

The necropolis and the reinforced concrete: anthropological and historical reflections about apartheid between Brasília and Johannesburg

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ABSTRACT

This paper compares the development of the cities of Brasília (Brazil) and Johannesburg (South Africa) through the analysis of event and everyday dualisms, as well as life and non-life. Based on a historical methodology and in the light of anthropological theories, we indicate how the constitution of these two apartheid spaces, these events and everyday life, are related through the realization of eugenic utopias that reify people already racialized in colonization. People who still have a dubious function of object and abject. Thus, we point the cement as an actor of the technosphere in the Negrocene, as Malcon Ferdinand suggested and, in the calculation of its transformation into concrete, we see how indispensable people (lives) read by capitalism/colonialism as commodities (non-life), are extracted from the residues of colonial political arrangements. Finally, we conceptualize modern cities as necropolis without forgetting that the alternatives to colonialism, presented by black histories, may indicate different experiences of what body and space are.

KEYWORDS

racism, apartheid, event, everyday life, Negrocene

As Necrópoles e o Concreto Armado: reflexões antropológicas e históricas sobre os apartheid em Brasília e Joanesburgo

RESUMO Este artigo compara o desenvolvimento das cidades de Brasília (Brasil) e Joanesburgo (África do Sul) pela análise dos dualismos evento e cotidiano; vida e não-vida. A partir de uma metodologia histórica e à luz das teorias antropológicas, indicamos como a constituição desses dois espaços do *apartheid*, esses eventos e cotidianos, se relacionam pelas concretizações das utopias eugenistas que reificam pessoas já racializadas na colonização. Pessoas que continuam tendo uma função dúbia de objeto e abjeto. Assim, apontamos o cimento como ator da tecnosfera no Negroceno, como sugeriu Malcon Ferdinand e, no cálculo de sua transformação em concreto, vemos como são indispensáveis as pessoas (as vidas) lidas pelo capitalismo/colonialismo como *commodities* (não-vida), extraídas dos resíduos dos arranjos políticos coloniais. Por fim, conceituamos as cidades modernas como *necrópoles* sem nos esquecer que as alternativas ao colonialismo, apresentadas pelas histórias negras, podem indicar experiências distintas do que seja o corpo e o espaço.

PALAVRAS-CHAVE

racismo, *apartheid*, evento, cotidiano, Negroceno

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*“(...) matéria é uma casa que habita a gente no
finito da jornada, mesmo que cimento
prometa eternidades, é de mariô y
barro a lembrança da acolhida*

*(palha, ou clorofila morrida, y
tecnologia de terra muito molhada
que a primeira deusa, velha, lenta, macerou).”*

Tatiana Nascimento, 2018

EVERYDAY LIFE AND EVENT¹

²In the modern city of colonial continuity, the assignment of individuals, reduced to their bodies, has perpetuated a racialized taxonomy and a perverse logic of the visible-invisible and value-non-value (Fanon, 1968). Thus, the historical conditions of contemporaneity allowed the continuity of the fractured spaces which in turn “facilitated the mechanism of expansion of capital in space through the use of forms” (Santos, 1977).

Engineering, architecture and urbanism – aligned with other sciences such as medicine, sociology, history, statistics, anthropology and geography – perpetuate colonial and racist practices. Through the knowledge produced by these disciplines, territories are sectioned, and forms are created to establish and assign the appropriate bodies for each space. This scission, however, is rendered powerful due to the equivalence that capitalism upholds between particular human beings and geological matter. Thus, cement has become an agent of capital.

This knowledge was based on the reinforced concrete technique, naturalizing the use of cement, in such a way that to this day there are few projects that resort to other construction systems. No other system has more space in architecture and engineering curriculum than concrete. There are even disciplines exclusively dedicated to the application of this material: Strength, Stability, Structural Systems and Calculation of Reinforced Concrete. And, even in the discipline of technical drawings, concrete appears implicit in the projects as an assumption of all construction. The damage produced by the hegemony of this material is varied and ranges from environmental degradation, to the exposure of workers who are considered to be “unskilled labor” to elevated risk in the field.

To think about its use is to reflect on the events it has given rise to. Whether it be the construction of Brasília and the forced removals of black working class families to satellite cities, or the modernization of Johannesburg under apartheid and

¹ | This essay is a result of the research carried out in the thesis (Lemos, 2022) and the experiences as a black man, a member of a traditional community of African matrix, who is born and raised in the Brasília's satellite cities.

² | Except in the cases indicated by the bibliography, the translation of foreign language fragments is mine.

the emergence of Soweto, which also resulted from forced removals (Borges, 2009, Lemos, 2018). In addition, it is possible to reflect on the changes in the cycles of life and “non-life” and how the process of transforming cement into concrete is able to delineate the value between undesirable and desirable lives.

This paper is marked by the effort that persists in the social and human sciences, to question the dualistic maxims of nature and culture; such as subject/object, organic/inorganic etc. Here, under the influence of anthropologists Veena Das (1995) and Elizabeth Povinelli (1995, 2016), we will reflect on the relationships: event/everyday and life/non-life.

Through these readings aligned with historiographical and archival research, I formulated some central questions:

a) What makes South African apartheid a separate event while the pains of everyday racism around the globe passed, in a way, unnoticed? Why, once again, does the African continent become the colossus of the world and a unique place in the very experience of race in the 20th century?

b) How are the bodies under the mark of blackness arranged in juxtaposition to other commodities? How in the modern city is this object-body just one among other materials such as calcium carbonate and water?

THE EXPENDABLE ORNAMENT

Modernist architecture with a brutalist expression has its matrix cast in concrete.³ We will see how this concrete refers to the physical matter of a building's composition and to the structure of the State in post-colonial modern cities. In other words, it is a force capable of condensing and scorching bodies, especially those forged in modernity as inferior under the stigma of race. But, after all, what are the ideas and entities related and connected to the pillars of modernist construction?

For example, the buildings in Brasília are great models of modernism. Designed by Oscar Niemeyer, they almost always carry Le Corbusier's five points: free plans, free facades, slender columns [pilotis], ribbon windows, garden terraces. The buildings attest to the wide use of space, the free movement of pedestrians and beautiful views of the environment outside the buildings. With no excess of internal and external ornament, the modern aesthetic ensures that no trace of the past emerges in the works. According to the discourse of its creators, Brasília was built from the “desert of non-life” and “without any history”, designed to create spaces for the new Brazilian man of the 20th century, a synthesis of the best of all races according to Gilberto Freyre's aspirations.⁴

In the modernist ideology, ornament was considered a crime, excesses were

3 | Concrete and its pure form was and remains the raw material for modernist buildings. In *The New Brutalism*, published by Reyner Banham in 1955, the guidelines of this section of modernist movement in its brutalist renewal are presented. One of the moral imperatives of the Modernist Movement would be “honesty in structure and material” (Banham, 1955: 22). However, I use brutalism here in its architectural and political sense, since these two fields are at the crossroads between the material and the immaterial, as Mbembe points out (2020: 8). I especially thank the professor for the conversation during my time as a visiting researcher at the University of the Witwatersrand. At that time, February 2019, the book had not yet been published and some reflections on neoliberal politics and brutalism enriched the proposals of the thesis beyond those previously elaborated.

4 | The idea of modernizing Brazil, assumed by politicians and intellectuals since nineteenth century until the 1930s (Queiroz, 2022), expresses its continuum in the construction of Brasília (Couto, 2013). This idea, however, is not disconnected from the racial goals of the early 20th century. It is updated in a version more “appropriate” to the logics of whitening the Brazilian population, as already warned by Abdias do Nascimento (1978). The new capital gave materiality to this new modern man (Rubino, 2010: 302). This is evident in the speech given by Freyre to the United Nations, ironically held in Brasília in 1966, comparing South African apartheid with the Brazilian reality, he attested: “Brazil is perhaps the only multiracial projection, on a vastly continental scale, in which, in modern society, a structure is not produced in which multiracial subgroups live parallel existences apart, only tolerating each other” (Freyre, 2003: 346).

completely expendable. The “clean”, connecting point between the styles of Adolf Loos⁵ and Le Corbusier, was highlighted by the latter: “Loos swept from under our feet, it was a Homeric cleaning – exact, philosophical and logical. With that, Loos influenced our architectural destiny” (Le Corbusier *apud* Risela, 1988: 19). In fact, the article *Ornament and Crime* (1908) by Loos was published in Le Corbusier’s magazine *L’Esprit Nouveau*. This article is regarded as one of the founding texts of modernist aesthetics. It contains the principles of Loos allied to the racial interpretation of society, thus pointing the way to a new architecture.

Loos makes a typical comparison of racialist thinking from the turn of the 19th to the 20th century; the architect establishes a metaphor between human development and the history of civilizations in racial hierarchies: “At the moment of birth, human sensations are equal to those of a newborn dog. His childhood passes through all the transformations which correspond to the history of mankind. At the age of two, he sees like a Papuan,⁶ at four, like a Teuton, at six like Socrates, at eight like Voltaire...The child is amoral. To us the Papuan is also amoral. The Papuan slaughters his enemies and devours them. He is no criminal. If, however, the modern man slaughters and devours somebody, he is a criminal or a degenerate” (Loos, 1908: 1).

It would thus be possible to measure the level of a civilization and a country by observing the amount of ornaments displayed on its walls: “Cultural evolution is equivalent to the elimination of ornament in common objects” (Loos, 1908: 2).

The peers of Loos’ time, immersed in neoclassical aesthetics, could question the inability to produce new ornaments: “How can we, men of the 19th century, not know what every Negro knows, what all the peoples of previous ages have known?” And his answer to this question is simple, “[...] what constitutes the greatness of our time is the inability to create new ornaments! We beat the ornament!” and adds “[...] the time will come when cities shine like white walls. As Zion, the holy city, the capital of heaven [...]” (1908: 3).

We can draw some lessons from this exploration of the nature of ornament, the powers of images and illusions present in Loos’ article.

First, we can observe a western episteme focused on the view and experience of the world given, almost exclusively, by our vision. It is not by chance that the term worldview is routinely used to attest to the experience and understanding of something. Oyěwùmí (1997) contests the Eurocentricity of this way of experiencing the world. There exists a different form of world-sense, when the experience of the world is felt in different ways, with different senses – such as perception of sounds and touch.

The detriment of a single path to gaze-centered human experience in the world, is the dualistic order. It was about opposing the body, what is visible, to the

5 | Adolf Loos (1870-1930) became one of the most influential architects in Europe thanks to his ideas. Despite having worked in the beginning of the 20th century, when the neoclassical movement dominated the European scene, Loos’s writings are considered fundamental to the modernist movement.

6 | Black population in New Guinea.

spirit. In Cartesian dualistic thought the body was seen as a trap from which any rational person should escape. The body, therefore, would be the excess of Loos. Even more, the ornate body socially constructed as a sign of excess, the Other, the Black, should be despised⁷.

From there, the second lesson that Loos presents us about modernist Western aesthetics is the relationship between the Black body and excess. The Papua, a Black type of Eastern Guinea, is the fruit and perpetuator of exaggerations. It is, above all, a body already marked on the skin through the historical sense that modernity has given it. This monumental, hypersexualized body is a superfluous body of modernist aesthetics. A figure in excess among other figures and, therefore, not figured on any surface, the body and the mark of blackness will always be immune to the spirit (Mbembe, 2014: 28). The “race”, that force that gives rise to the power of the image, the visible and the illusory, does not consist only in the formation of a figure of absence. It is also not just the practices that consist of such.

We can consider that for Loos, to arouse race and its resultant racism in the context of ornament is to create a blanket that covers the subject: the “Papuan” is nothing more than the excess of nature and, as I am the reason, it is not I can have nothing to do with this being. After all, “When the racist sees a Black person, he does not see that the Black person is not there, does not exist, and is just a sign of a pathological fixation on the absence of a relationship” (Fanon, 2008; Mbembe, 2014: 66).

This economy of invented images raises another problem about the reality of appearances and the appearances of reality. In the process of the Atlantic slave trade, the transformation of people of African origin into “blacks” and, therefore, bodies to be exploited, followed the logic of transforming people into minerals. Africa was the place where the mineral was extracted, the Americas the place of smelting for, finally, the conversion into European profit. “The black is not just the prototype of the poisoned and charred subject. He is the one whose life is made of calcined remains”, where the process of passing from the “mineral-man to the metal-man and from the metal-man to the coin-man is a structuring dimension of the first capitalism” (Mbembe, 2014: 78).

This image invented in contradiction could not be figured in the whiteness of the “walls of Zion”, of the buildings of the modernist city. Forged by the idea of excess, animality and instinct in the long narrative of western mythology, spanning from the 15th century to the present day, the black will be excluded from modern aesthetics, while simultaneously being fundamental as a labour force in its construction.

In this case, Brasília and Johannesburg, cities made up of colonial gestures and modernist mimesis, were structured in anti-blackness (Vargas, 2020). These are cities where *whitopia* spatiality defines the privilege of color and translates into ar-

⁷ | Oyèwùmí's criticism is even more scathing. For her, even if the social and human sciences have drastically distanced themselves from phrenology in the 19th century, they continue to carry out analyzes where the centrality is the body: suburbanites, workers, criminals, blacks, women and a series of specific types that, in the end, after all, it will end up bringing a common and everyday sense of race and, as an effect, opposing the subject who analyzes to the objectified subject (Oyèwùmí, 1997: 4).

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Figure 1 | Model Sierra Veloso and photographer Alice Leite shoot at the Memorial dos Povos Indígenas in Brasília. Source: Sierra Veloso's personal collection, 2019.

chitecture the “ideal of whiteness and anti-blackness” (Alves, 2020: 15).

Southern architects, sons and daughters of the colonizing elites, fascinated by European standards, reverberated this aesthetic in the formation of modern colonial cities. From Brazil to South Africa, these young architects sought connections with the old world, asked for their advice and incisively replicated the concepts in their works.

In Brazil the names of Oscar Niemeyer and Lúcio Costa are well known. In South Africa we can highlight John Fassler, Helmut Stauch, Norman Eaton and William Holford. All of them collaborators of the Modern Movement and admirers of other important names in the European architecture and urbanism scene, such as Le Corbusier, Patrick Geddes and Ebenezer Howard.

The connections between architects on both sides of the Atlantic went through the European script and Le Corbusier was one of those convergence points. His fame as a symbol of modernism attracted interest and investment in the post-war period. To the south of the globe, its architectural model is felt from Brasília to Chandigarh.⁸ The idea of “International Style” in modernist works is at the heart of these connections.

On the other hand, these links to Europe created another relationship between Brazil and South Africa in terms of architectural style. The studies of profes-

⁸ | Capital of the Indian states of Punjab and Haryana, the city was entirely planned by Le Corbusier and founded in 1947 after the events of Partition. Lahore, the former Punjab capital, was under Pakistani rule.

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sors Marguirete Pienaar (2018), Maria Fernanda Derntl (2019) and Arthur Barker (2018) reveal this. The influence is such that the critic “coined the name Little Brazil to refer to the buildings in tune with Carioca modernism that spread across Pretoria, Johannesburg and Cape Town” (Derntl, 2019).

We find signs of this mimesis, for example, in the visits of Norman Eaton and Hellmut Stauch in the 1940s. Eaton was not only impressed by the forms of Brazilian modernist architecture that he came to reproduce in South Africa, he was also attentive to the housing complexes low-income projects that architects and urban planners were proposing at that time. Among the few entries made by Eaton in his travel diary, we highlight the draft of the housing project in Realengo⁹

Analyses that relate modernist aesthetics and political-social thinking in architecture are not unprecedented. About Le Corbusier, for example, Simone Brott makes an exercise beyond the architect’s explicit relationship with fascist movements and collaborationism in Vichy France (Brott, 2013: 127). For her, these contacts are symptoms of the radicalization of the way Le Corbusier understood and applied the concept of “revolution”. Brott traces a history of the use in the work of the French architect to elaborate the similarities with the fascist discourse.

In 1922, Corbusier announced in a letter his intention to release his “first major book” under the title of *Architecture et révolution* (Brott, 2013: 146). At the suggestion of friends, the title underwent changes until it became *Vers une architecture* in January 1923. For her, changing the title does not seem trivial if we consider the disappearance and reappearance of the concept in the work. And, despite covering up the term, Le Corbusier made *révolution* the keyword of the project. As Brott realized, curiously the book ends with the following words:

Society violently desires something it will or will not get. It’s all in that; everything will depend on the effort made and the attention given to these alarming symptoms.

Architecture or Revolution

Revolution can be avoided.

(Le Courbisier *apud* Brott, 2013: 147).

For part of the historiography, the end of the book signals the attempt to avoid a revolution through modern architecture under the influence of utopian socialism. For Brott, however, these sayings represent the desire for violence in which the fascist movements leaned and to which Le Corbusier aligned himself. Whether it was when he had relations with George Valois and Hubert Lagardelle when he became editor of the trade union newspaper *Prélude*; or yet, when he taught in Rome in 1934 at the invitation of Mussolini; and, finally, most importantly, when he collaborated

⁹ Eaton’s record is just an indication of how the housing complexes were connected to national-developmental projects around the world, which, in turn, were anchored in apartheid to materialize. In Johannesburg in the early 1950s, the architect Douglas McGavin Calderwood (1919-2009), presented a low-cost model for using space at the expense of confining workers in the townships that would become Soweto (Lemos, 2022: 175-179).

with Vichy in the 1940s (Brott, 2013: 147; López-Durán, 2018: 171).

In addition to the relationship with fascism, Fabíola López-Durán (2018) highlights the close connections between modernist architectural thought and eugenics theories, especially neo-Lamarckianism, which proposed a cause-effect relationship of the environment on individuals and their races. With unpublished letters and documents from Le Corbusier to Alexis Carrel,¹⁰ the architect proves the links between ideas about modernist architecture and the alleged human racial improvement through the transformation of the environment.

It is worth remembering that Le Corbusier and Loos were not the only architects and urban planners who envisioned the city of modern man in racial terms. The tradition of English urbanism, whose influence is perceptible from Brazil to South Africa (Derntl, 2020; Lemos, 2022), also invested in Galtonian eugenics, adjusting social statistics to the guidelines of space occupation. Patrick Geddes and Ebenezer Howard were probably the most inspiring names for their British pupils in the early 20th century. They materialized the eugenic and utopian city of Kantsaywhere elaborated by Francis Ganton (Welter, 2002: 187-191; Vigot, 1989).

Further on, the cult of violence in the Modern Movement with expression in the neo-brutalism of the 1950s presents itself both aesthetically and in ethos. Brutalism is not just a reference to the concrete used in the constructions; it is also an attitude that guides modern life in its ruthlessness. The brutalism of the modern building as a state of architecture is confused with the architecture of the State: stiffening of borders, compression of bodies in peripheries and townships and the artifices used by state/private powers to contain and handle these bodies in urban centres (Mbembe, 2020).

CONCRETE TEST SPECIMENS

This clear and white aesthetic, external to the modernist buildings, does not denote the dark mass of the interior concrete of the obscure beams. When we submit it to the concrete specimen,¹¹ we will find the breaking of the limits of life and non-life in the calcium carbonate (CaCO₃) cycle, the main chemical material of the limestone used in concrete. The origin of matter is in the shells of crustaceans (life) from the ancient oceans of the Precambrian period. The exploitation of limestone for the use of CaCO₃ involves a vast network: from the paper industry to the food industry, from sewage treatment to civil construction. It is in the last activity, however, its greatest use. Today, worldwide cement production is around 1.7 billion tons per year, equivalent to 1 m³ of cement per person. Apart from water, no other material is consumed by humanity in such quantities (Santos, 2008: 15). Its manufacturing

¹⁰ | French physician and biologist, winner of the Nobel Prize in Physiology or Medicine in 1912 for his anticoagulant technique in blood transfusion. Also known for his collaboration with the Vichy government and broad defense of eugenics, extermination and castration of the population considered deviant. His eugenicist opinions are present in the book *Man, the Unknown* (1935), one of the works that guided Le Corbusier in formulating the model of the "new man" (López-Durán, 2018: 158-172).

¹¹ | Test by which a sample of concrete is placed under pressure to assess its strength.

process takes place through the burning of lime (CaCO_3) releasing CO_2 into the atmosphere:



One of the criticisms of the use of cement is precisely the release of CO_2 into the air. But let's observe another chemical capacity of this artifact: the condensation of water, since 42% of its mass is the sum of non-evaporable water and absorbed water (Faria, 2004: 9).

The absorbed water is constituted by the first layers of water molecules submitted to the surface electric forces field of the C-S-H particles, where C-S-H represents the hydrated calcium silicate hydrates. The chemisorbed water varies very little in this process and takes place via an actual chemical bond with the absorbent molecules, a bond that implies electron transfer. Chemically, therefore, the main characteristic of cement is water absorption.

These elements are fractioned and rearranged to favor the technosphere, and that inserts them in the cycle of the expendable and essential. However, the chemical calculation of the process of transforming cement into concrete does not insert the residues of colonial-capitalist arrangements also absorbed by cement

The concrete at the service of the rationalization of space is, among the various colonial techniques, an entity capable of breaking the organic relationships between individuals and the elements that surround them. The dissolution of these relationships and deterritorialization transformed things and people into commodities, inserting them into the flow of dispensability and indispensability. Through the globalized experience of the plantation in the New World, the technosphere capable of regulating the different planetary spheres was created (Ferdinand, 2019). Therefore, it regulates replacing reciprocity by commodification. Biosphere, rhizosphere, lithosphere and hydrosphere are now regulated by the economic order (Green, 2015: 4).

Contemporary cities and their eugenic rationality shaped the colonial-modern. In these places, the technique of concrete (element of the technosphere) uses limestone (lithosphere) and, permeating the colonial spaces, extracts from political waste the workforce (biosphere) necessary for late capitalism (Lemos, 2022: 54). Highways, roads, walls, monumental buildings, dams and hydroelectric plants now determine the flow of people and things. Rhizomatically permeating the spaces, these concrete structures restrict or give access to individuals according to their social-biological categorization (Oyewmi, 1995).

Composed of calcium carbonate and water, this great magical artifact of mo-

dernity transforms liquid into solid. It maintains life/non-life forms in the cycles of colonization and capitalism. It regulates and divides access, creating fractured landscapes that offer “immunity to geological time, to the flows of physics to the forces of human history”. Faith in cement gives humans and their technosphere a fracture between economy and ecology (Green, 2015: 7).

From the construction of dams on Tuxá lands in the interior of Bahia (Cruz, 2017) to the walls of the navy’s naval base built in the interior of Quilombo Rio dos Macacos (BA) (Oliveira, 2020); from walls in Palestine (Soske and Jacobs, 2015) to hydraulic fractures for natural gas extraction in South Africa (Green, 2015): it is the order of cement and concrete that prevails. Spaces are created in non-life by regulating the planetary system, imposing value regimes and, consequently, restricting access to people typified as commodities.

We have arrived, therefore, at a time when the impacts of human presence on the planet will be observed in thousands of years, in the geological time scale we passed from the Holocene to the Anthropocene. The result of an “urban-agro-industrial” impact on a global scale, accompanied by an unprecedented population growth.

In the conceptual order, the Anthropocene was managed by anthropology as an alternative to the end of the bifurcation between nature and humanity – that is, if it does not fall into the traps that are, on the one hand, the “social construction of nature” and, on the other, a “reductionist view of humans made of carbon and water, forcing geological forces among other geological forces” (Latour, 2014: 12).

Even though, this same concept falls into the trap of the universal human when it does not specify the production of an anti-black world by colonial structures.

To overcome this obstacle, Marisol De La Cadena alternatively proposes the term “anthropo-not-seen” referring to invisible entities in the course of the Anthropocene (Cadena, 2016: 225). This means that, since the 14th century, with the movement of European expansion, a war has been promoted against worlds in which the division between nature and humanity does not operate. At the same time, this “unseen” refers not only to “living” beings, but also to the destructive capacity of this “invisible” (colonial) force, always considered constructive. However, the insistence of the term *anthropo* still focuses on universalism.

On the other hand, if we focus on the Atlantic space where African people received the Black sign, a space where terrestrial beings are offered to capital in favor of the technosphere, we can elaborate another conceptualization of this geological era. In this sense, Malcolm Ferdinand calls the time that began on the plantation the “Negrocene”, given that “black colonial slavery would be one element among many in the ecological transformation of the plantation system” (Ferdinand, 2019: 66).

From Africa to America and back to Africa, from the slave quarters to the qui-

lombo (Nascimento 1985: 47; 1988). This body-map, created and inserted into Western society where the experience of the world is almost always interpreted through what can be seen, is circumscribed in the perverse dynamics of being and non-being, of the “loss of image”: “Body suddenly imprisoned by the fate of outside men. Body-map of a distant country that seeks other frontiers that limit the conquest of myself” (Nascimento, 1988, 35:48 min).

Let us return, then, to the planning of modern cities. For transforming cement into concrete. These elements evoke a dilemma regarding from the state of matter (from liquid to solid) to the matter state (from life to profit from death). Perceiving reinforced concrete as the material that dictates the urban forms of these cities, we remember that Milton Santos had already highlighted the importance of forms as a tool of capital.

In *A Totalidade de Diabo: como as formas geográficas difundem o capital e mudam estruturas sociais* (1977) he pointed to new technological advances as producers of objects whose technical structure harbours potential. Through the articulation of “form and intentionality” things gained a power they had never possessed before. Consequently, the scheduling mechanism has become more imperceptible. “The people of the countries involved, who have passed the brainwashing of Western theories about growth and space or who find themselves defenseless in the face of them, may not even suspect the effects of planning” (Santos, 1977: 32).

Re-decomposing the reinforced concrete of the beams, stilts and walls of modernist architecture, we found these specific bodies covered by limestone: black bodies, *candangos*¹² “concreted” in the foundation of the beams which could not be removed without compromising the structure of the works and the service time (Videsott, 2009: 287; Ribeiro, 2008).

In Brasília, the *candango* – established as a worker without colour by the historiography and the discourse of the official creators of the capital – had his image reinvented and revisited to mobilize an identity common to modern Brazilians: “In the vicinity of the white, above, the skies are dismantled, below from my feet the earth bursts, under a white, white song. All this whiteness scorches me...” (Fanon, 2008: 108).

During the construction of the University of Brasília, Fanon’s anguish surpasses the metaphor for Expedito Xavier Gomes and Gildemar Marques. On May 5, 1962, *Correio Braziliense* newspaper reported:

The auditorium of the University of Brasília is called ‘2 Candangos’, as a tribute from the Dean to the 2 anonymous who died in its construction. In homage we will say their names: Gildemar Marques, from Bom Jesus, Piauí, 19 years old and Expedito Xavier Gomes, from Ipu, Ceará, 27 years old. (*Correio Braziliense*, May 6, 1962)

12 | The etymology of the word refers to a racial relationship between Angolans and Portuguese. In Brazil, *candango* was, for some time, synonymous with mulatto. Later, during the construction of Brasília, the name was reinterpreted to designate migrant black workers from other states in Brazil. (Lemos, 2018).

We certify the color of these workers in the only document that provides detailed information: the report of the burial expert present in process S3066/62 of the Archive of the Court of Justice of the Federal District and Territories.¹³ We opted, however, for not reproducing the photographs of these dead individuals to avoid the colonial violence of the archive itself.

The first university building in the city was erected over the bodies of these workers who were doubly rendered into concrete in life and in history. I say concreted in history because the homage of “tragedy” does not bear their names, it rather reifies them through naming the building as “Two Candangos”.

The image of the *candango* combines the sub-human being, a contributor to construction, with the raw materials of reinforced concrete. They were the “steel titans”. The name *candango*, synonymous with the disposable, will be re-signified at the same time it is made available in the cement mass (indispensable). In the speech of his appointment as mayor, Israel Pinheiro said: “Fortunately, the candangos, which until then were known pejoratively, are really steel titans, in whose energy and will Brazil can trust its redemption” (NOVACAP, 1960). The *candango* presents itself yet another classification that justifies the incarceration and elimination of black people in a specific context. (Wynter, 1994: 2).

These individuals, transformed through “a thousand details, anecdotes, reports” (Fanon, 2008: 105) were the basis of the project of modern Brazil, which in turn implied the castration of its powers. At the same time, the figure itself excludes women from the process of building the capital, as if the erection of the city were exclusively the result of male labour. Thus, reinforcing the western senses of experiencing the world where “social hierarchies, such as sex and race, are a function of visual privilege over the other senses” (Oyěwùmí, 2010: 30).

Commodity, metal, currency. The division of the historical narrative of slavery, colonialism and apartheid (Mbembe, 2001: 196) separated these events from everyday life, created illusions of a terrifying past against an acceptable present or, even, created geographically displaced examples that make acceptable regimes of devaluing the subjects, held as *infrahumans* and dispossessed of their bodies. In the new cities, these bodies work through the means of capital, where the dynamics of the superfluous and the necessary, operate a constant flow over all entities involved in this space.

Much like Brasília, Johannesburg operates on the spectrum of superfluity. But unlike the Brazilian capital, the industrial centre of Gauteng was the stage for the event, the colossus of the world, apartheid. Talking about superfluity does not mean that the city exists only through excess; the “trimmed” edges are important parts

13 | The lawsuit filed by Antônia, widow of Expedito Xavier, concerns the request for pensions owed to dependents by the Institute of Retirement and Pensions for Industrial Workers (IAP). This simple document leads us to an analysis of how the historiography of popular housing in Brazil disregards the transfer of income from black families to the IAPI. Money that, due to bureaucratic violence, remained in the institute's coffers and was invested in civil construction (Lemos, 2022: 59).

of this system. Superfluity refers to the “dialectic of the indispensable and the expendable, work and life, people and things” (Mbembe, 2001: 38). Modern cities are rewritten to replicate the colonizing unconscious. Inventing something new while replicating similarities with the metropolises and where its main characteristics come, above all, from capitalism.

In the Brazilian Federal District, capital is linked to urban development and civil construction whose origin is anchored in the transition of gained from the slave trade to legal forms during the end of 19th century.¹⁴ In Johannesburg, industrial capitalism arrived through the diamond fields of the Kimberley and the exploitation of gold on the plateau of the Witwatersrand (POSEL, 1991; FREUD, 2019). Built as a city without references to the past, a European experience in Africa, Johannesburg has combined capital, work and industry connected with the global economy. The city lived and lives linked to formal and coercive institutions with a legal structure that determined the value of people, properties and credits through racial divisions (Nuttal e Mbembe, 2008: 39).

To say that cities have these characteristics linked to capitalism does not mean to say that they only create a relationship of production and accumulation. This is due to a characteristic of capitalism that Marx has been showing for some time: flow and movement (Nuttal e Mbembe, 2008: 40). As we talk about the technosphere circuit, life and non-life are confused in this flow, black people are arranged as with commodities.

Johannesburg’s growth in 1886 coincides with the adoption of the gold standard by the Western economic system thirteen years earlier. The discovery of gold in the Witwatersrand brought with it a wave of European immigrants who occupied the plateau in search of investment, profit and goods. For a good to exist, it must be itself constantly thrown out of circulation, that is, it must have some level of superfluity. As indicated by mining engineers in the Witwatersrand at the beginning of the 20th century: profit is only possible through the racial division of labour and the excess of workers.¹⁵

People under the Black sign, those who are disposed as assets, are no exception to this rule. In South Africa, the European class would have been unemployed in their own homelands, however on arrival in South Africa, through racial structures, benefitted from the labour of immigrants from Zimbabwe, Mozambique, Zambia. Contrary to what part of Marxism propagated, the circulation of capital is not preceded only by a class relationship, “but also in human investment in certain forms of racial delirium” (Nuttal e Mbembe, 2008: 42).

The dynamics of the city and work in Johannesburg produced these delusions, black lives were necessary for the construction of industrial capital linked to mining. Valued as expendable, abundant and in excess. These lives were marked as “objects

14 | The historiography of Brazilian economic formation based on the classics of Celso Furtado (1958) and Fernando Novais (1989) has been revised from the perspective of a national capitalism much more linked to Atlantic mercantile capital, where the raw material was enslaved Africans and indigenous people (Alencastro, 2000). At the same time, the flow of this capital starts to be directed to other activities, especially civil construction in Rio de Janeiro (Fragoso & Florentino, 2001).

15 | As the historiography about the mining industry in South Africa points out: Nkosi (1987), Duncan (1995), Teisch (2005), Katz (2006), Higginson (2007), Tuffnell (2015), Freund (2019).

among other objects". The spatial relationship of the black body with the city is established in the contradiction of despicable life and, therefore, desirable as a low-cost workforce. And, at the same time, the city itself is structured in this dichotomy and only survives through it. Lives that were made through a sacrifice necessary for development, which implies a distribution of death – or necropolitics.

Deep in the mines that surround Johannesburg, respiratory diseases such as tuberculosis and silicosis were constant. The latter is a potentially progressive, irreversible disease that leads to the incapacity of construction and mining workers. Caused by the inhalation of crystalline silica dust present in cement and constant in jobs that require drilling, grinding or cutting rocks (Katz, 2006). Silicon dioxide (SiO₂) in contact with lung cells causes the release of inflammatory mediators (macrophages, neutrophils, lymphocytes) that phagocytose silicon dioxide. As SiO₂ is not digestible (matter from the non-life cycle), this process ends up continuously causing autolysis – cellular self-destruction – triggering fibrosis in the tissues: scars that stiffen the lungs and make gas exchange difficult and, finally, breathing, impossible (Sato et al., 2006).

The scheme of cellular self-destruction and the body's inability to digest silicate has something similar to the dynamics of psychological self-destruction of black subjectivities. As Fanon laments, racism concerns both external and internal effects, its toxicity seems to have no end if not for the explosion:

Enclosed in this overwhelming objectivity, I begged the other. His liberating gaze, running over my body suddenly free of asperities, gave me back a lightness that I thought I had lost and, extracting me from the world, gave me to the world. But in the new world, I soon came across another aspect, and the other, through gestures, attitudes, looks, *fixed me as you fix a solution with a stabilizer. I was furious, demanded explanations... to no avail. I exploded. Here are the crumbs gathered by another me* (Fanon, 2008: 103)

At the same time, South African apartheid managed to justify itself and create a relationship of distance between black and white people through sanitary discourses. In the first three decades of the 20th century, sanitary segregation was practiced as a way of achieving progress and development. Following this path, public health doctors tried to argue that African people were more susceptible to diseases, especially tuberculosis, due to the lack of coexistence with western forms in the industrial city. However, it was possible to adapt the native peoples to their living conditions by creating their own spaces. Segregation followed through sanitary arguments, guaranteeing the health of white populations in the centres and regulating the lives of black people (Packard, 1989: 194-196).

As soon as South African apartheid took shape in the 1950s, urban and regional plans were aired in the press and in city administration bodies. The bureaucrats publicized the need for planning due to the increase in the concentration of people in urban centres, this increase in turn would propel diseases. On the other hand, they hid economic causes such as the need for mining companies to lower production costs for better yields (Mabin, 2013: 22; Lemos, 2022: 161-173).

The grand plan for the redevelopment of Johannesburg was first conceived together with the French urban planner and architect Maurice Rotival. The pioneer modernist of CIAM (*Congrês Internationaux d'Architecture Moderne*) was also one of the first to use computers for precision calculations together with aerial photographs. In his perspective, this would be the best way to lead the growth of modern cities, a city controlled by elites (Hein, 2002a: 250).

With experiences in the Plan of Caracas (Venezuela, 1936) and New Haven (United States, 1941), South African bureaucrats did not hesitate in calling on the urban planner to reconfigure Johannesburg. In August 1952, the Rand Daily Mail reported the headline “Rotival Explains his Master Plan for Development of Rand” after the meeting between the urban planner and government officials (Figure 2). Rotival’s first proposal highlighted by the article pointed to the establishment of 500,000 houses for natives, both in the Far East Rand region and in southwest Johannesburg, with the reorientation of the townships of Pimville, Orlando and Moroka – a complex of townships that today form Soweto.

Rotival also envisioned a “White Corridor” between Johannesburg and Vereeniging. A space destined only for industrial development and houses for white people. In the urbanist’s understanding, the region could prosper with planning, given the mining power of coal mines for the production of electricity, whose forecast of 427 watts per capita was among the highest in the world.

Years later, Rotival’s project was used as a basis for the production of the Planning Survey of the Southern Transvaal (1957) or, the Red Report, a study that guided all regional planning between Pretoria, the Witwatersrand plateau (where Johannesburg is located) and the city of Vereeniging (region known as PWV).

Transitioning again to the other side of the Atlantic, during the construction of Brasília in the 1950s, we observe the ecological and sanitary argument to prohibit autonomous construction of the migrant population. The “Sanitary Security Range”, defined by the DF-001 highway (Figure 3), was a device used in 1958 to bar the settlement of migrant workers near Brasília.

From this point on, all donations of land or buildings within the limits could only be accepted after the approval of a NOVACAP board of directors (HOLSTON, 2010). The track materializes the argument of the sanitation engineer Saturnino de Brito Filho who, in a plan prior to that of Lúcio Costa, already warned of the need

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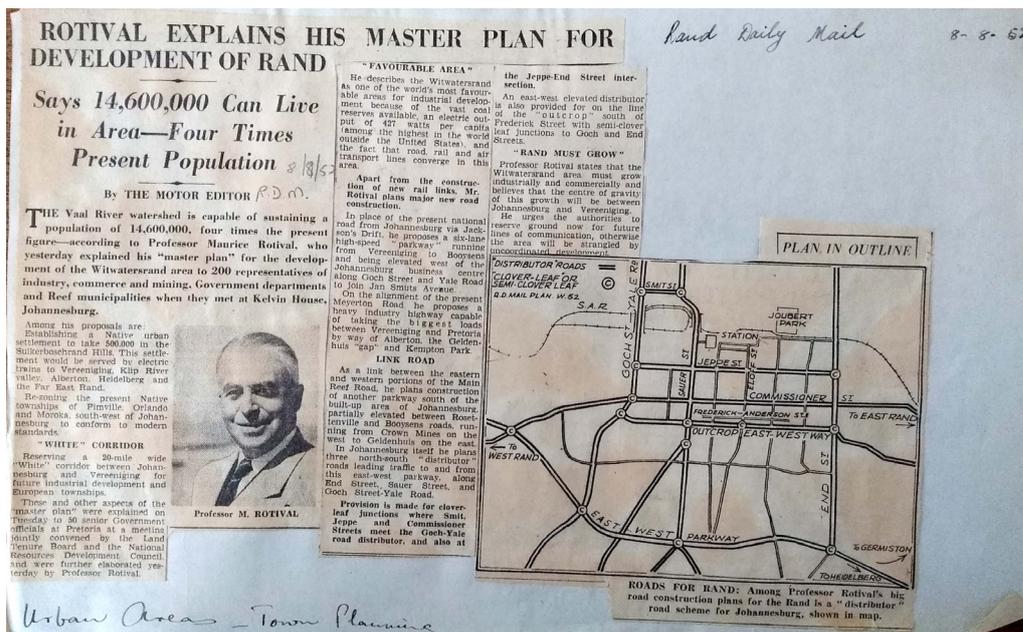


Figure 2 | Journal Rand Daily Mail in 1952. Source: HPUW, AD1972 S.A.I.R Journals, cx. U259.16.3 (Soweto 1949-1954).

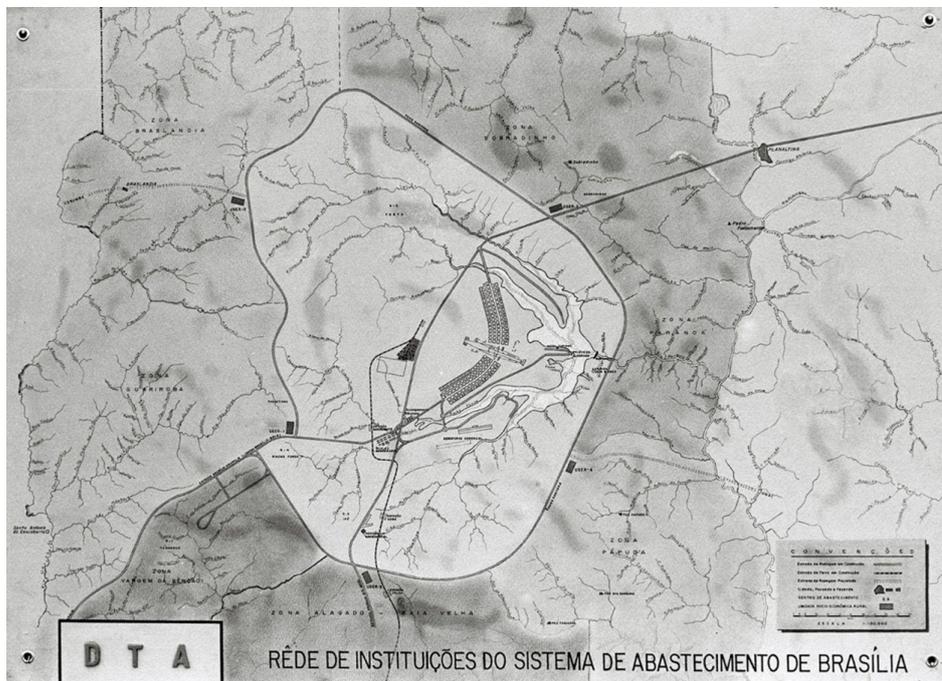


Figure 3 | Faixa de Segurança Sanitária [Health Safety Boarder]. : ArPDF, Fundo Novacap, Nov D.4.4.B-19, 1975.

for the new federal capital not to reproduce the mistakes of Belo Horizonte and it should avoid the “formation of slums” in addition to “determining the distance in km at which new nuclei [satellites] can be established” (CLNCF, 1955: 85 *apud* Lemos, 2022).

The construction of highways and park roads (concrete order) did not effectively integrate all the inhabitants of the region (Maravalhas & Derntl, 2019). At most, they served to take workers to their distant homes, creating segregated cities with punctual access to the downtown. Fundamental boundaries in regional planning to boost the flow by which capitalism is sustained in modern cities (Santos, 2007; 2009).

Considering these two examples, we can say that the cement insert the spatial configurations within the territories in the same way that it penetrates the rocks during hydraulic fracturing (fracking). Its function, its only objective, is to extract the maximum energy from some terrestrial beings for the benefit of the neoliberal system (GREEN, 2015; POVINELLI, 2016; FERDINAND, 2019; MBEMBE 2020). Modern cities, planned for the proper functioning of human life – that is, for the good functioning of those considered human – produce a deadly split between entities. They are nothing more than necropolis.¹⁶

CONSIDERAÇÕES FINAIS

The solutions found so far based on the improvement/development of cities, continue to fail because they operate on the same logic of the system of production of death through the divisions between the entities of the planetary system. People of African origin, indigenous peoples and others – historically established as sub-human – are arranged in space according to the will of colonization and capitalism together with other non-life entities (calcium carbonate, limestone, water, etc.). In the transformation of cement into concrete, the social and historical processes that involve colonized human beings are hidden.

Here we understand the necropolis in the approximate sense of what Jaime Amparo Alves has recently presented. At first, Alves focused on statistical data on the production of incident deaths in the black population of the city of São Paulo (2018). Now in *Biopolis, necrópolis, negrópolis: notes for a new political lexicon in socio-spatial studies on racism* (2020), his observations, still centered on data, walk in an expanded sense on the ideas of spatiality. On the other hand, it lacks a critical consideration of the architectural and urban techniques used by whiteness to divide the worlds between man and nature.

And at this point, therefore, we move away from a quantitative analysis to-

¹⁶ | It is necessary to emphasize the difference between death (nekróu) induced and imposed in the West, and the death conceived in other cosmologies or traditional peoples. For example, in candomblé, death *iku* (yoruba) and *kufua* (kimbundo) does not establish a division. Death does not have the same meaning, because *Ikú* does not break belonging to the community. *Ikú* only transforms the condition of a living being into an ancestor who is also a participant and belongs to the community, linked through memory. And memory in the West is totally hijacked in favor of historical events, of “big names”. I owe these reflections on *Ikú* to prof. wanderson flor do nascimento recorded on 06.19.2020 when he presented me with ideas from his chapter in press. This same reflection gives rise to another already carried out by Muniz Sodré (2019) on the space of the *terreiros* in peri-urban regions and how they occur in the alternative to the colonial mode of organization (Sodré, 2019: 28-32).

wards an approach to the anthropology of technique, taking as reference a study already carried out in relation to the management of life and non-life in the Brazilian *cerrado* biome (Fagundes, 2019). In the latter case, however, the work focused on fire management at the Serra Gerais Ecological Station (Jalapão-TO). In the thesis, Guilherme M. Fagundes verifies how the change in the perspective of combating management, resulting from the inclusion of local quilombola knowledge and practices, leads to changes in dealing with fire and in the arrangements of human and non-human lives (Fagundes, 2019: 154-212).

Here, by critically emphasizing the socio-historical factors present in the gestures that transform cement into concrete, we intend to point out other paths in the future. By denouncing the colonial technologies of late capitalism, we hope to pave the way for revisiting alternatives. After all, the globalized use of concrete and the creation of fractured landscapes are not finished. The rammed earth techniques for dwellings, which derived from “*biointeraction*” (Santos, 2015), still exist and are in dispute by those who defend an ecologically viable experience. But this same movement can be quickly co-opted by whiteness itself, as identified by Ferdinand (2019).

Even in the urban space, the ways of life of the occupations indicate that there is no concrete totality. The consubstantial dwelling opposes the Cartesian whiteness of the anti-black world (Paterniani, 2022: 17-20).

Therefore, I sought to formulate a critique of whiteness based on a historical analysis of the application of architectural and urban techniques that constitute the modern city. I identified how the constitution of brutalist buildings, typical of the modernist aesthetic, overshadow the colonial event and apartheid. Thus, I invite fellow historians to examine what the event and everyday life are in this context. Finally, I inserted the critique of the modern city in the midst of productions on decolonial ecology and counter-coloniality, pointing to the *necropolis* as a fundamental element of the Negrocene.

However, it is essential to construct such criticisms by emphasizing that there is nothing new. Precisely because the historical experiences of *quilombos*, *terreiros* and other spatial organizations constitute this reflection/action (Sodré, 2019; Nascimento, 1985). Elaborating criticism by hiding these experiences can contribute to the obliteration of these insurgent black experiences and feedback the alleged universality of cemented landscapes.

Black historical agents formulated and continue to formulate strategies to tear apart the concrete. Whether through social movements, when we observe the global articulation in the fight against apartheid (Hall, 2022), or the occupations in large urban centers (Paterniani, 2022); based on strategies to reframe everyday life through art, writing, technological reinventions (Nemer, 2021), or teaching as a form of healing. After all, as Denise Ferreira da Silva reminds us, “healing is not the mark-

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er between health and disease – it is rather a process of creation in language and with language a process of expression. It is the creation of meaning, when oriented towards ethical and collective issues, that has the potential to recreate the world in a new way” (Silva, 2016).

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