonte	0.61	2,375,151	4.9	4.3	4.3
Brasília	0.60	2,570,160	4.9	25.8	6.2
Curitiba	0.59	1,751,907	6.2	5.9	5.9

Note: [a]As officially defined by the IBGE (2011). CBD, central business district.
Sources: IBGE (2011); Zechin (2014).

and the bottom income layers (Table 1) and showed that the average distance for the bottom income layers in Brasília (25.8 km) was much higher than for other Brazilian cities of comparable size, for example, Fortaleza (7.4 km) and Belo Horizonte (4.3 km).

Finally, there is a severe unbalance between the deployment of jobs and residences in the capital. Circa 7% of the capital's population live in Costa's Plan compared with about 47% of the city's jobs (Miragaya, 2013). Combined with the concentration of services in the Plan, no wonder about 1 million people travel there from the city's surrounding districts every day. However, how do hard and soft modern versions of urban configuration deploy themselves in the patches of the quilt?

HARD

Brasília's 'morphological mosaic' is varied indeed. Its types of fractions listed in approximate chronological order are as follows: two pre-modern urban nuclei, one dating from the 1850s (Planaltina; '1' in Figure 2), the other from the 1930s (Brazlândia; '10' in Figure 2); remains of contractors' camps; remains of *favelas* (slums), which have almost completely disappeared; distant planned satellite nuclei, largely based on modernistic principles, but without the rich investment in the quality of public space and health, education, leisure and other services and urban facilities that exist in the Plan; low-rise (the majority) and high-rise gated communities, which cut across income layers and that have recently spread throughout the municipality; finally, the 'noble' bit, Lucio Costa's Pilot Plan and its immediate surroundings, which was declared a UNESCO World Cultural Heritage Site in 1987.

The two pre-modern urban nuclei present the typical configuration of Brazilian vernacular towns: a reasonably regular (orthogonal) street layout, buildings without frontal or lateral setbacks constituting a clearly defined, strongly constituted by doors and windows, and continuous street space.

Figure 4 shows 19th-century Planaltina, mixed use implying lack of semantic specialization, special outstanding edifices (e.g., churches) which contrast with the rest through volumetric attributes and generous space around them. In such cases, modern strategies – hard and soft – have been limited to expansion areas (the original towns have increased enormously in population since the 1950s). In the 'historical bits' (i.e., pre-modern), built densities are low and the flow of people in the streets is constant and varied, albeit in small numbers. Planaltina is one of the most distant satellite nuclei, located 42 km from the metropolitan core by the shortest route, meaning 2 h 28 min of average travel time in the transit system.

The poorest region, Sol Nascente (Rising Sun) (Figure 5), is at the opposite edge of the city and is considered the biggest *favela* in Latin America (with about 100,000 inhabitants). It is 38 km and on average 1 h 53 min from the metropolitan core. The settlement presents an open street layout – reasonably regular, quasi-orthogonal grid, small blocks, no cul-de-sacs – but the contrast with Planaltina could hardly be greater. Buildings hide behind walls that stretch along the whole span of plot fronts; streets are open-air tunnels in between brick or makeshift metal barriers. There is high unemployment, record levels of criminality and no public facilities. The state is absent and social relations are managed by criminal gangs ('factions') which enlist unemployed youths in their 'services' (drug dealing) and 'protect' associates. Sidewalks are inexistent and there is no asphalt. The 'eyes on the street', the famous expression of Jane Jacobs (Jacobs, 1961, p. 35), equals zero. First, there are simply no windows, building frontages are high and there are blind walls, punctured simply by an almost imperceptible door; second, no spaces welcome people to stay and simply watch passers-by at buildings' frontages; and third, there is no land use diversity that might attract strangers and which in turn might attract the gaze of people inside or outside of buildings.

But, alas!, they would not help anyway: a thorough survey of criminality carried out in Brasília found very poor correlations between offences and local or global syntactic land-use properties (Ferraz, 2017). The odd ethnographer *feels* unsafe strolling along the open-air tunnels; the inhabitant *knows* s/he is unsafe. As high walls protect the houses from trespassing, crime is 'exported' to public spaces (notwithstanding the fact that crime is also a 'family business', involving domestic violence against women and youths); and when police street surveillance is eventually strengthened, informal sources suggest that crime is exported elsewhere. Consistent relations with architecture are nil (Ferraz, 2017). In this place, we may speak of a hard architectural solution, but not in the sense dealt with so far: strong barriers do not encompass a set of buildings, or correspond to a particular building with a determinate

character, but are pervasive in defining the interface of each and every building vis-à-vis public space (notwithstanding small local shopping areas). This is not the space of the vernacular Brazilian city, nor of the traditional *favela* (where buildings and plots are most permeable one with another and with public space), and even less of the 'modern'. A new animal was born, one which is being replicated in many other areas of the municipality. We may thus speak of a 'local hard' instead of a 'global hard' strategy which I have referred to above.

There are essentially two versions of the hard trend in Brasília, plus a minor variant: the low- and the high-rise gated communities, and the labyrinthine street system of two satellite nuclei. Consider first the gated communities.

On average, low-rise schemes are mainly inhabited by middle-low or low-income layers, and high-rise schemes by upper layers. Coelho (2017) revealed that 52% of segments have restricted access, that is, belong to some sort of segregated (hard strategy) scheme.

Gated communities are located from about 20 km to more than 45 km from the city core. A wall surrounds the set of houses, punctured almost always by a single entrance. The 'wall' may be a transparent iron fence with beautiful flowers, but is still a blind barrier towards public space (Figure 6 shows the arterial road that feeds the communities of the Grande Colorado borough, located 20 km and on average 1 h 12 min from the metropolitan core).

Considering the houses, as in Sol Nascente, crime is exported elsewhere. The homes themselves are safe, in contrast with boroughs in which there is an open street system. Public space is desolate, public transit is almost non-existent or a regular timetable is an unfulfilled dream, people in the streets in between walls are servants of the inhabitants of the houses inside the walls, walking to and from bus stops, except for the odd inhabitant who cannot afford to drive a car every day (s/he may have one for leisure trips, weekend visits, etc.). Along the arterial roads something like a bit of a 'main street' may develop, to which almost everyone drives a car.

In a case study that asked inhabitants the main reason for moving to the gated communities (Vianna, 2005), 'safety' was identified as a factor, but was ranked only fourth (11% of respondents). A total of 35% chose a preference for living in a 'spacious house' (they moved from flats), 24% for 'economic' reasons (many moved from expansive Pilot Plan residential areas, in which 38% paid rents), and 17% for 'tranquillity'. A desire for communal relationships supposedly enhanced by the absence of non-local passers-by remains a myth. This result once again refutes Oscar Newman's territorial nightmares, as proposed in *Defensible Space* (1973). According to Newman, neighbourly relations would improve with the degree of the unambiguous identification of people with a particular portion of space, meaning the exclusion of strangers. Exclusion is, on the contrary, a tremendous blow to cities' liveability, as has been known for centuries (Tonkiss, 2013). This research carried out in Brasília further supports Hillier's (1973) refutation of Newman's claim: relationships among neighbours came third (11%) after relationships with relatives (56%) and workmates (21%) (Vianna, 2005). In middle-class cases, social relationships occur trans-spatially, as they did previously, before families migrated from flats in the Plan, and as are seemingly typical of upper social layers anywhere on Earth (Holanda, 2011a).

In Brasília, high-rise gated communities are concentrated in the borough of Águas Claras (Clear Waters), the skyline of which reminds us of all but 'bucolic' Costa's Plan (Figure 7). It is located 21 km and on average 57 min from the metropolitan core by metro. Average income is much higher than in the previous cases, and each 'condominium' is much better equipped with leisure, sports and cultural facilities. Public squares have all but vanished: some spaces were erased from the map because of the 'misbehaviour' of their users, who neighbours considered a nuisance. There remain only 'squares' inside walls.

Gross residential densities are quite high (215 persons/hectare), but this does not result in the presence of people in public open spaces, showing that high densities may be a precondition for their presence, but are not a determining factor. We have here a 'hard over hard' scheme: plots are shut off from the streets by high walls (Figure 7) and sets of plots are ordained in cul-de-sac schemes, morphologically preventing non-locals from passing by, typical of Newman's (1973) strategy. Except for local shopping areas, to which, again, locals have access predominantly by car, public space is thus deserted.

Águas Claras is a telling example of a development in which builders had a stronger say than state officials, choosing taller buildings, maximizing surplus value and confirming the economic logic of the hard strategy put forward by Hillier and Hanson. The original blueprint defined a 12-stories high template for flats, but pressures from economic agents succeeded in increasing this to almost 40 stories high, resulting in traffic and environmental problems.

The minor hard variation concerns two satellite nuclei, Guará ('12' in Figure 2) and Gama. They come closest in Brasília to the Islington housing estates commented upon by Hillier (1996): short street segments, abundant 'T' and 'L' junctions that result in frequent twists and turns (Figure 8), blind walls all over the place, a concentration of shops in clearly delimited parts of the territory, and deeply located vis-à-vis arterial streets. We could not be closer to Borges' 'labyrinth of walls'. The most integrated lines on the axial map are arterial roads for cars and are deployed along residential blocks, but the latter turn their blind backs to such roads (Figure 8). No wonder they are deserted of pedestrians. It takes 46 min by transit to travel 13 km to reach the metropolitan core.

SOFT

The territory of the federal district, which coincides with that of the Municipality of Brasília, is divided into 31 districts, or administrative regions (RAs). The perimeter that circumscribes the World Cultural Heritage Site encompasses RA-1 (officially, 'Brasília'), and three other RAs, but only the former is the subject of this section. However, for the sake of uniformity of taxonomy, I shall stick to the denomination chosen above: the area will be referred to as the 'Plan', essentially the object of the national competition launched in 1956, which Costa won (the result was made public in March 1957) (Figure 9).

Many detailed appraisals of Brasília have been published. Thus, this paper will skip a thorough description of the city and rather concentrate on the use of its open public space, which relates to the hard/soft dichotomy in modern urban design.
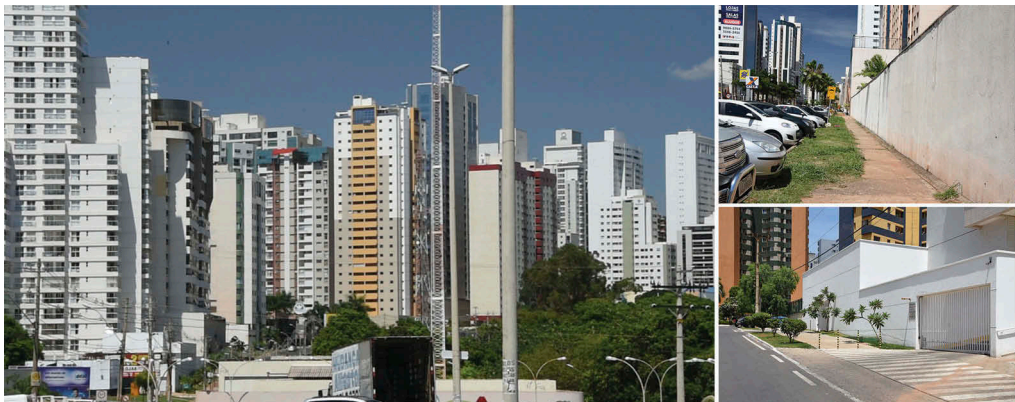

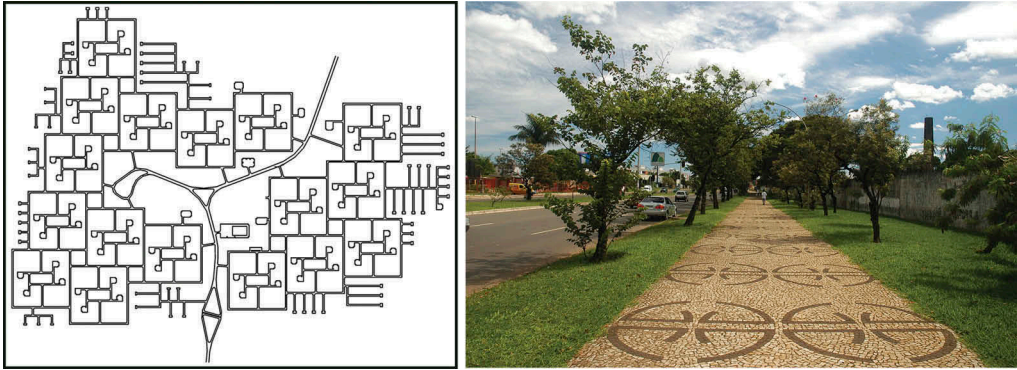**Figure 7.** Águas Claras (Clear Waters) skyline and surrounding walls of compounds.

Figure 8. Guará: plan (left) and blind walls (right).

Figure 9. The World Cultural Heritage Site: the approximate triangle in the centre of the image, limited by the lake, to the right, and by the thoroughfare to the left. The Road Axis is signalled in red.

Social discourse, imported from academia, considers the Plan's urban fabric to be organized into four 'scales': monumental, gregarious, residential and bucolic, terms which, over time, have been adopted by Costa (1995) himself. Take this to define urban morphological types – which boil down to boroughs – and we are close to a good enough classification of the types of places we find here. There are common attributes among them, as well as specificities. Stand-alone buildings are a general trait, which go hand in hand with generous, densely vegetated open spaces. Costa is right in nicknaming his project 'park city': *greenery* is perhaps the word that first comes to mind to describe the city's identity. Still, variation in the size and form of open spaces and built volumes – and their relations – clearly differentiate the four types of places.

The distinguishing feature of the Plan's residential space are the 'superblocks' (Figure 10), elementary urban units about 250 m square including peripheral pedestrian paths. Four rows of such blocks are located to the east and west of the Road Axis, the express thoroughfare that crosses the city from north to south and runs along the residential superblocks, which accordingly unfold to the north and south of the urban centre (in Figure 2, '3' marks the location of the superblocks and '4' marks the urban centre; in Figure 9, the Road Axis is signalled in red). Inside the blocks, freestanding residential buildings are in general six stories high plus *pilotis*. Besides, there are kindergartens, a school for the six first years of the Fundamental Educational Cycle and a newsstand. The rest is freely accessible open space, including a playground and a multifunctional sports court. Altogether, built volumes occupy about 15% of the area, whereas in pre-modern urban tissues enclosed plots plus freestanding edifices usually surpass 50%: in 19th-century Planaltina, for example, they reach 68% (Holanda, 2011a). Thus, soft strategy indeed: net (considering only the space inside the superblock) residential densities average 200 persons/hectare, but gross residential densities fall drastically to 16 persons/hectare in RA-1, for this includes all other uses, the generous street system and non-aedificandi areas, which abound.

However, there are always moving or static people around, the numbers and variety of which change along with the hours of the day and days of the week: young children use the playground, accompanied by parents or nannies; adolescents sit in groups, chatting; various ages use the sports courts; adults jog or stroll around, play in the courts or participate in tai chi sessions early in the morning; groups meet at tables and chairs in shaded areas to play cards or dominoes; families or groups of friends have an evening meal in makeshift open air restaurants, supported by food trucks, that occupy empty parking spaces in the evenings; peripatetic fairs sell food or craftsmanship items on certain days of the week in certain superblocks; the newsstand is always a meeting point etc. (Figure 11). Add to this the intense use of the Road

Figure 10. Lucio Costa's 'Park City': residential superblock.

Figure 11. Superblocks' open space use.

Axis (Figure 12), closed to vehicular traffic on Sundays and holidays: hundreds of people walk, run, cycle, skate, have snacks, buy crafts, listen to bands performing in the open air, tend small children who play on a variety of apparatuses assembled in shaded areas etc.

On weekdays, though, the Road Axis is a dangerous nuisance. Data published by the Confederação Nacional de Transportes (2019) reveal that Brasília presents the national record of 333 accidents/100 km of federal roads that cross the city, four times the national average. However, the Road Axis is not included because it is a district and not a federal road; all categories considered, this thoroughfare stands out as the second most dangerous route in the capital (Santos & Santana, 2019). This *Death Axis* – its popular nickname – creates a 'metal barrier' of vehicles travelling at high speeds, partitioning the Plan into 'East-Brasília' and 'West-Brasília' (Figure 13(a)). As pedestrian underpasses are about 600 m apart and are uncomfortable, dangerous and dirty (Figure 13(b)), about 30% of people risk their lives crossing the Axis, meandering between cars driving at 80 km/h. And yet, if fast moving cars were not a priority, the avenue might look as the simulation presented in Figure 13(c). Admittedly, such heterodoxy would face strong opposition in this automobile-dominated city, but perhaps it is only a matter of time?

Acquaintances amongst neighbours may unfold into friendships, but this is more common in the early years of life – as with my children, who grew up in a superblock and rarely spent their free time indoors. Adults use the superblocks' public space, but their relationships are

Figure 12. Road Axis, closed to vehicular traffic on Sundays and holidays.

predominantly trans-spatial, as is typical of the middle classes. This area is par excellence a high- and middle-class environment (the third richest RA in the city), with small variations up- and downwards, depending essentially on apartment building type, the local properties and localization attributes of buildings and associated differential market value (Holanda, 2007). In Brasília it is the (high) real state value of superblock flats that are a source of socio-spatial stratification, thus making the Pilot Plan predominantly an upper- and not a working-class environment. In this extremely top-down design strategy, many 'noises' – e.g., land-use regulations assigning commerce to less accessible locations – prevent the 'law of natural movement' (Hillier, 1996) from realizing itself: in other words, the most (topologically) physically accessible urban axes do not attract more people and therefore more central

Figure 13. (a) Vehicular flows on weekdays on the Road Axis; (b) pedestrian passages under the Road Axis; (c) possible future Road Axis, from an express road to an urban avenue (simulation on a Sunday or holiday).

Source: Author and Eduarda Aun.

activities, in turn attracting more people etc. in a 'virtuous circle of urbanity'. If there is a problem with the superblocks, this is it: the small (local) variation in domestic space types results in quasi-homogeneous (and high) prices that make it inaccessible to most people.

The superblock and its flats are highly praised by Brasília's inhabitants, contradicting critical discourses such as those of Holston and Gehl, but also classical statements such as those of Jacobs. There are no 'streets' or 'squares' or 'blocks' as clearly defined morphological units, or 'eyes on the street', let alone street 'active façades' – perhaps the most fashionable dictum of contemporary urbanists. However, this is not a problem: it does not affect the visual pleasure people enjoy, nor conviviality or safety. Superblocks feel safe and are safe, again contradicting discourses such as Rykwert's (2000), according to which high officials have abandoned the flats in the superblocks, fleeing from crime, and moved to single-family housing schemes by the lakeshore. In fact, the opposite holds true: criminal offences are much higher in the latter borough ('6' in Figure 2) (Ferraz, 2017), the richest area in the federal district. Residential burglaries amounting to 3.4/1000 inhabitants are the highest in the federal district and 27% higher than in the administrative region, which comes second. The Pilot Plan Administrative region is the third *safest* on this indicator. No wonder upper class families are moving back to the superblocks, further increasing prices. Besides in the borough by the lakeshore, offences are concentrated in areas with a high number of pedestrians, as in the urban core, and in parking lots with little surveillance, as in the club sector by the lakeshore or campus of the University of Brasília (Ferraz, 2017). Thus, 'unsafeness', disappearance of the 'city public of other Brazilian cities', and 'the overwhelming sense of monotony and sameness' (Holston) boil down to sheer wishful thinking.

Local expressive and practical qualities attract local people to the open spaces, but through-movement makes an important contribution, particularly in the east–west direction: important magnets – services, bus stops, metro stations – are located towards the east and west, and the overall permeability allows people to choose the most convenient path to connect them, eventually through the superblock's interior space. Remember that gross densities in Águas Claras are more than 10 times higher than in the Plan (215 compared with 16 persons/hectare), but the deserted spaces are in the former and not in the latter.

For sure, Brasília's superblocks are nothing like Copacabana, Rio. The latter is perhaps the most 'urbane' borough in the world, if by such we understand a place with an enormous variety of people and services for all social layers, both as residents and visitors. Its 150,000 inhabitants, a high gross residential density of 280 persons/hectare that is very close to Manhattan's, the huge amount of services, plus the famous beach result in the strong polarization it exerts over the whole city. No wonder pedestrian flows are high in daily life, even on secondary streets, and no wonder there are record crowds on special occasions: 1 million people for a Rolling Stones concert, 2 million for the famous New Year's Eve fireworks display and 3.5 million attending a mass celebrated by Pope Francis.

However, it is inadequate to use the same yardstick to measure – and assess – people in Brasília's superblocks' open space. Indices often refer to axes along which some measures are taken: number of doors, number of windows, built continuity, setbacks etc., referring to linear metres of street length. Such axial measures do not apply in Brasília for a simple fact: there are no axes. Soft strategies simply abolish them in favour of stand-alone buildings in the greenery. Permeability is radicalized (you may walk along almost straight lines in every direction). As far as pedestrian movements in the internal domain of the superblock are concerned, space is axially undifferentiated (for vehicles, it is another story). The analytical break down of the open space system of a superblock into elementary units must consider other procedures, for example, isovists or convex analysis (two other techniques adopted in space syntax, depicting two- and not one-dimensional morphological units as in axial analysis). Preliminary results suggest it is the size, form and location of such units, plus their landscape design, and other spatial attributes – sun/shade, benches, sounds/silence, ponds, flowers, scents, air movement and temperature on our bodies' comfort zone the whole year round in the privileged weather conditions of the central plateau – that convey the sense of pleasure and convenience residents

report on, and attract their presence (Ribeiro, 2013). Soft strategy indeed, but we are far from the would-be set of Corbusian gigantic *unités d'habitation* lost in the landscape. Costa has conceived another scale altogether.

The monumental 'scale', or type, or, better still, borough contrasts sharply with the residential superblocks, although belonging to the same soft strategy. The Monumental Axis, particularly the stretch of the Esplanade of Ministries, is the most famous bit of Costa's Plan, the one most powerfully symbolic, the one that confers the city its identity as the national capital (Figure 14).

Curiously enough, it was also here that Costa was ambiguous vis-à-vis modern design. Yes, the soft strategy is constituted by freestanding buildings, the famous 'sculptural' edifices designed by Oscar Niemeyer in his most 'classic' period: Metropolitan Cathedral, ministerial parallelepipeds, National Congress, Planalto Palace (presidential headquarters), Supreme Court, Ministry of Justice and, *primus inter pares*, the Itamaraty Palace (Ministry of Foreign Affairs) (Holanda, 2011b). However, they define, more than anywhere else in the city, two clearly configured open space morphological units: the first, the lawn surrounded by the ministries and the Congress, plus, in its western extreme, the Bus Station; the second, the Three Powers Plaza, defined also by the Congress, to the west, the Planalto Palace, to the north, and the Supreme Court, to the south. (As a three-sided plaza, it reminds us of Praça do Comércio, Lisbon, and Praça XV, Rio). Do not expect the 'cohesion' Camillo Sitte (Sitte, 1986) discusses when he refers to classic squares in Europe, that is, the contiguity of built volumes clearly circumscribing open space, and yet, the Esplanade, 2000 × 320 m, and the Plaza, 300 × 300 m, could hardly be more legible. A comparison with Chandigarh's capitol is extremely telling, in which the composition is ordained through abstract axes, not through perceptible, real space (Holanda & Medeiros, 2012). Le Corbusier was indeed modern; Costa, not that much.

Mary Douglas (Douglas, 1970) could not have been more right when she wrote that 'greater space means more formality'. The Esplanade of Ministries, the dimensions of which bring it closer indeed to pre-Columbian Teotihuacán – the same precise length of 2000 m – is suitable for anything but instrumental, daily life. Indeed, the latter was never its declared aim:

Figure 14. Monumental axis: the stretch of the Esplanade of Ministries.

it was the embodiment of expressive qualities that successfully made it a powerful symbol of the nation, or harbour for big events on ceremonial occasions.

Globally and locally the Esplanade's configuration conspires against the presence of people in open spaces, as a wide body of evidence suggests (see the International Space Syntax Symposia and, particularly in the Brazilian case, Netto et al., 2017). Globally, it is an appendix to the rest of the Plan, a morphic peninsula, which connects to the rest of the Plan at the Bus Station and is surrounded by unoccupied land to the north, east and south. Locally, built space occupies a fraction of the available area, doors are barely visible for they open to secondary spaces, transitions between interior and exterior spaces are always indirect by means of various devices: ramps, tunnels, flyovers or reflecting pools that surround buildings. Douglas' 'formality' realizes itself through sheer size but also through other attributes, subtle as they may be here, which mark off inside from outside and that run from Mayan ceremonial centres' ramparts, through castles' moats and bridges to the encircling walls of Imperial Beijing.

And yet, social life penetrates the interstices of this *exceptional space*, as fissures in the dominant order (Holanda, 2017). Both as bottom-up phenomena, public spaces lodge petty commerce and services in daily life, frequented by the civil servants who work here (Figure 15), and tens of thousands of people in special gatherings throughout the city's history and particularly from 2013 onwards (Figure 16). Demonstrations have run through big cities all over the country, and it remains to be investigated – if this were ever possible – if they have been relatively more or less significant in Brasília, let alone if the capital's space has interfered in them, for better or for worse. For certain, they rank among the most important public meetings the city has ever witnessed. It has been many years since the National Congress surroundings and the ramps and roof of the platform-building, upon which the cupolas of the Senate and the Chamber of Deputies rest, had been thus occupied by demonstrators (Figure 17). The symbolic impact of such an image can hardly be stronger.

If there are local and global morphological restrictions concerning the presence of people in Brasília's monumental spaces, there are also circumstances that favour it, namely the fact the Costa has brought to the very core of the city the central Bus Station, to
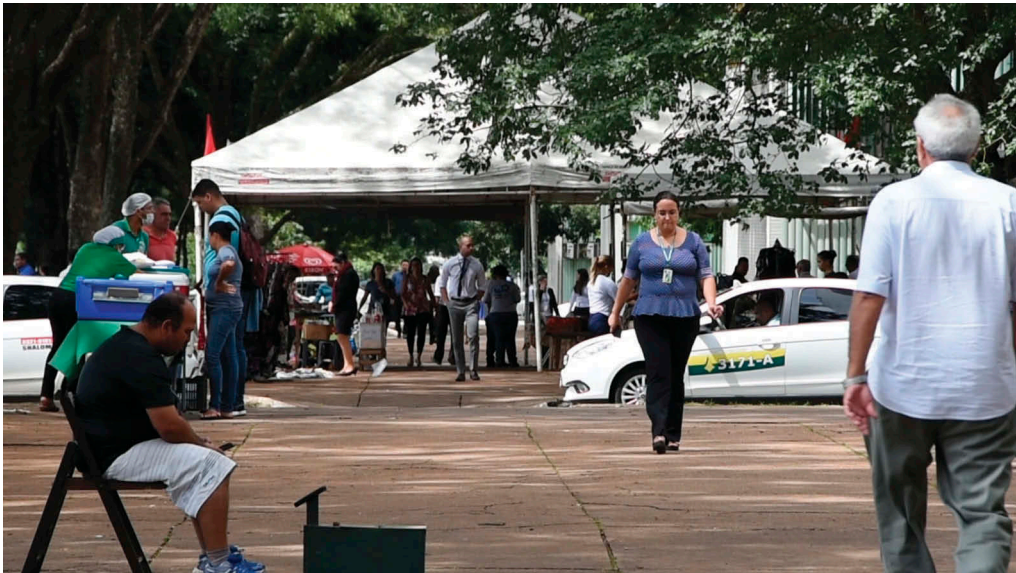

Figure 15. Petty commerce and services at lunch time on the fringes of the Esplanade of Ministries.

Figure 16. Esplanade of Ministries: (a) 1992; (b) 2002; and (c, d) 2016.

Figure 17. National Congress, 17 June 2013.
Source: Ronaldo de Oliveira/CB/D. A. Press.

which there has been the later addition of the metro station, thus making, in public transit terms, the western extreme of the Monumental Axis the most accessible point in the metropolis. The Bus Station – or the Road Platform, as the built complex is called – is a fascinating four-level structure: an underground express passageway for vehicles that connects north and south stretches of the Road Axis; the ground floor, where buses leave and collect passengers (Figure 18); a mezzanine, with various sorts of services (from which

Figure 18. Ground floor of the Bus Station (Road Platform).

Figure 18 is taken); and the upper deck, from which we enjoy the most famous postcard picture of the capital (Figure 14). It is estimated that more than 100,000 people pass through this place on weekdays. The Platform and its immediate surroundings – what is called here the 'centre of civil society', in contrast with the 'centre of the State', that is, the Esplanade of Ministries and the Three Powers Plaza (Holanda, 2011a) – constitute the 'gregarious' scale, or borough, or morphological type, formed by sectors which lodge hotels, offices, banks, shopping malls etc. As the nickname suggests, it is here that public spaces in Brasília are most intensely used in daily life.

If in some cases architectural configuration can be said to be highly determinant of the presence, or otherwise, of people in places, we must be careful in examining the specificities of each circumstance. Leaving aside accessibility by public transport, people may have the will and the strength to overcome difficulties and make themselves present in places against all (architectural) odds. Back to Holston: 'In Brasília, the outdoor city public of other Brazilian cities has all but disappeared.' (Holston, 1989, p. 312) Have they?

Finally, we reach the fourth and last morphological type: the 'bucolic' scale. This is Borges' 'labyrinth of the desert' par excellence, or, in relation to what is of concern here, the 'soft' trend at its best. Vast expanses of open space, usually non-aedificandi areas with no indication of future or possible land uses. They are the remains of the 'cerrado', the typical natural landscape of the region – low and sparsely located trees with Gramineae in between. However, it is not a deserted no-man's land in all cases: it is in such areas, those located by the lakeshore, that public parks have been implemented most successfully – as with Parque das Garças (Herons' Park), at the south-eastern tip of the North Peninsula (number '11' in Figure 2). There is always someone here on weekdays, swimming, jogging, walking a dog, fishing, boating, picnicking or simply relaxing in the shaded (or sunny) areas, and watching the beautiful views of the Plan across the lake towards the Esplanade of Ministries (Figure 19). It became a very popular spot, and at weekends and in holiday periods the place teems with people from both the middle and working classes, proving much more popular than the Road Axis, for example. This is the most prominent of all recently reclaimed lakeshore tracts which had been, through the years, appropriated by neighbouring houses or private institutions, as upper-class
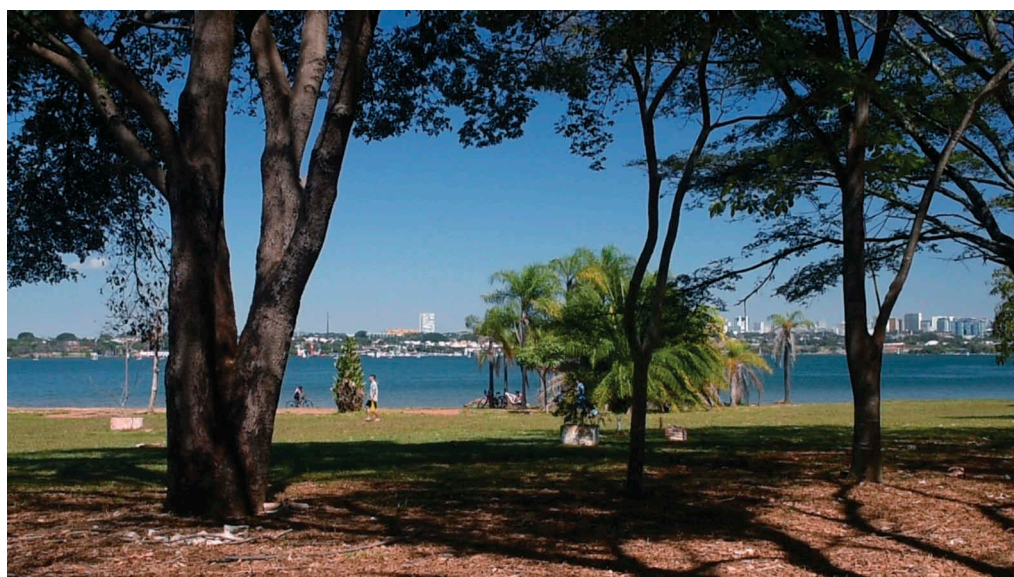
Figure 19. Herons' Park towards to the Esplanade of Ministries. The Congress Tower stands out as the most prominent visual landmark in the city.

clubs. It is a shame that accessibility to such places depends mainly on private car use, for they are badly served by public transport, as is the whole of the city, for that matter. These are the 'noble' occasions on which lower classes take their cars from the garage if they can still afford to own and use one, for the costs are becoming increasingly prohibitive. Even so, no great effort is needed to identify the class composition of the people who come here, as compared with those who visit the Road Axis on Sundays: skin colour is a good enough sign.

CONCLUSIONS

A wide body of evidence suggests that both hard and soft modern strategies conspire against richly occupied open urban spaces, if by such we understand an intense and varied co-presence of people. Is this the case in 'modern' Brasília?

Yes and no. The hard trend clearly impacts negatively on the use of space, particularly in the distant periphery. It presents itself in the form of high- and low-rise gated communities, but it also comes with open street systems in which 'T' and 'L' junctions proliferate, demanding frequent twists and turns as one navigates through such boroughs – Borges' 'labyrinth of walls'.

However, Brasília's Pilot Plan has invested rather in the soft solution and has done so most successfully. The best examples are the residential superblocks, highly praised by their inhabitants – and correspondingly well used, although high costs of implementation and maintenance, as well as high real estate values, imply occupation predominantly by residents belonging to upper social layers. And Costa has invested in this strategy particularly in the city's monumental scale – the space of the state par excellence. A place that was intended as primarily expressive, not instrumental, and therefore open only to actual appropriation on special occasions, has entirely fulfilled its role, with a plus: daily life has also inserted itself in the interstices of this essentially symbolic order. Furthermore, the symbolic power of gatherings spread widely through social networks is perhaps enhanced by the expressive role of the place itself in which they happen.

With his proposal, Lucio Costa rescues from the history of human settlements the aesthetics of the *sublime*. Traditionally, this aesthetic category has been applied to grand natural sites, and the reason for enchantment is commented upon by Botton:

> This is the lesson written into the stones of the desert and the ice fields of the poles. So grandly is it written there that we may come away from such places not crushed but inspired by what lies beyond us, privileged to be subject to such majestic necessities. The sense of awe may even shade into a desire to worship. (Botton, 2019)

Costa, while paddling against the stream of modernism which refused *grand design*, pursues this 'sense of awe' and puts his project shoulder to shoulder with places such as Teotihuacán, St Peter's Square and Imperial Beijing amongst others. No wonder Brasília is consolidating itself as a destination of tourist pilgrimage.

This theme is to be pursued further. There are places in Brasília that deserve greater attention, the enquiry into which potentially enriches architectural practice, in the never-ending virtuous circle of our agency, and towards both ends of the spectrum: central urban places intensely used in daily life, in which subjects overcome barriers imposed by hard design, and bucolic surroundings, not only by the lakeshore but also in other sites, where softness is paramount. There are precious lessons in both.

ACKNOWLEDGEMENTS

DISCLOSURE STATEMENT

FUNDING

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