UNIVERSIDADE FEDERAL DE SÃO CARLOS
CENTRO DE CIÊNCIAS EXATAS E DE TECNOLOGIA
PROGRAMA DE PÓS-GRADUAÇÃO EM ENGENHARIA URBANA

RESTRUCTURING THE SMART CITY FROM THE GLOBAL
SOUTH: A STRUCTURAL AND DIALECTICAL ANALYSIS
BETWEEN THE VIRTUAL AND PHYSICAL URBAN SPACE

VICTOR GARCIA FIGUEIRÔA FERREIRA

São Carlos
Dezembro de 2023

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Tese apresentada ao Programa de Pós-
Graduação em Engenharia Urbana da
Universidade Federal de São Carlos, como
parte dos requisitos para a obtenção do
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Orientação: Prof. Dr. Ricardo Augusto
Souza Fernandes

São Carlos
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Folha de Aprovação

Defesa de Tese de Doutorado do candidato Victor Garcia Figueirôa Ferreira, realizada em 07/12/2023.

Comissão Julgadora:

Prof. Dr. Ricardo Augusto Souza Fernandes (UFSCar)

Prof. Dr. Érico Masiero (UFSCar)

Profa. Dra. Elza Luli Miyasaka (UFSCar)

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Prof. Dr. Antonio Gabriel Santana Martins (UFSC)

O Relatório de Defesa assinado pelos membros da Comissão Julgadora encontra-se arquivado junto ao Programa de Pós-Graduação em Engenharia Urbana.

Fragen eines lesenden Arbeiters

Wer baute das siebentorige Theben?
In den Büchern stehen die Namen von Königen.
Haben die Könige die Felsbrocken herbeigeschleppt?
Und das mehrmals zerstörte Babylon
Wer baute es so viele Male auf? In welchen Häusern
Des goldstrahlenden Lima wohnten die Bauleute?
Wohin gingen an dem Abend, wo die Chinesische Mauer fertig war
Die Maurer? Das große Rom
Ist voll von Triumphbögen. Wer errichtete sie? Über wen
Triumphierten die Cäsaren? Hatte das vielbesungene Byzanz
Nur Paläste für seine Bewohner? Selbst in dem sagenhaften
Atlantis
Brüllten in der Nacht, wo das Meer es verschlang
Die Ersaufenden nach ihren Sklaven.

Der junge Alexander eroberte Indien.
Er allein?
Cäsar schlug die Gallier.
Hatte er nicht wenigstens einen Koch bei sich?
Philipp von Spanien weinte, als seine Flotte
Untergegangen war. Weinte sonst niemand?
Friedrich der Zweite siegte im Siebenjährigen Krieg. Wer
Siegte außer ihm?

Jede Seite ein Sieg.
Wer kochte den Siegesschmaus?
Alle zehn Jahre ein großer Mann.
Wer bezahlte die Spesen?

So viele Berichte.
So viele Fragen.

(Brecht, 2018: 756-757)

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Resumo

Esta pesquisa faz uma análise crítica das estratégias de desenvolvimento orientadas pela tecnologia, sejam elas vistas como uma iniciativa inteligente ou associadas a características sustentáveis, resilientes e outras. Da mesma forma, analisa o impacto das tecnologias de informação e comunicação na sociedade. Além disso, investiga a dependência da sociedade e as necessidades de inovações tecnológicas no espaço urbano. O objetivo não é estagnar a inovação tecnológica, mas sim direcioná-la para servir à sociedade, o aspecto humano da cidade. Trata-se de um esforço intrinsecamente transdisciplinar que considera estudos de informação e comunicação, economia política, estudos urbanos, sociologia urbana, governança e teorias de governabilidade. Esta pesquisa busca compreender as consequências do desenvolvimento impulsionado pela tecnologia e analisar o espaço físico urbano e sua relação dialética com o ambiente virtual e suas tecnologias, bem como a reconfiguração das relações desenvolvidas nessas dimensões, a dinâmica de poder, os mecanismos de governança, governabilidade e planejamento do espaço virtual tecnologicamente ampliado, especialmente no contexto do Sul Global. Assim, pode-se destacar três aspectos originais da presente pesquisa: (1) Construir um arcabouço teórico que contribua para as análises realizadas na tese, devido ao caráter transdisciplinar e de fronteira; (2) a reestruturação da compreensão das cidades inteligentes por meio de uma perspectiva do Sul Global; e (3), com base na realidade material, preparar o terreno para estratégias, táticas e pesquisas futuras para aprofundar a compreensão das cidades inteligentes e possibilitar mudanças subversivas.

Palavras-chave: cidades inteligentes, colonialismo digital, urbanismo neoliberal.

Abstract

This research critically analyses technology-driven development strategies, whether they are seen as an smart initiative or associated with sustainable, resilient and other characteristics. Also, analyses the impact of information and communication technologies on society, and investigates society's dependence on and need for technological innovations in the urban space. The aim is not to stagnate technological innovation, but to direct it towards serving society, the human aspect of the city. This is an intrinsically transdisciplinary endeavour that considers information and communication studies, political economy, urban studies, urban sociology, governance and theories of governability. This research seeks to understand the consequences of technology-driven development and analyse the physical urban space and its dialectical relationship with the virtual environment and its technologies, as well as the reconfiguration of the relations developed in these dimensions, the dynamics of power, the mechanisms of governance, governability and planning of the technologically expanded virtual space, especially in the context of the Global South. Thus, three original aspects of this research can be highlighted: (1) a theoretical framework that contributes to the analyses carried out in the thesis, due to its transdisciplinary and frontier nature; (2) the restructure of the understanding of smart cities through a Global South perspective; and (3) based on the material reality, prepare the ground for strategies, tactics, and future researches to further the comprehension of the smart cities and enable subversive changes.

Keywords: digital colonialism, neoliberal urbanism, smart cities.

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Introduction

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A graphic representation of data abstracted
from banks of every computer in the human system. Unthinkable complexity.
Lines of light ranged in the nonspace of the mind,
clusters and constellations of data. Like city lights, receding...
(Gibson, 2014: 83)

Urban environments are complex and dynamic, permeated by social, political, cultural and economic aspects, of municipal, regional, national, and international scales. It is configured as an interdisciplinary field of study that must take into account physical and spatial issues, the social relations that have shaped the environment and the models and strategies of urban development (Graham, 2010, 2011; Harvey, 2015; Rolnik, 2009, 2017). Information and communication technologies (ICTs) are only additional elements in this confluence of urban factors. The term smart city arises, according to the literature, from the interaction between these new technologies in constant development, with social and human capital, aiming at improving the quality of life in urban environments (Albino; Berardi; Dangelico, 2015; Batty, 2012; Bibri; Krogstie, 2017a 2017c; Castells, 2000; Morozov; Bria, 2019).

This virtual space, complex in itself, creates an extra dimension of complexity and dynamism to the urban physical environment, changing urbanity and its society, resulting in novel forms of power struggles. Thus, the social construction of urban spaces also changed, new actors entered the scene, while the existing ones had their reality altered

(Morozov, 2018; Morozov; Bria, 2019). The insurmountable information and data within this rhizomatic virtual space have an "exponential, explosive and chaotic nature of its development" (Lévy, 2011), that exceeds in every way the development of the physical city space.

Adding to these analyses, the Global North-South dynamic should be investigated. After all, low complexity economies (of the Global South), for a myriad of reasons, lack the effective capacity to develop, produce, implement, and maintain technology-driven urban initiatives and interventions without the interference from corporations or States from the Global North, *i.e.*, without undergoing a despotic globalisation process (Santos, 2000, 2008b; Santos; Souza; Silveira, 1998). At the same time as it has on its territory essential natural resources for technological production, and mirroring what happened with the exploitation of Guano to enable British high farming in the 19th century (Mariátegui, 2007), there is a metabolic rift, (Clark; Foster, 2009; Foster; Clark, 2004; Foster et al., 2020) caused by the predatory exploitation of resources that feed the advances in high tech, sold back to these dependent economies when possible or necessary. This dependency relation, *i.e.* colonial relation, as well as the different economic, political, and social realities must be studied in order to provide a restructuring of the perception, concept, and practices of smart cities in the Global South.

Therefore, an effort is needed, not only to understand what constitutes a smart city, but also the structures that guide its development, planning, and management. More sustainable, resilient, culturally, economically, and socio-politically conscious forms must be advocated. To this end, an interdisciplinary and systematic approach is essential to identify and analyse the entanglement of technology in urban society and its consequences.

1.1 Research questions and hypothesis

This thesis' investigations were driven by two initial questions: (1) what is the dialectical relation between the physical and virtual urban environment and its technologies? And following, (2) what are the changes and reconfigurations within the political, economic, social, and cultural dynamics, especially in a Global North-South hemispheric context? Furthermore, a simple yet complex initial hypothesis was set, that smart cities are a way of maintaining and deepening the structures, infrastructures, and superstructures of the capitalist mode of production.

Hence, there are three further hypothesis that helped to structure and guide this research: (a) smart city technologies have become a *sine qua non* condition for discussing urban reality, due to their economic, social, cultural, and political composition; (b) smart city templates and frameworks from the Global North cannot be implemented in the Global

South; (c) the peripheric economies of the Global South, due to their low complexity, do not have the capacity to develop, produce, implement, and maintain technology-driven urban initiatives without interference from the Global North.

1.2   Justification

Although smart cities are oriented towards economic and urban development strategies that are often tied to a neoliberal corporatism (Hollands, 2008, 2015; Shelton; Zook; Wiig, 2015; Wiig, 2015, 2016), they are also a currently inevitable trend. The term encompasses almost any of the possible digital urban intervention. Hence, studying this field means to not only study the smart city phenomenon as a concept behind urban interventions and policies, but also to understand the materiality of it, and to question what is included and understood as "smart", what is not and why. Rather than resisting the insertion of technology in the urban environment, it is better to understand this phenomenon and expand the possibilities to the social construction of the urban space. Using the term smart city is not, in this thesis, a defence of its superiority to the detriment of others (sustainable, resilience, human, etc.), much less a proposal to abandon them. It simply characterises the lens through which analyses will be carried out.

In studies surrounding smart cities, a significant portion is limited to technical and technological aspects, with little evidence of an approach that relates to social issues, that are essential for a better understanding of smart urban environments (Albino; Berardi; Dangelico, 2015; Batty,2012; Bibri; Krogstie, 2017b, 2017c; Lyons, 2018). Therefore this thesis originates from the necessity to expand the present understanding of the social, political, economic, and cultural aspects of the smart cities phenomenon. To better develop this research, there is a need for a theoretical framework that will be able to support a more democratic decision-making process of planning and governing the urban spaces. *In summa*, this research is an effort to produce an holistic view of the smart city phenomenon, aggregating different fields of study, creating bridges, and addressing research gaps.

1.3   Objectives and contributions

The main objective of this study was to comprehend the urban physical space and its dialectical relation with the virtual environment and its technologies, the reconfiguration of the relations developed in these dimensions and the dynamics of power of the technologically augmented space, especially in a Global-South context. Accordingly, the specific contributions of this thesis are:

1) A theoretical framework that contributes to the analyses carried out in the thesis, due to its transdisciplinary and frontier nature;

2) The restructure of the understanding of smart cities through a Global South perspective;

3) Based on the material reality, prepare the ground for strategies, tactics, and future researches to further the comprehension of the smart cities and enable subversive changes.

1.4   Methodology

This study makes use of an exploratory, descriptive, and explanatory bibliographical research approach to comprehensively investigate the evolution of the smart city field of research. This approach facilitates the identification, analysis, and synthesis of existing literature related to: smart cites; urban studies; science, technology and society; governance; and political economy. Therefore, enabling a holistic understanding of the study's object, the physical and virtual urban spaces and their dialectical relations.

The present thesis is a continuation of a master's dissertation (Ferreira, 2019) were a systematic analysis of the "smart city" study field was conducted, producing a state-of-the-art research. In order to update the dissertation results, a systematic and comprehensive search on electronic databases, academic journals, books, conference proceedings, reports, and other relevant sources was conducted to verify if any new significant developments were made within the field. Regarding the "smart city" phenomenon, the inclusion criteria encompass publications spanning the last two decades (2001-2021) to ensure the incorporation of recent developments. A combination of keywords such as "smart cit*", "sustainability", "urban planning", "neoliberalism", "political economy", "global south", "metabolic rift", "digitalisation", and "colonial" was used to retrieve relevant literature.

Any new and relevant findings were used in a qualitative content analysis, to extract relevant information. The content analysis process was used to identify any new key themes, concepts, theoretical frameworks, and empirical findings related to this thesis. These were organised and categorised in combination with the results of the already mentioned master's dissertation to develop a comprehensive overview of the evolution of smart cities, as well as, to identify a thematic synthesis enabling the development of a coherent narrative that outlines the historical progression, current practices, challenges, and potential future directions of the smart city phenomenon. This synthesis helped to bring to light underlying patterns, contradictions, and gaps within the literature, enabling the unfolding of the theoretical analyses, developments, and contributions of the present work.

The scope of this thesis is also a limitation within itself. Therefore, it might constrain the depth of analysis for some aspects of the study's object. Also, it heavily relies on the availability and quality of existing literature, which might be biased or incomplete, and additionally it dwells in a transdisciplinary frontier research area. Last but not least, the scope and depth of this research is conditioned to the limitations of its author. Regardless, this thesis devises an attempt to bridge the gap between the billowing "smart city" research with other areas and fields of knowledge, contributing to a deeper and more comprehensive understanding of the digitalised urban environment.

1.5   Thesis structure

The remainder of this document is structured as follows:

Part I encompasses the literature review of smart cities and the frameworks used for its development, in Chapter 2; next, Chapter 3 presents the theoretical foundations for the fruition of this study with a certain degree of abstraction; and Chapter 4 is an effort to understand neoliberal urbanism and a sort of "smart" capitalist realism.

Part II represents the research on hemispherical realities through the lens of coloniality, imperialism, and late imperialism, in Chapter 5. Following, Chapter 6 briefly presents the concepts of digital colonialism and of an eco-technological imperialism.

Part III begins with the analysis of power relations, auratic structures and changes of perception, and a pulverised control in a digitalised urban environment, in Chapter 7; while Chapter 8 proposes a possible restructuring of the understanding of smart cities, together with strategies for democratic and socially conscious smart development structures.

This work is an attempt to look at the smart city phenomenon and the urban environment through various perspectives. The main challenge was not to lose focus and weave a comprehensive three-dimensional möbius tapestry with multiple coloured threads, that sometimes may have recently been spun through distaff and spindle. This spinning may occur behind the pages, between the lines, and sometimes within text, so one must not yield to the eagerness to know the connection between all concepts and find the answers to immediate questions that may have been aroused by their inquisitive mind. Maybe there is some fatiguing in following the divergent weaves of this work, but by chance and effort the author may have been able to further in the reader's mind critical thinking and questioning of hegemonic structures, or at least, maintain a cohesive weaving, however chaotic it may seem at times, to compose at the end a coherent and decipherable multilayered pattern.

Part I

Theorical references

Occorre persuadere molta gente cheanche lo studio è un mestiere,
e molto faticoso, con un suo speciale tirocinio, oltre che intellettuale,
anche muscolare-nervoso: è un processo di adattamento,
è un abito acquisito con lo sforzo, la noia e anche la sofferenza.
(Gramsci, 1982: 138 - 139)

Chapter 2

Smart cities dimensions, modes of existence, and hemispherical realities

Dieser Sturm treibt ihn unaufhaltsam in die Zukunft,
der er den Rücken kehrt, während der Trümmerhaufen vor ihm zum Himmel.
Das, was wir den Fortschritt nennen, ist dieser Sturm.
(Benjamin, 1978a: 698)

This chapter seeks to present the literature related to smart cities, as well as, present initial critical comments on the concepts, definitions, frameworks and development strategies that compose the current understanding and practises of the smart city phenomenon. This critical appointments will be developed throughout the thesis from different points of view and approaches, as an attempt to congeal a more comprehensive understanding of the analysed object. Therefore, the themes and questions raised in this chapter will be expanded and complexified before being given an answer or resolution.

2.1 Concepts, definitions, dimensions and critical considerations

According to Caragliu, Del Bo and Nijkamp (2011) a smart city stands for both the investment in human and social capital (decisive for urban competitiveness) and for physical capital (encouraging the use of ICTs). However, a smart city must account for government participation and excellent resource management, *i.e.*, this new paradigm of cities comprises the use of technology to improve the infrastructure to produce better cities

to live (Zanella et al., 2014). As stated by Schaffers et al. (2012), the smart city concept is multi-dimensional, representing a scenario that possesses objectives to be achieved and an urban development strategy that focuses in utilising technological innovations to enhance citizen's quality of life. Therefore, a smart city should be innovative, creative and often reinvented, aiming towards a universal sustainability (Albino; Berardi; Dangelico, 2015; Bibri; Krogstie, 2017a; Hayat, 2016).

However, the social praxis is the criterion of truth, and the observed reality of smart city initiatives, with some exceptions, bears unequivocal neoliberal characteristics and an utopian or post-modern background of representations and semiotics being more relevant than reality itself, than the social praxis and the necessities it poses. This detachment from the reality, or blindness to it, is neither new nor without reason. Hollands (2008), already warned against a corporate takeover of the smart city, and seven years later, the same author doubled down and again made critical remarks about the smart fever on urban studies (Hollands, 2015). As of the reason, since smart cities fit so well with the current hegemonic ideology, that it deepens, accentuate, and expands neoliberal practises, it is difficult to remove the veil and understand that there are alternatives. The symbolism, the idea of a "smart" city holds power, and this idea, even if it is hollowed out of meaning, becomes a commodity to be ranked against others of the same kind, and evaluated, traded, bought and sold within late capitalism's speculative and financial economy. Again, the idea, the representations of reality become a commodity, and therefore central to the capitalist mode of production, *i.e.*, the idea of a "smart" urban space, and all it entails becomes a commodity, and as such, alienated and fetishised.

To better grasp the "smart" concepts as it is understood in the literature, some attempts have been made to structure in a more succinct and categorised manner the desirable or key features of smart cities, achieving a way to measure the smartness of a city. Giffinger *et al.* (2007) and Giffinger and Gudrun (2010), stipulate six dimensions of a smart city: (a) smart governance; (b) smart mobility; (c) smart environment, management and the use of natural resources; (d) smart living and quality of life; (e) smart economy; and (f) smart people or social and human capital. These six dimensions will be briefly explained and critically commented upon the following subsections. As they all exist under the smart city phenomenon, some of the overarching critical points are transferable and applicable to multiple dimensions. Hence, repetition will be avoided, except for stressing key factors.

2.1.1 Smart governance

In literature, "smart governance" refers to strategies that prioritise the application of digital technologies and innovative structures to enhance efficiency, transparency, and

inclusivity of government operations, public services, and urban management.

Odendaal (2003) initially puts forward the concept of "digital governance", stating that ICTs can foster opportunities for growth and empowering. However, advises caution on reckless application of ICT solutions, warning of the possible distortions and misuses of "digital governance". Nonetheless, as highlighted by Pires, Magee, and Holden (2017), the prevailing paradigm of smart cities often involves solutions offered by corporations, which tend to function more as investments than actual resolutions to urban challenges. This trend extends to technologies targeting internal government operations, as well as those presented as public policies.

Prominent researchers such as Batty (2012), Bolivar and Meijer (2016), and Giffinger and Gudrun (2010) have pointed out that "smart governance" has become a branding strategy adopted by governments seeking higher rankings in smart indices to bolster the city's image, particularly the government's image. This positioning aims to attract investments while sidelining the more market detached conceptualisations of smart governance. The purpose of smart governance should be to leverage new technologies as tools for fostering greater public participation in decision-making related to urban planning and management. It also should enhance the quality and efficiency of public and social services, foster transparent governance, and develop strategies that prioritise interactive, participatory, and democratic governance models (Giffinger et al., 2007; Giffinger; Gudrun, 2010; Grossi; Pianezzi, 2017; Pires; Magee; Holden, 2017; Wiig, 2015).

At its core, smart governance envisions a collaborative partnership between the government and its citizens, utilising digital innovations and data-driven insights to co-create solutions that address urban challenges. By embracing technologies like the Internet of Things (IoT), data analytics, and artificial intelligence, governments can collect, analyse, and utilise real-time data to make informed decisions and optimise resource allocation. This data-driven approach empowers city administrators to respond promptly to emerging issues, adapt to changing circumstances, and allocate resources more effectively. Furthermore, a central tenet of smart governance involves fostering transparency and accountability. Digital platforms can facilitate open communication between the government and its constituents, enabling citizens to access information about policies, projects, and resource allocation. This transparency not only builds trust but also encourages active civic engagement, as citizens feel more connected to the decision-making process.

To achieve smart governance, according to literature, the focus must shift from pursuing superficial rankings and branding to creating meaningful, lasting impacts on the quality of life for urban dwellers. To summarise, some of the key elements of smart governance are (Batty, 2012; Bolívar; Meijer, 2016; Meijer; Bolívar, 2016; Pires; Magee; Holden, 2017):

1. **Data-driven insights** – utilising data analytics to inform policy decisions, monitor progress, and allocate resources effectively;

2. **Participatory decision-making** – engaging citizens in the planning and decision-making processes for urban development and public service improvements;

3. **Service efficiency** – employing technology to streamline the delivery of public services, reducing bureaucracy, and enhancing citizen experiences;

4. **Transparency and accountability** – ensuring that government actions are transparent and the decision-making process is accessible to the public, enhancing trust and reducing corruption;

5. **Accessibility** – ensuring that technology-enabled solutions are accessible to all segments of society, including marginalised communities, to prevent digital divides;

6. **Collaborative** – building partnerships between government, private sector, academia, and civil society to co-create innovative solutions for urban challenges.

In conclusion, according to literature, smart governance goes beyond mere technological implementations. It represents a paradigm shift towards participatory, inclusive, and data-driven governance that seeks to improve the well-being of citizens. By embracing the principles of smart governance, cities can harness the full potential of digital advancements to create sustainable, resilient, and citizen-centric urban environments.

2.1.2 Governance apparelled

Smart governance practices and conceptualisation aligns with the neoliberal ideology of the guarantor-regulator State (Carcanholo, 2017; Grossi; Pianezzi, 2017; Hollands, 2008; Wiig, 2015). It becomes a strategy or a political-economic mechanism to further market discipline and competition, with the excuse of solving State inefficiencies. Thus, occurs the hollowing out of the State, public services are dismantled and concessions, permissions, public-private partnerships, and privatisations substitute former State functions (Borchers; Figueirôa-Ferreira, 2022; Farmer, 2011; Hollands, 2015; Souza, 2018; Theodore; Peck; Brenner, 2011; Wiig, 2016). In this manner, through the use of technology, neoliberal ideology equips the State apparatus under the veil of a supposed impartial tech-driven efficiency. Additionally, once apparelled by the neoliberal ideology deepened by smart initiatives, the State, through smart governance, becomes more susceptible to other initiatives of the same nature. One must not forget that new forms of governance, signifies new legislations, and within an apparelled State in conjunction with a susceptible (coercively if necessary) society, the legal form becomes an instrument for the perpetuation of certain

interests, *i.e.*, the legal form is over-determined, the law is a consequence of the society that creates that law, so in a capitalist society, the function of law is to serve the maintenance of a capitalist society and its mode of production (Hosika, 2022; Kashiura, 2015; Naves, 2000; Pachukanis, 2017).

The concept of smart governance represents an enticing vision for modernising governance practices and models, leaning on technology to play a central role in remodelling administrative processes, focusing on stripping down the State apparatus to enhance efficiency and accountability, fostering citizen participation. However, upon a more critical analysis, this governance digitalisation poses a set of issues and challenges (Batty, 2012; Bolívar; Meijer, 2016; Grossi; Pianezzi, 2017; Leszczynski, 2016; Meijer; Bolívar, 2016; Pires; Magee; Holden, 2017; Söderström; Paasche; Klauser, 2014; Souza, 2018; Theodore; Peck; Brenner, 2011; Wiig, 2016):

1. **Technological fetishism** – one of the primary issues regarding smart governance is the assumption or belief that technology alone can solve complex urban challenges with neutrality, this neglects the complexities of governance and policy making. This belief disregards technology's production and development and the social relations it obscures, configuring a fetishistic characteristic. In this way, smart governance becomes a "beacon" of neutrality, impartiality, efficiency, and scientific way of governing;

2. **Exclusionary practices** – the pursuit of smart governance, as seen on literature, often - inadvertently or not - excludes segments of the population. Digital divides, characterised by disparities in access to technology, can marginalise vulnerable communities, worsening existing inequalities. Smart governance, instead of ensuring equitable access to services and participation in decision-making, can sometimes create barriers or a simulacrum of participation that without regulations to enforce community decisions and opinions, renders such initiatives a mere façade;

3. **Data privacy and security** – the data-driven nature of smart governance raises significant concerns about data privacy and security. Collecting and utilising vast amounts of personal data for decision-making can compromise individuals' privacy and lead to data breaches, specially with incipient legislations and proprietary software used in digitalised governance initiatives. These issues become more prominent when the privatisation tendencies of neoliberal policy are accounted for. The private sector (Big-Techs, corporations and overall private initiative) can have access to not only sensitive but profitable citizen and State data;

4. **Accountability and transparency** – while smart governance aims to streamline administrative processes, it can sacrifice accountability and transparency. Automated

decision-making systems can veil the decision-making process, making it challenging for citizens to hold officials and governments, hidden behind technological and technical algorithmic efficiency, accountable;

5. **Human-centred approach** – the human-centred approach sometimes may translate into the participation of a diminutive portion of society. Conversely, as a way of dismantling welfare programmes and to foster the neoliberal focus on the individual, becoming individual-centric, and therefore holding the subject accountable for their own precarious and exploited conditions, exempting the State and governments from responsibilities.

Smart governance can not be treated as a reality detached solution that exists, is created, structured, build, and managed outside of society's current mode of production. Otherwise, it may represents, in this context, the reduction of the governing capacity under the excuse of a supposed inability of the State to govern and ensure citizens' rights and needs, furthering neoliberal practices and agendas that undermine and exploit citizens' rights to the city.

2.1.3 Smart mobility

Mobility holds a central role in the landscape of urban studies and development strategies due to its significant influence on the environment, economy, and society. Therefore, "smart mobility" must be held at the same degree of importance. The intricate relation between mobility choices and their externalities has prompted a reevaluation of transportation systems and practices. Notably, the work of Kenworthy (2006) highlights the importance of prioritising active travel modes and efficient public transportation networks while mitigating the dependence on cars and motorcycles as part of sustainable urban development strategies. Within the discussions of such strategies, the term "smart mobility" becomes a multifaceted and evolving concept. However, it remains nebulous and occasionally lacking expanded and comprehensive definitions and discussions.

While "sustainability" is sometimes interchangeably used with "smartness," the former term does not comprehensively encapsulate the entirety of what constitutes "smart mobility". This conceptual distinction is crucial to delineate the nuanced dimensions of smart transport systems. Smart mobility, as explained by Lyons (2018) and further elaborated by Noy and Givoni (2018), is characterised by three fundamental pillars:

1. **Data-driven decision-making** – the essence of smart mobility lies in its capacity to harness technology to generate, share, and utilise data, information, and knowledge. This data-driven approach should serve as a tool to empower decision-makers with

insights to optimise transportation strategies, mitigate traffic congestion, enhance operational efficiency and diminish externalities;

2. **Connectivity and innovation** – smart mobility entails the use of technology to enhance vehicles, infrastructures, and services. Innovations such as real-time tracking, smart traffic management systems, and connectivity between vehicles and infrastructures augment the overall transportation experience;

3. **Holistic improvements** – smart mobility should extends its benefits to the interests of transportation system operators, users, and investors alike. This comprehensive approach seeks to streamline operations, provide seamless user experiences, and yield attractive returns on investment.

Lyons (2018) aptly notes that the connection between sustainability and smart mobility is continually evolving. Urban mobility must contribute to sustainability by promoting efficient transportation alternatives, reducing carbon emissions, and optimising resource allocation. However, the dynamic landscape of smart technologies introduces a new layer of complexity by harnessing digitalisation strategies potential to further these sustainable goals (Noy; Givoni, 2018; Yigitcanlar; Kamruzzaman, 2020). Jeekel (2017) delves into the realm of social sustainability in conjunction with smart mobility, investigating the intricate relation between technology adoption and equitable access of said technology. Accordingly, mobility smart measures and technologies should not inadvertently exacerbate social inequalities but rather enhance inclusivity and equitable access to all members of society.

In summary, the trajectory of smart mobility intertwines with sustainability but carves its unique path by leveraging technology, data-driven insights, and holistic improvements to transportation systems. This convergence has profound implications for urban development, environment preservation, and social equity, demanding a multifaceted exploration of its dimensions and implications.

2.1.4   Capitalisation through urban mobility

In order to better illustrate the critical considerations in regard to smart mobility discussions, two possibly disruptive initiatives will be used, autonomous vehicles (AVs) and Mobility as a Service (MaaS). This does not configure an in-depth review and analysis of said initiatives.

Autonomous vehicles and driving systems, represent a possible disruptive impact on urban planning and land use, enabling novel forms for tech-driven development to reshape the built environment. Although individual AVs take the forefront of the development

initiatives, public transport AVs are also being investigated, even if in a far smaller scale. AVs prompt a reexamination of the urban fabric, as their integration makes necessary adjustments in infrastructure, spatial planning, traffic management, and data protection bringing forth valid concerns (Paiva et al., 2021; Yigitcanlar; Wilson; Kamruzzaman, 2019):

1. **Infrastructure** – built environment and land use tailored to AVs companies and users;

2. **Sustainability** – sidelined with marketing focusing on the benefits, commodities, and exclusivity of AVs;

3. **Parking** – vehicles still need parking, therefore, precious spaces will continue being used to park AVs when not in use. On the other hand, AVs can free up parking spaces changing land use and benefiting land owners, financial and real state capital;

4. **Vehicle ownership** – AVs initially will be promoted as a private property by developers and investors alike, a luxury item that does not accommodate sharing initiatives, unless public transport AVs are included within this technology push for innovation;

5. **Public transport** – current trends devise a decrease in the use of public transport, or at least an increase in the marginalisation and depletion of investments and support policies;

6. **Social exclusion** – increase in the social divide, either by treating AVs as luxury individual transportation modes, or by enforcing its use by lower income population on the expanse of constant surveillance and data accumulation;

7. **Operational systems** – the development and programming of the AVs different operating systems must be regulated and strive for cooperation and ethical guidelines, otherwise competitiveness and aggressiveness can render AVs at the least, unreliable;

8. **Data accumulation** – AVs will expand the amount of data production within the urban space, albeit by the space itself or by the users. Be it the luxury individual autonomous car owner or the mass of autonomous public transport users, AVs become potential instruments for data extraction and capital accumulation.

Even considering that optimistic predictions estimate more impactful usage between 2030 and 2050, and even with accidents being recorded, AVs are still a growing field. Research regarding consumer intentions and tactics to promote a higher penetration rate are being conducted and with their positive results, investments and speculations on the market impact and investment returns are on the rise (Milakis et al., 2017; Panagiotopoulos;

Dimitrakopoulos, 2018; Silva; Cunha, 2022). Clements and Kockelman (2017), in their study investigate the economic impact of AVs into 13 industries in the United States. As can be seen on Table 1, AVs represent a significant growth to some key industries: Freight transportation; land development; automotive; electronics and software technology; digital media; oil and gas. There is even an estimative for the "drivers" increase in productivity, being able to work during the trip, with the reduction of 2.7 billions unproductive hours, resulting in USD 47.5 billion/year of saved time. On a similar study, Alonso et al. (2020) shows the prospective changes in ten Spanish industries. This scenario differs from the US, where some industries show substantial GDP (Gross Domestic Product) increase but there is an overall decrease, as seen on Table 2. Some of the negative results, can be explained by the lack of national industries related to the production and maintenance of AVs and their infrastructure. This is only one smart city initiative, albeit impactful and disruptive so are many others. Even though the economic predictions and conjectures do not become a reality, they served as fuel to capitalise on the speculation, the possibility, and potentiality.

Table 1 – Summary of Annual Economic Effects: Industry-wide and Economy-wide.

Industry	Size of Industry (billions)	Dollar Change in Industry (billions)	Percent Change in Industry	$/Capita
Insurance	$180	−$108	−60	$339
Freight transportation	$604	+$100	+17	$313
Land development	$931	+$45	+5	$142
Automotive	$570	+$42	+7	$132
Personal transportation	$86	−$27	−31	$83
Electronics and software technology	$203	+$26	+13	$83
Auto repair	$58	−$15	−26	$47
Digital media	$42	+$14	+33	$44
Oil and gas	$284	+$14	+5	$44
Medical	$1,067	−$12	−1	$36
Construction–infrastructure	$169	−$8	−4	$24
Traffic police	$10	−$5	−50	$16
Legal profession	$277	−$3	−1	$10
Industry-specific total	$4,480	$418	9	$1,312
Economic Type of savings	Dollar Change in Industry (billions)	$/Capita		
Productivity	$448	$1,404		
Collisions	$488	$1,530		
Economywide total	$936	$2,934		

Table 1 – *(continued)*

Industry	Size of Industry (billions)	Dollar Change in Industry (billions)	Percent Change in Industry	$/Capita
Collision value overlap	$138	$432		
Overall total	$1,217	$3,814		

Note: + = industry gain; − = industry loss;

$/Capita per year and total: all values added because of net economic–consumer benefit.

Source: (Clements; Kockelman, 2017)

Table 2 – GDP Forecast of all the industries analysed along with this paper with the three scenarios proposed and their related GDP data in millions of euros.

	Current GDP	Current GDP	Transition 20%	GDP (T20%)	Transition 50%	GDP (T50%)	Transition 100%	GDP (T100%)
Equipment industry	3%	35.805,99€	−5%	34.015,69€	−10%	32.225,39€	−16%	30.077,03€
Goods transport	8%	93.305,52€	9%	101.703,02€	26%	117.564,96€	58%	147.422,72€
No-life insurance industry	0.90%	10.496,87€	−5%	9.972,03€	−50%	5.248,44€	−65%	3.673,90€
Professionals concerned	0,27%	3.149,06€	−10%	2.834,16€	−44%	1.763,47€	−85%	472,36€
Technological industry	1.20%	13.995,83€	25%	17.494,79€	80%	25.192,49€	160%	36.389,15€
Health	1%	11.663,19€	−23%	8.980,66€	−60%	4.665,28€	−90%	1.166,32€
Passenger transport	8%	93.305,52€	8%	100.769,96€	25%	116.631,90€	55%	144.623,56€
Energy industry	2.50%	26.242,18€	−24%	19.944,05€	−55%	11.808,98€	−98%	524,84€
Repair and maintenance industry	3,47%	40.471,27€	−3%	39.257,13€	−10%	36.424,14€	−15%	34.400,58€
Automotive industry	10%	116.631,90€	−15%	99.137,12€	−45%	64.147,55€	−70%	34.989,57€
TOTAL	38,16%	445.067,33€	–	434.108,60€	–	415.672,59€	–	433.740,04€

Source:(Alonso et al., 2020)

Furthermore, within the emergence of smart mobility strategies, MaaS rises as a potential game-changer in the realm of urban transportation, offering a tantalising vision of seamlessly integrated mobility options. While the idea may appear of undeniable merit, upon critical examination the complex landscape reveals issues of technological dependencies and social and economic implications. MaaS promises to revolutionise urban mobility by integrating diverse transport modes – from public transport to car-sharing and bicycles – into a unified framework. This integration should deliver streamlined and personalised travel experiences, all within a digital platform. The allure lies in the convenience it offers, especially by eliminating the need for multiple travel cards or private vehicle ownership. However, this depiction obscures critical aspects (Borchers; Figueirôa-Ferreira; Fernandes, 2021; Jittrapirom et al., 2017; Utriainen; Pöllänen, 2018):

1. **Technological dependence and inclusion** – MaaS' viability depends on a robust digital infrastructure, highlighting a potential divide between tech-alphabetised individuals and those less comfortable with technology. While smart devices usage is on the rise, equal access to digital devices or reliable internet connectivity is not universal. Consequently, there is a risk of exacerbating disparities in transportation access and leaving certain segments of the population marginalised and excluded;

2. **Privacy and data concerns** – MaaS's reliance on data collection and sharing raises privacy concerns. The seamless user experience demands substantial personal data sharing, which could be exploited or mishandled. Striking a balance between convenience and privacy is crucial, requiring strict data protection regulations and transparent user consent mechanisms, that are lobbied against by tech companies, developers, and providers;

3. **Equity and affordability** – While MaaS can supposedly offer cost-effective alternatives to private vehicle ownership, its financial accessibility remains a question. Subscriptions and fees may inadvertently exclude lower-income individuals, rendering them dependent on traditional transportation systems, that as a consequence of MaaS implementation, may become insufficient and neglected. Also, subscription models might not suit occasional travellers and tourists;

4. **Mode shift and sustainability** – MaaS' promise to reduce car ownership and promote sustainable transportation is tempered by the car centric urban infrastructures, as well as, the superstructure that dictates the car usage and ownership as a given. In other words, while offering multi-modal options can encourage shifts away from private cars, deeply ingrained social habits and preferences might slow the transition. Additionally, an overemphasis on efficiency might overshadow the importance of fostering sustainable travel behaviour;

5. **Control and autonomy** – the concentration of various services within a single digital platform, as envisioned in MaaS, raises questions about user autonomy. Users and service providers might find themselves dependent on few platforms services included, limiting their choices and reducing the competitive landscape. Hence, MaaS's success and the dominance of a few major players could potentially stifle innovation and configure a monopoly on urban transport systems and sectors that endangers users and labourers.

In conclusion, MaaS's transformative promise is tempered by potential challenges and uncertainties. The vision of seamlessly integrated mobility services is alluring, but its implementation requires careful steering and observation of technological, social, and economic issues and discussions. MaaS is an almost perfect example of the deepening of neoliberal strategies to capitalise the urban space. Even if MaaS strategies prioritise inclusivity, equity, privacy, and user and provider autonomy while fostering sustainable mobility behaviour, the application, development and control of such initiatives will still incur in a simple problem, *i.e.*, treating mobility as a service rather than a right.

2.1.5   Smart environment

According to Giffinger (2007), smart environment is closely tied with the management of natural resources, but also includes measures to mitigate pollution, to enforce environmental protection, and promote a certain attractiveness of natural conditions. Therefore, smart environment should observe the overall sustainability of smart initiatives, with a focus on the environmental impact of the urban space, and strive for greener and a more eco-friendly urbanity, *i.e.*, it aims to achieve a balance between economic growth and environmental awareness by using smart measures and technologies together with data-driven insights to minimise waste and reduce the ecological footprint.

A notable peculiarity, however, of this term in literature lies in its dual nature, as it can refer to both the natural environment and the virtual or digital environment. This duality highlights the diverse ways in which technology and innovation intersect with the space, be it constructed or natural. Although, Giffinger (2007) did not use the term with this double meaning, literature and empirical experiences show this duality. With the increasing penetration of ICTs in society and urban spaces, the digital environment has become an integral part of the human experiences. Virtual environments such as social networks, gaming platforms, virtual cities, and even augmented and meta-verse worlds, to different degrees represent aspects of a particular sociability, with real and tangible consequences.

The digital revolution and the advancement of IoT gave traction to digital environ-

ments to become increasingly "smart", adapting to user needs and preferences with data collected from the physical realm. As can be seen on recommendation systems (e-commerce websites), smart houses that automatically adjust lighting and temperature based on residents' habits, algorithms for pattern recognition, surveillance, content delivery and more. Here is a crucial point to understand what the "smart" adjective stands for, it strives and thrives with the connection between the virtual and physical space.

2.1.6 Streamlining smart environmentality

Smart cities, according to literature, constantly seek innovation, aiming for constant reinventions and developments to a more ubiquitous, creative and technological urban space. However, this often translates into progress for progress sake (Albino; Berardi; Dangelico, 2015; Bibri; Krogstie, 2017c; Hayat, 2016; Grossi; Pianezzi, 2017). How can something that is constantly reinvented be sustainable? As can be verified in literature, the smart city trend rose to popularity with heavy investments from large corporations, big-techs, and private sector research foundations, envisioned as a "multi-trillion dollar global market" and part of this market profit is dependent on a mentality shift (Townsend et al., 2010). In the case of smart environment, by using foucaultian concepts and analyses is possible to understand the necessary shifts in the environmentality for the fruition of the smart cities agenda (Foucault, 2010; Gabrys, 2015).

This environmentality, can be understood as a form of controlling, regulating or governing subjects, or the population, by changing or modulating the environment and how said individuals interact with it. Also, environmentality addresses bio-politics, the distributions of power that control the daily experiences and more, how to and the way in which said experiences may occur (Foucault, 2009, 2010; Gabrys, 2015). The expansion, through ICTs, of user-space-generated data is an essential aspect of smart city initiatives. On the same note, a common theme in government and industry white papers discussing smart cities revolves around the utilisation of networked sensing technologies to enhance urban processes and optimise the use of resources. These technologies aim to improve the efficiency of various aspects, such as transportation, infrastructure, energy consumption, and industrial operations (Gabrys, 2015). Hence, the central approach to attaining sustainability within smart cities is by fostering greater efficiency in urban processes through sensing and monitoring (supposedly impartial and neutral) technologies, that become with time, an integral part of citizenship.

Smart environment initiatives, as all other smart city initiatives, have an underlying of political and economical interests, that if neglected to be observed, the discourse will be dominated by current ideology (Gabrys, 2015; Grossi; Pianezzi, 2017; Hollands, 2015; Lyons, 2018). Sustainability is often conditioned to the efficiency of resources, climate,

green spaces, people, mobility etc. The whole of the urban space is to be reconstructed in order to achieve a sustainable efficiency, to provide a smart and sustainable growth. This focus implicates in a dangerous modulation of the perception of environmentality: the life, the how to live and the way of living is conditioned to efficiency, not to the why, *i.e.*, sustainable practices become reduced to smart practices and more importantly, growth and development are not questioned, only their efficiency. To recapitulate, some key points to understand smart environment are (Bibri; Krogstie, 2017c; Gabrys, 2015; Grossi; Pianezzi, 2017; Hollands, 2008; Lyons, 2018; Morozov, 2018; Morozov; Bria, 2019):

1. **Streamlining sustainability** – with the lens of smart technologies, the driving principle of sustainability is reoriented towards the better utilisation of time and resources through space. Smart technologies become integrated into everyday structures and social relations and are designed to promote more efficient lifestyles;

2. **Monitoring and modulating** – sensing assumes a central role in articulating the sustainability and efficiency of smart cities, fostering the continuous oversight of processes to effectively manage them;

3. **Data-centric sustainability** – the user and urban data generated through these "smart" processes are intended to facilitate the regulation of urban operations within a seamless integration between human-machine sensing and activity. In other words, this processes happens by the combination of supposedly well-informed and coordinated human actions (by utilising digital platforms and data collection), artificial intelligence and algorithms, ubiquitous computing, and many other smart measures and technologies;

4. **Pseudo human-centric** – while humans/users may actively engage with the sensor-equipped environment through mobile devices and platforms, the coordination and regulation across both manual and automated urban processes unfolds within pre-programmed environments. These environments serve as organisational hubs that streamline the inputs and outputs of both humans and machines, harmonising their efforts towards the predetermined goals of sustainability/efficiency;

5. **Unquestionable smart sustainable development** – there is an unquestionable premise that technologies are neutral and impartial, and that efficiency is the only possible path towards sustainable management of resources. This form of sustainable development, and the veiled political and economic interests, is seen as the rational and logical path to follow. To argue against it is illogical, and to dispute or oppose the need for development is deemed irrational, almost maniacal and detached from reality.

As a consequence, the "natural" environment is neglected, if much, there is a push for more efficient metabolic flows by the use of smart measures and technologies. As attested by Moss et al. (2021), nature oriented smart initiatives, that aim to a more hybrid society-nature relation, are almost invisible to the smart cities discussions. These smart projects are not commodified, corporations and big techs until now consider these initiatives of little market significance. On the other hand, most of these projects do not include their initiatives as "smart" ones, this points to a radical problem within the understanding of what is "smart", who develops it, for whom it is for, and what purposes it serves.

2.1.7   Smart living

The smart living dimension, as developed by Giffinger (Giffinger et al., 2007; Giffinger; Gudrun, 2010), is closely linked to quality of life. Ranging from cultural, health and education facilities, to turist attractivity, housing quality, social cohesion and individual safety. Therefore, smart initiatives should be applied to improve the overall quality of life of the citizens. Data-driven participation and decision making structures should be promoted to enhance the living experience. Digital technologies should be used to safeguard and secure citizens' individual safety, health, continuous education and leisure time. ICTs, according to the dimension of smart living, should permeate and digitally augment all the aspect of the urban living experience, enabling a higher quality of life for the urban dwellers. Aiming for a human centric urban experience by the following tenants (Albino; Berardi; Dangelico, 2015; Batty, 2020; Bibri; Krogstie, 2017b; Grossi; Pianezzi, 2017; Hollands, 2008; Pires; Magee; Holden, 2017; Townsend et al., 2010):

1. **Culture and creativity** – smart living policies should recognise the importance of cultural facilities in urban areas. Museums, theatres, galleries, community spaces, and parks play a crucial role in fostering creativity. Accessible cultural events and activities can be organised through digital platforms, as augmented reality (AR) and virtual reality (VR) technologies can create immersive cultural experiences, preserving heritage and encouraging cultural exploration by the citizens;

2. **Healthcare and well-being** – the health and well-being of citizens must be central in smart living policies and initiatives. Telemedicine, wearable health devices, and remote monitoring systems enable easier access to healthcare services and promote a healthier lifestyle. User generated data can be analysed to identify health trends, diseases vectors identification, containment of viruses, pandemic mitigation etc. Parks, green spaces, and recreational facilities should be accessible and digitally enhanced to encourage physical and mental well-being;

3. **Adaptability and lifelong learning** – continuous education is deemed essential within a smart city. Smart living initiatives focus on providing lifelong learning opportunities through online courses, digital libraries, and interactive educational platforms. Educational pathways need to be tailored to social and individual needs, promoting the development and adaptability of the workforce therefore promoting the increase of human and social capital;

4. **Tourism and attractiveness** – smart cities must use technology to enhance tourism experiences. Interactive maps, augmented reality guides, and real-time transport information compose an easier urban environment for tourists;

5. **Housing quality** – smart living advocates for affordable, energy-efficient, and sustainable housing. Also, promotes the proliferation of smart homes. These houses should be constructed with sensors, ICT devices and technologies to optimise energy consumption, enhance security and improve comfort. Urban planning becomes data-driven, and in consequence with more tools to address housing crises, urban sprawl, and land use policies, ensuring a diverse range of housing and services options for citizens;

6. **Social cohesion** – a sense of belonging in a community is essential to smart living. Through digital platforms and social media, citizens should be encouraged and enabled to participate in local decision-making processes. Collaborative initiatives should be promoted to foster a sense of belonging to the urban space;

7. **Individual safety** – surveillance systems, emergency response apps, and predictive algorithms contribute to safer urban environments. Citizens can report incidents in real-time, and law enforcement agencies can respond more efficiently through smart cameras, facial recognition and data analysis. Cybersecurity measures are also included to protect citizens' sensitive data and privacy, specially those that are retained by State agencies;

8. **Digital augmentation** – ICTs should progressively be intertwined with every aspect of the urban experience, as these technologies can optimise data-driven decision-making and ensure that urban policies are responsive to citizens' needs and preferences.

In conclusion, smart living should strive for the whole of the urban experience to be encompassed by smart measures and technologies. It also means to augment and enhance every aspect of the living experience by the digitalisation of social practises. Quality of life, within smart living, is intended to signify connectivity, optimised use of time and space, and efficient and dynamic social relations, political disputes, cultural activities, and economic opportunities.

2.1.8   Enunciation locus and neoliberal living

Smart living aims to permeate all of human activity within a urban space augmenting the social practices with digital technologies, therefore crucial questions arise: (1) is there a universal way of living?; (2) are the smart technologies coded to be adaptable and to accommodate different cultures, ways of living and epistemologies?; (3) what is the impact of smart technologies designed and operated by international corporations and private enterprises into everyday life?; and (4) to whose power this technologies serve and what ideology is perpetuated and deeply ingrained into society and individuals?

Enunciation locus is a compelling concept and analysis of how knowledge and ideologies operate in society, and offers an encircling understanding of the smart city phenomenon. Therefore, addresses the previously raised questions about the tenants of smart living. The enunciation locus, *i.e.*, "the geopolitical place and the body-politics of the speaking subject" (Grosfoguel, 2009), is about the knowledge that sprawls through society and its structures, and about the ground zero of an unquestionable, superior, universal, and true knowledge. This ground zero, in Western knowledge production, is devoided of a locus and the "Ego" who produces and speaks is not situated, it stays hidden and outside of the analyses. The ethno-racial/sexual/gender epistemic place of a subject or a knowledge system must be accounted to visualise the one who speaks and structures of power and knowledge of the body-politics and geopolitical epistemic locus (Baptista, 2021; Grosfoguel, 2009).

Hence, the neutrality, objectivity and efficiency of the not located "Ego" and its knowledge is a Western myth. This ego-politics, as it stays hidden, becomes the antithesis of a political and ideological knowledge, it presents itself as a central and universal totalising truth, not contaminated by lesser lucubrations and formulations that carry a political, economic, ideological non-western substrate. This ego-politics overpowers the geopolitics and the body-politics of knowledge and, as an epistemic strategy, is essential to colonial expansion, as it forcefully and unnaturally builds a hierarchy of knowledge and an almost zealot mission to "civilise" and bring "truth" to those not yet aware of their allegedly epistemic inferiority, inefficiency or uncivilised qualities.

In summa, the enunciation locus has a dual perspective. It serves as a critical lens through which one is able to scrutinise the processes of how a singular form of knowledge imposes itself as universal. Highlighting the formulation of a rational world structure that derives from a singular perspective of knowledge, notably the European and North American centric - the Global North - frame of reference. Consequently, it reinforces a framework of power/knowledge often referred to as coloniality, and its repercussions on the lives of multiple Global South epistemic realities cause a selective epistemicide filled with racism, sexism, xenophobia and exploitation. Additionally, the enunciation locus seeks to

assert a localised body-politics and geopolitics, aligned with the multiple oppressed systems of knowledge of the Global South. Therefore, aims to undertake a critical examination of the historical processes of colonial power structures, relations, and ideologies (Baptista, 2021; Grosfoguel, 2009).

Henceforth, the permeation of all human activity within the urban space promoted by smart living initiatives, can perpetuate a neoliberal way of living by exercising control not only of the environment but of the individual subjectivity and social, economic, and political interactions. In this sense, smart city development strategies are an instrument and a method to deflagrate an hegemonic ideology. Also, they are constructed and structured by certain body-politics and geopolitics and imposed and sold as a supposedly rational and ideologically ridden smart growth strategy. This neoliberal living, can be understood as the individualisation and commodification of all aspects of the living experience, seeking the domination and subjugation of all those whose existence serves only for the production of surplus value (Borchers; Figueirôa-Ferreira, 2022). Hence, smart homes, augmented reality and virtual reality, telemedicine, surveillance, and other tech-driven initiatives all have the potential of creating new markets and deepening the cohesion of neoliberal smart hegemony. To better understand this processes, two examples will be used, telemedicine and surveillance technologies:

1. **Uberisation of health labour** – Brazil has the Unified Health System (*Sistema Único de Saúde - SUS*), a public and free health system envisioned by the Federal Constitution of 1988. However, Brazil has the world's second largest market of private health plans. As Bahia and Sheffer (2018) demonstrate, historically all the governments since the re-democratisation have, in a way or another, supported the growth of the private health sector. On the other hand, the precarisation and de-funding of the public system result in compromised services and, therefore, the need for assistance of the private sector. The last trend to arise from this scenario is telemedicine apps, that provoked an uberisation of health labour and a financialisation through in-app pre-paid credit. Most offer accessible prices, efficient, quick and streamlined consultations, emitting medicine prescriptions and issuing exams requests that are often provided by *SUS* (Bahia; Scheffer, 2018; Souza; Abagaro, 2021);

2. **Racialised algorithms** – As for surveillance technologies, Tarcizio Silva (2019, 2020, 2022) puts forward a few key elements to understand this initiatives inherent racialised elements: (1) there is a feedback loop, where AI systems and software reproduce discrimination that already exists in society; (2) creation of a differential humanity, racism promotes a hegemonic social group, thus producing a racial distribution of the system; (3) invisibility and hypervisibility (intersectional disparity), as in the

non-recognition of black people traits in biometric tools and at the same time occurs a hypervisibility in the tools of domination and control; (4) global coloniality in the technology business, colonising the technological infrastructures of less developed and peripheral countries, in order to monopolise that country's access and direct it towards specific networks and contents; and, (5) coloniality of the field, meaning that the disciplines in the field of information tend to neglect the presence of racism in the training of professionals, teachers, and new researchers. Hence, racism within digital colonialism serves as an ideological and material element used to differentiate commodity prices (human beings) and the criteria for disposal and utilisation (Faustino; Lippold, 2022).

Both examples, in different ways, are permeated and enforce a neoliberal and colonial euro-north-american centric formats of sociability, politics, culture, and economic structures. The digitalisation of healthcare and surveillance does not originates from a delocalised origin, these initiatives represent a specific set of characteristics and coded ideologies. As are implemented, managed, and used within a geopolitical and body-politics present in the social relations in a peripheral and colonial society. On another note, there is an intersection between these examples. As telemedicine apps are mostly used by working and lower-income classes, which in the case of Brazil is composed by marginalised groups of diverse ethno-racial, sexual and gender epistemologies, with questionable quality of exams and consultations, credit debts, data accumulation and monitoring, arises a materiality of exploitation and surveillance.

2.1.9 Smart economy

The dimension of smart economy tries to encompass a range of characteristics that define a "modern and dynamic" economic system. This system is deemed essential to foster innovation, sustainability, and smart growth on the local and global stage. There is a centrality to the role of competitiveness between cities, individuals, companies, and nationalities. It offers a human centric economic system, where individuals are given the tools and opportunities to create disruptive enterprises. Resilience of the economic system is promoted through constant transformations and development processes that through competitiveness promote impactful innovations and growth (Albino; Berardi; Dangelico, 2015; Bibri; Krogstie, 2017b; Mora; Bolici; Deakin, 2017; Townsend et al., 2010). Giffinger (2007, 2010) describes this dimension with seven characteristics:

1. **Innovative spirit** – a smart economy should strive for constant innovation. An innovative spirit of creativity and the development of new ideas, products, and services should be always encouraged. The State, governments, businesses, universities, private

institutions, and funds must foster innovation through investments in research and development of new technologies and scientific advancements. A creative and "maker" culture must be cultivated to offer better support models and processes to startups, entrepreneurs, and small businesses;

2. **Entrepreneurship** – a ecosystem of entrepreneurialism must serve as a driving force to economic growth and to strengthen the labour market. Individuals empowered by a creative and innovative environment, with the assistance of State and private capital should be able to pursue different enterprises. Also, policies should be implemented to ease the process of starting and building-up businesses. Initiatives to promote access to venture capital must be implemented. A culture of entrepreneurship must be created and nurtured to catalyse innovation, economic dynamism, and growth;

3. **Economic image & trademarks** – building a positive economic image and strong trademark or label is crucial for attracting investments, talented and creative individuals, and possible consumers to what a city has to offer. The city name and image should stand for key smart features and frameworks, therefore aggregating value. Coopting investments from well-known corporations and brands adds a level of economic trustworthiness and a positive city label;

4. **Productivity** – serves as a measuring mechanism of how efficiently resources are utilised to produce commodities and provide services. Smart economies should enhance productivity through tech-driven initiatives, development of human and social capital, and processes and models optimisation. Striving to constantly improve the ecosystem as a key driver of sustainable economic growth and competitiveness;

5. **Flexibility of labour market** – the labour market flexibility means an adaptable workforce that is resilient under different economic conditions and configurations. Policies that involve skill development, continuous learning and training, and positions mobility. It must ensure that labourers have the means to transition between fields, industries, and occupations, reducing the impact of economic crises;

6. **International embeddedness** – a smart economy cannot be insulated of national and international markets. It should strive for international collaborations, business opportunities, and foreign capital investments. Insertion within global market capital flows should allow for the exchange of knowledge, technology, and resources, leading to increased competitiveness and economic resilience;

7. **Ability to transform** – a smart economy must be agile and capable of adapting to changing circumstances and multiple adversities. It must be able of changing its economic activities by investing in emerging sectors and addressing challenges such as climate change. Disruptive technologies are a key element for this adaptability,

being the solution and catalyst of change. The core pillars for this adaptability are proactive policies, skilled workforce and high levels of human and social capital, and a modern and dynamic approach to governance.

These characteristics are interconnected and mutually supporting, creating a resilient and dynamic economic ecosystem that is supposedly suited to face the challenges, adversities and opportunities of a dynamic and modern world. Achieving and sustaining smart economic practises requires the collaborative effort of the State, business, and specially society to create a dynamic environment and a entrepreneurial culture where tech-driven innovations and smart growth can flourish (Albino; Berardi; Dangelico, 2015; Bibri; Krogstie, 2017b; Giffinger et al., 2007; Giffinger; Gudrun, 2010; Mora; Bolici; Deakin, 2017; Townsend et al., 2010).

2.1.10   Smart growth, big data and uberisation

When dwelling upon the smart economy dimension of a smart city, one can easily note the neoliberal influences and the intersections between the six smart city dimensions (Bibri; Krogstie, 2017a; Grossi; Pianezzi, 2017; Hollands, 2015; Söderström; Paasche; Klauser, 2014; Wiig, 2016). There is a hyper-focus on innovation and entrepreneurship, individual adaptability, creativeness and flexibilisation of labour relations. Job security and benefits are substituted for risk taking and entrepreneurial drive. The labour market flexibility, often produce weakening of labour laws that with the excuse of modernising and dynamising the economy nurtures job insecurity and precariousness. The industrial reserve force, the mass of unemployed people, historically used to control the labour force and its salaries and rights, becomes institutionalised through policies and growth strategies. Continuous learning and training, performance, creativeness, and individual proactiveness and devotion to labour are induced and enforced by the ecosystem. Labourers through the wardens of data and quantifiable performance assessments, become trapped in environments of over-exploitation. Capitalisation through international and venture capital of start-ups and entrepreneurial endeavours, favours economical financialisation of different sectors, and often result in big tech corporations buying innovations, either to incorporate into their product line or to take out disruptive threats, maintaining the monopoly tendencies of the capitalist mode of production. The difference, however, is that with this dynamic ecosystem, this process is accelerated.

Regarding the production of the urban space and smart economy principles, smart growth arises as a prime example of smart strategies being implemented. As an urban planning concept, it promises a future where cities can expand and develop sustainably, offering a multitude of choices to residents while minimising negative environmental impacts. However, in reality, it aims to provide predetermined and system-aligned choices

to city dwellers, and not choices with real and impactful consequences, neither does it provide systems of land and wealth redistribution and legislations to control speculation and financialisation of urban spaces. For example, it tries to solve urban issues and housing crises through market strategies that originated such problems. These strategies, also, often prioritise the use of quantifiable data, sensors, and indicators to prove their efficiency (Bibri; Krogstie, 2017a; Quastel, 2009; Morozov, 2018; Morozov; Bria, 2019; Özdemir, 2018). However, the data is used to measure the efficiency towards something, while the goals and processes to achieve it are not questioned, *i.e.*, the data is collected, analysed, and processed in a supposedly non ideological epistemic place that resides in a supra-reality above any questioning, and by machines that are purportedly as precise, efficient and impartial. Hence, smart growth and its strategies, limits the possibilities of change by narrowing the choices that can be made, and transforms this circumscribed spectrum of action into the only possible, rational, and logical way of organising the path of a progress driven and dependent of a supposed quantifiable efficiency of urban data, while the content, goals, and methods stay obscured or delocalised.

Smart growth encourages mixed-use and high density development, walkable neighbourhoods, public and active modes of transportation, the preservation of green spaces, and use of smart technologies in homes and public spaces. In theory, this approach should enhance the quality of life for residents and reduce the environmental footprint of urbanisation. However, the practical implementation of these initiatives without proper regulation and policies results in gentrification (Özdemir, 2018). As cities embrace smart growth strategies, they often attract investment and development in previously neglected areas. While this can lead to improved infrastructures and services, it also tends to drive up property values and rents, displacing long-term, lower-income residents. This "smartfied" areas become tech-hyped clusters of premium value, often linked to a creative class, that reap and harvest the benefits of this high-tech and high quality of life urban developments, while the "uncreative", those with less human capital that cannot contribute to the smart city, are continuously displaced and relegated to underdeveloped urban spaces (Crawford; Gray; Miltner, 2014; Figueirôa-Ferreira et al., 2023; Löfgren; Webster, 2020; Özdemir, 2018).

Additionally, in practice, smart growth is often selectively implemented, favouring profit-driven developments and strategies over the broader well-being of the population, deepening social inequalities. It raises tax revenues through higher property values and attract investments through real state development, prioritising short-term economic gains over long-term sustainability, quality of life, affordable housing, and equitable access to resources. Hence, smart growth, within the smart city phenomenon plays a key role in redefining urban planing and city development, implementing neoliberal practices to solve problems created by former versions of neoliberal practices and policies. Again, these

strategies are validated by technical quantifiable data, without social conscience, and abide by a set of epistemic and ontological codes, barriers, and power structures that ward and dispel non-initiated (or included) individuals, citizens, organisations, social groups and classes, not only in the decision making process, but in the development of the alternatives to be decided upon, and on the methods and aims of said process. This technocratic way of urbanism derives important phenomenons, and due to their centrality within smart growth strategies, big data and urberisation were chosen as examples to better understand the smart economic dimension.

The use of big data is increasing in multiple spheres and fields of knowledge and sciences. Different processes and methods make use of big data to achieve results that are supposedly more rooted in materiality. However, some problems arise when looking at this issue from a more critical point of view. First of all, there is a need to characterise a certain *mythos* surrounding big data. As correctly stated by Crawford, Gray and Miltner (2014), big data is a *Weltanschauung* (worldview) deeply rooted in multiple dimensions and domains in the public and private sectors, and it is still expanding. A central part of the phantasmagorical aspect – the symbols and ontologies of a set of potentialities and possibilities of a better reality that become fetishised and fragmented into material realisations and commodified – of big data is that it represents the end of theory. Big data is presented as solution that with enough scale of data, storage, processing power, and usability can identify and trace patterns to achieve the pure truth of an analysed object (Benjamin, 1999; Crawford; Gray; Miltner, 2014; Figueirôa-Ferreira; Borchers; Fernandes, 2022; Kaika; Swyngedouw, 2000; Kitchin, 2014; Löfgren; Webster, 2020).

However, big data is not a neutral and theory-free concept but a set of tools, it is not a repository of information that exists uncompromised by bias and limitations, from the input to the output of data. It requires active engagement and interpretation, even if it is done partially or almost a hundred percent by AI, there is labour done at some point by individuals under the employment of a State or company, as well as, the reading of data and decision making occurs in some degree by people and their own way of seeing and understanding the world. Big data solutions do not exist in a vacuum, they are created, developed, and used under complex social relations and materiality (Bibri; Krogstie, 2017a; Bowker, 2014; Löfgren; Webster, 2020; Puschmann; Burgess, 2014). Hence, one can observe a neoliberal substrate that modulates big data and its deployment, promising economic efficiency and value generation (Crawford; Gray; Miltner, 2014; Löfgren; Webster, 2020). One example is the collection of disperse and diverse online interactions to identify patterns of cost-efficient markets and products and personalised marketing. Another example is the surveillance strategies that rely on passively collected, voluntarily provided, and unwillingly gathered data from the population, that typically target lower-income working class neighbourhoods and marginalised groups, notably black people (Crawford; Gray;

Miltner, 2014; Faustino; Lippold, 2022; Silva, 2020).

On another note, big data leads to power shifts and concentrations as it changes the tools and methods of domination and constitutes new means for the production of value. Hence, there is a power relation between those who hold the technological capacity and infrastructure and those that are only data producers. (Big) Data is a resource, and neoliberal ideology constantly seeks to reify it, obscuring and concealing the socially constructed aspect, forming a notion of objectivity, neutrality, and truth that can impartially read, guide and govern society and individuals (Bibri; Krogstie, 2017a; Bowker, 2014; Crawford; Gray; Miltner, 2014; Honneth et al., 2018; Kitchin, 2014; Kourtit; Nijkamp, 2018; Löfgren; Webster, 2020; Marx, 1990; Puschmann; Burgess, 2014; Ruppert; Isin; Bigo, 2017).

However massive is the scale of data, it was not collected, stored, structured, analysed, and used in a social, economic, political, and cultural vacuum, they shed light into certain epistemologies and ontologies while eclipsing others. Big data is a structure intertwined in the infrastructure and superstructure of society, and as such it must be investigated and analysed. To closely look at a more practical use of big data, and the consequences of the myth surrounding it, one can turn to uberisation, as it stands as a near perfect example of the deep and concerning impacts that big data strategies have on the urban space and the global economy.

The uberisation as it became know, derives from work on-demand and just-in-time practises, a form of labour were workers stay available in platforms and contractors can pay for a multitude of services without any formal labour contract and, consequently, rights. This form of labour stands on the premises of flexibility, informality, and outsourcing, opposing, therefore, taylorism and fordism through the financialisation of labour markets. Many configurations of this labour form exist, but the most well-know one, and for this reason the namesake of this phenomenon, are ride-sourcing apps. Where labourers with their own or rented cars, bear all the running and operating costs, food, insurance, cleaning, etc, while the app does not guarantees any protection or rights, and operates with little to no regulation, maximising their surplus value appropriation. This form of platform economy and of precarious labour has become of central importance to the ecosystem and metabolism of the current stage of capital accumulation (Abílio, 2020a; Abílio; Amorim; Grohmann, 2021; Antunes, 2020; Barns, 2020; Kenney; Zysman, 2016).

Hence, on one side of the smart growth and digitalised urbanism exists a high demand for creative, highly educated and skilful people, with high values of human capital, on the other there are those that have the same potentialities and capabilities but are excluded from the creative clusters. On both sides operate the same logic of exploitation and surplus value generation, however it is clear that exists a social divide that perpetuate previous societal structures and class struggles. Through a entrepreneurial

ideology of "you are paid for how much you invest in yourself and your work", a limitless exploration of precarious labour is perpetuated, with more than eight hours of work seven days a week. While in the offices of just-in-time apps videogames and bean bags compose a "creative" workplace, the "street entrepreneurs" have to risk their lives with no labour rights and guarantees. Again, the class struggle is not between a coder and a motoboy(girl)/bikeboy(girl)/app driver, but of those that produce value and those that through social, political, and economic structures control the means of production. However, there is a racial aspect, since there is a significant participation of young black people on the precarious "street entrepreneurs" side of the labour force (Abílio, 2020a, 2020b; Abílio; Amorim; Grohmann, 2021; Antunes, 2020)

Looking closely to the platform economy/gig economy models, the following scenario is observed: (1) financial capital making profit by investing in value extraction processes; (2) platforms that materialise their profits through speculations and by the exploitation of on-demand workers; (3) workers that are paid by service, by the piece of work (piece-wage); (4) consumers that use and assist to control the quality and therefore the price and value of the piece of work. This form of labour is not new, it just takes a new form with uberisation, and it is the most appropriate for the neoliberal capitalist mode of production, as it ensures some key features (Abílio, 2020a, 2020b; Abílio; Amorim; Grohmann, 2021; Antunes, 2020; Barham, 2017; Barns, 2020; Cohen et al., 2016; Eyert; Irgmaier; Ulbricht, 2022; Franco; Ferraz; Ferraz, 2023; Kenney; Zysman, 2016; Marx, 1990; Pires, 2021):

1. **Individuality and competitiveness** – the labourer has a sense of liberty, of control over its own labour and independence of the employer. The entrepreneurial mentality enforces self-control and competition with other workers;

2. **Straining of labour-power** – being paid by service/gig/piece encourages the labourer to work as intensely as possible, and to lengthen the working day. Hence, becomes easier for those in control of the means of production to intensify and prolong the daily hours of work;

3. **Surveillance** – the quality, intensity, and the labourer itself are controlled by the wage form and the platform, laying the foundations for a "hierarchically organised system of exploitation and oppression" (Marx, 1990: 695) with three main characteristics: middlemen can easily enter in this labour relation and diminish received wage, *e.g.*, vehicle rentals; by the exploitation of a worker by another; and by the use of big data to control the labourer transactions, movements, and interactions;

4. **Wage reduction** – the quality of labour is determined by the evaluation of the service/gig/piece, therefore, it offers an effective way of reducing wages. Lower evaluations lead to less opportunities of being paid by service/gig/piece;

5. **Changes in productivity** – as the number of service/gig/piece produced rises, the wage is lowered in the same proportion. For "the same quantity of a given product represents an amount of labour-time which varies" (Marx, 1990: 699). And as the service/gig/piece represents a definite quantity of labour-time it also varies. In other words, even if the demand increases without a proportional increase in workers within a platform, the structure of this type of wage and labour that emphasises individuality, competitiveness, and intense and prolonged work under constant surveillance guarantees the decrease of wages and increase of surplus value;

6. **Data production** – origin and demand data, essential to urban and mobility planning, is monopolised by few companies that can utilise this data-set in conjunction with others to crush competition, exercise better control over workers, stipulate prices, and capitalise on this monumental amount of data;

7. **Financialisation and transference of capital** – big tech companies, that operate in this platform/gig economy model, heavily rely on investments funds and financial capital to speculate and make profit, and even if they are not from a central economy, part of the investments are. Therefore, this configures a transference of capital from peripheral to central economies.

In summa, one can perceive in this three different dimensions an underling logic of exploitation, accumulation, individualisation, end of theory, and financialisation. Smart growth represents a development model, big data a concept and set of instruments, and uberisation one specific form of economic model that enables the deepening of structures of surplus value generation and neoliberal labour relations.

2.1.11 Smart people

Smart people can be understood through some key attributes that include their level of qualification, affinity for lifelong learning, social and ethnic plurality, flexibility, creativity, cosmopolitanism/open-mindedness, and active participation in public life. However, this dimension of a smart city is in many ways a synonym of human and social capital. It is a fundamental and central tenant of smart development strategies, as it represent the "human" aspect of the smart urban agenda (Giffinger et al., 2007; Giffinger; Gudrun, 2010). Hence, lets breakdown the characteristics of this dimension to grasp its concept (Albino; Berardi; Dangelico, 2015; Bibri; Krogstie, 2017c; Mora; Bolici; Deakin, 2017):

1. **Level of qualification and lifelong learning** – smart individuals should typically demonstrate a commitment to education and skill development. Advanced degrees or certifications in key fields should be promoted. These qualifications should reflect

not only their dedication to intellectual growth but also the ability to contribute significantly to their chosen professions and society as a whole. Also, there should be a culture and ecosystem to incentivise continuous learning and training. New skills and new professional fields should be explored in a organic and natural manner. Adaptation and alphabetisation in evolving information technologies and data sciences should be a common endeavour. This lifelong commitment to learning and training is viewed as a form of ensuring relevance and innovation in their pursued endeavours;

2. **Social and ethnic plurality** – diversity of individuals must be accompanied by inclusivity and a culture of striving, through diversity policies, must be implemented. Fostering relations and engagement of people from various backgrounds, cultures and perspectives is understood as a way to enrich and aggregate value to a city's development strategies. This diverse exposure enhances the understanding of the world, fostering empathy and enabling the development of innovative solutions by drawing upon a wide range of experiences and backgrounds. Therefore, attracting investments and promoting economic growth;

3. **Flexibility** – smart people should have a forward and modern mindset with a willingness to constantly change. They should be adaptable and open to new ideas, approaches, and perspectives. This flexibility allows the navigation of complex challenges with agility and respond to shifting circumstances more effectively and efficiently. Also, smart people must be able to change professional fields and job positions due to their willingness to learn new skills, undergo training, and raise their qualification level. Job and career rigidity must be frowned upon;

4. **Creativity** – must become the symbol of smartness. Hence, smart individuals must demonstrate a high degree of creativity, enabling disruptive and innovative solutions to challenge the *status quo*, bringing fresh perspectives to problem solving. Artistic pursuits, scientific development, entrepreneurship, and multiple creative endeavours should be a trademark of a creative and smart city. Often, a single individual must engage in two or more pursuits, bringing life into the workplace and urban space;

5. **Cosmopolitanism/open-mindedness** – smart people have a globalised and open-minded perspective and understanding of the city. Different cultures, ideas, and worldviews should be embraced to foster a cosmopolitan worldview that transcends city and national borders. Therefore, international collaboration is made possible to collectively tackle issues and challenges;

6. **Participation in public life** – smart individuals should be actively engaged in public life, either by civic participation, community service, contributions to public discussions or artistic performances. They recognise their responsibility as citizens

to contribute to society and seek by the use their skills, training and knowledge to try to solve issues and improve the lives of others within their community.

In summary, smart people should not be solely defined by their current qualifications but by their commitment to lifelong learning in order to increase their human capital. Also, striving for diversity, adaptability, creativity, open-mindedness, and active engagement in shaping the world around them should all be taken into account when building a smartness culture that produces individuals capable of raising the social capital of a city. These qualities make individuals invaluable contributors to society, leading the way and at the forefront of active urban change.

2.1.12 Deconstruction of citizens' subjectivity

Understanding human and social capital is essential to better grasp the dimension of smart people, and the human aspect of the current smart city development strategies. On both, human and social, is of central importance the individual choices. They both focus on the impacts of individuality, of the human aspect of the production system. Human capital is presented as the sum of knowledge, skills, education, and health possessed by individuals, their own "capital" to be put to work and contribute to the labour force and the production of value. Hence, according to human capital theories, the human element is essential to the production system, and to efficiently increase profit without much expenditure in physical capital (machinery, land, and more). The human being is inserted as a machine in the profit margin calculus (Saul, 2004).

One aspect that is often left out of human and social capital literature, is that they are heavily influenced by taylorism and fordism, as they seek to control over multiple dimensions the human aspect of the chains of production. With a focus on training and education, occurs a strategic shift in the understanding of knowledge, it becomes a property and in that sense a Capital. The labourer is seen as a capitalist, that possess knowledge and skills that have economic value. Hence, labourers and the owners of the means of production in these theories are seen as belonging in the same category of capitalists. From this false equalisation, derives a decisive element: the consolidation of a private property concept vulgarisation, resulting in the idea of a capitalist system without private property owners, or class struggle. Since the labourer also owns property and goes into the market with his own (human) capital, the owner of the means of production simply pays for the use of the human capital, and they both receive value in return for their initial capital investment. The commodity of labour-power becomes conceptually and materially adapted to industries, companies, corporations, and a cohesive civil society objectives, *i.e.*, occurs the modulation and control over the individual. These transformations are enforced by educational strategies and structures. There is a psychological decomposition of the work

and production process, a human engineering that aims to perpetuate conformism to a technical and technological deterministic understanding of society and all its elements and dimensions (Ferreira, 2014; Saul, 2004).

The principles of taylorism are still present in human capital: (1) science instead of empiricism, the idea must be stronger than the necessities and challenges presented by social praxis, in other words, a certain science must shape materiality to its benefit; (2) temporal coercion, *i.e.*, times and movements are defined not deriving from the observation of the workers, but as standards to be complied; (3) harmony instead of discordance, meaning social cohesion and discipline to achieve a supposedly harmonious goal that pleases all, but in fact only serves to optimise the production of value; (4) team spirit instead of individualism, while also maintaining the competitiveness between workers through psychological discipline and control with ideological and educational strategies; (5) performance optimisation that seeks to extract the maximum of the labour-power; and (6) the improvement of every worker to achieve maximum efficiency and reach full potential of each individual within a production system. Hence, human capital, just as taylorism-fordism, seeks to establish a structure for labour discipline and domination over labourers' knowledge, skills, and ideas. Specialisation and expertise in delimited and controlled sets of knowledge and skills are promoted through an educational system designed to shape and develop human capital. The supposed capital of the labourer, the knowledge they possess, is instead controlled by an apparatus of domination that aims to promote the perpetuation and maintenance of the current mode of production. In this way, the structure and organisation of capital expands and secures itself as the single viable possibility by encompassing the production, accumulation, and reproduction dimensions. Human capital theories provide the adjustment of the labour commodity to the needs of industries, companies, and corporations by transforming the labourer's subjectivity (Corbanezi, 2018; Dunker, 2020; Ferreira, 2014; Lopes, 2022; Maia, 2022; Saul, 2004).

Therefore, issues of inequality were reduced to low levels of human capital, this is an essential point. Instead of perceiving inequality as an inherent condition of the capitalist system, human capital theories change this perception to the lack of qualifications, of proper education, and training. This implies a dangerous idea of individuality, where falls to the individual the responsibility to succeed by increasing the value of his own "capital" and adapting it to the needs of the labour market. Hence, the rise of meritocratic ideals and self-made entrepreneurs or entrepreneurs of the self. Instead of an education for the integration with society, there is a shift for the insertion within the labour market, *i.e.*, there is a promise of employability if one exerts oneself to earn it (Motta, 2008; Saul, 2004). This exertion and the individuality of the success and failure, foster psychological suffering specially anxiety and depression, due to reducing the subject to one of performances and incapacities. As society and the subjectivity of individual become conditioned to

performance, to produce means to become a citizen and be recognised as a human, *i.e.*, possessing human capital becomes an essential pre-requisite to be recognised by family, friends, society, legal structures, culture and of course the labour market (Corbanezi, 2018; Dunker, 2020; Dunker; Maia; Manoel, 2022; Maia, 2022).

However, there is a part of the population that does not have access to such possibilities. Those of lower income or below the poverty line cannot access such structures to qualify their human capital. Hence, arises the theories of social capital as a supplement, as a means of training and educating parts of the population not for the insertion within high qualified human capital labour market, but to assure a certain level of survivability. Thus, civil society, must be responsible and solidary for bolstering social development, enabling poor people to access more opportunities and become qualified and productive. Therefore, cultural and social dimensions become essential to the economy, and to ensure its stability, political stability and social cohesion must be pursued (Lopes, 2022; Motta, 2008). These, results in a favourable scenario for the maintenance of neoliberal policies and ideologies. Since inequality and poverty, again, instead of being perceived as organic and inherent issues of a globalised capitalist mode of production, become "solvable" by investment in human and social capital.

Within social capital theories, education has to: (1) increase human capital; (2) construct a civic culture, forming a cohesive, harmonious, peaceful, and solidary society to alleviate poverty; and (3) restrain political, cultural, and ideological tendencies that may disrupt the desired cohesiveness of society (Motta, 2008). Therefore, ensuring that human resources productive potentials are utilised fully and reducing the possibilities of social conflicts or struggles that may hinder the production, accumulation and reproduction within the capitalist mode of production. And, in the case of peripheral economies, investment in social capital becomes an essential condition for the success of emerging countries in the process of dynamising and internationalising their markets. Nonetheless, permeated by structures and epistemologies that are imported and enforced on their population to adjust and accommodate international structures and division of labour.

In summa, the human capital ideologies are still applied to a certain social stratum of the working class, ensuring competitive potential in the labour market and employability. On the other hand, social capital ideologies are implemented to deal with those that lost their ability to sell their labour power or never possessed it, the miserable, the famished, the brutally beaten by the system, dissidents, "morally" compromised, and undisciplined to activate their productive potentialities. Regarding smart city strategies, human and social capital theories are woven into the discourse, permeating all the dimensions of smart initiatives. Some peculiarities that arise must be addressed:

1. **Citizenship** – insertion and skills with digital technologies become part of human

and social capital training and education. This implies, that to some level, the citizenship becomes conditioned to this digital literacy;

2. **Digital accessibility** – digital divide becomes an aspect to be solved by social capital, by a civic culture and public policies that can promote the possibility of digital integration or insertion;

3. **Data production** – citizen sensing as a integral part of smart cities, meaning that, willingly or not, urban dwellers become gatherers and providers of data. This becomes an essential part of citizenship, therefore, the higher the capability to produce data, the higher a certain citizen's value;

4. **Human capital** – high levels of human capital translates into more production, accumulation, and circulation of data;

5. **Social capital** – high levels of social capital translates into possible expansions for data production and labor-power to lower-level work positions within a smart economy, *e.g.*, motoboy(girl), bikeboy(girl), and app driver.

2.2 Modes of existence and narratives

Constant debates occur regarding the cities of the future and how "smart" they will be. These debates generate interest from the public and especially from investors, valuing the term even without a real understanding of what it means and stands for (Bibri; Krogstie, 2017a; Hollands, 2015; Wiig, 2015). The point of criticism is not on the economic development itself, but in the strategies, economic policy, and structure they subscribe to, one that seeks to remedy socio-environmental, political and economic inequalities or deepen them (Bibri; Krogstie, 2017c; Bibri, 2020; Wiig, 2016).

A common strategy is to create a brand for cities, promising advantages, incentives and profits to external and internal investors (Wiig, 2016). "Digital City", "Intelligent City", "Ubiquitous City", "Knowledge City", are just some of the most prominent terms that tried to establish themselves as the true definition of what a smart city would be, as well as the owners of the smartest development strategy (Figueirôa-Ferreira; Fernandes, 2021; Mora; Bolici; Deakin, 2017). The dispute occurred in academia, but was fuelled by the market, by the desire to own the smartest label, the most sustainable, humane and resilient (Albino; Berardi; Dangelico, 2015; Pires; Magee; Holden, 2017).

Among the various development strategies or modes of existence in smart cities, three categories can be identified: (1) state and technology-driven urban development strategies; (2) platform urbanism led by companies and corporations; (3) citizen and civil

society-driven urban interventions based on data and technologies (Söderström; Blake; Odendaal, 2021).

The first one can follow both a logic of supply, where technology companies and corporations in some form of partnership with the State provide a product or service, and in a logic of demand, where the State, especially local governments, seek the private sector with prior planning, *i.e.*, with problems and possible solutions in mind, creating a demand that technology companies compete to meet. However, Söderström (2021) and Ruppert et al. (2017), argue that the current reality presents a historic change regarding the ability to produce, collect and manage large volumes of data. States have lost their centuries-old monopoly, undergoing an emptying process that permeates a neoliberal economic logic (Grossi; Pianezzi, 2017; Pires; Magee; Holden, 2017; Wiig, 2015).

The second form, based on platform economy, is arguably more impactful than the first in the current context. Digital platforms produce and process big urban data to manage their services, and due to the strong control over data, and the trivial and widespread use by many citizens, the platform urbanism increasingly establishes itself as a governing force in the city.

The third is driven by "data activism", which produces and uses data – without State involvement - to enable rights claims in the context of social or environmental injustice and public inaction. However, this third model also goes through the encouragement of innovation, entrepreneurship, and the participation and collaboration of society, and may yield to the ruling classes, working to perpetuate the logic responsible for creating the problems that gave rise to the citizen initiatives and activism.

The modes of existence are not mutually excluded, however, in cities whose cultural, economic, political or social realities make one of these models impossible or limits it, there is a tendency for the others to excel. The context of the COVID-19 pandemic, revealed the most problematic uses and risks, as well as the opportunities related to these three modes of existence (Figueirôa-Ferreira et al., 2023; Söderström; Blake; Odendaal, 2021).

Favouring citizen and civil society-driven urban interventions encourages co-creation with the community and representatives of the culture and identity of a particular locality, enabling the emergence of a unique and smart technological development. How much of this technological innovation is original and detached from a global pattern is an important question to be investigated. After all, how dependent and uninfluenced is an entrepreneurial initiative native to a globalised urbanity where the flow of capital and international technologies is almost inseparable from the urban fabric (Grossi; Pianezzi, 2017; Söderström; Blake; Odendaal, 2021; Sonn; Shin, 2020; Thatcher; O'Sullivan; Mahmoudi, 2016)?

2.3 Digital capital, urban virtuality and development strategies

<div align="right">

Es kann als eines der methodischen
Objekte dieser Arbeit angesehen werden,
einen historischen Materialismus zu demonstrieren,
der die Idee des Fortschritts in sich annihiliert hat.
Gerade hier hat der historische Materialismus alle Ursache,
sich gegen die bürgerliche Denkgewohnheit scharf abzugrenzen.
Sein Grundbegriff ist nicht Fortschritt sondern Aktualisierung.
(Benjamin, 1991: [N2,2] 574)

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The power and influence of capital in urban development, planning, and strategies is undeniable. To address rights to the city, dynamics of urban digital control, and urban studies in general, while disregarding the economic influence, is an empty effort. Capital is a fundamental element (Harvey, 2011, 2015). To perceive the ways of capital before the emergence of the internet and the technologies arising from it, was already a herculean task, now in a perspective where the virtual and the material are imbricated to the point of becoming inseparable, new structures of perception need to be developed (Deleuze, 2017; Lévy, 2011). Hence, there is a need to understand and investigate the role and dynamics of this digital capital inserted in urban dynamics, especially in the context of smart cities.

Initially, the virtual can be understood as a node of tendencies and forces that accompany a situation, an event, an object or any entity (Lévy, 2011). That is, it is opposed to the current, to the fixed, to the material, and not, as commonly understood, to the real. The virtual is a set of potentialities always in metamorphosis and development. The virtual possesses a reality while maintaining its virtuality (Deleuze, 1994). Thus, despite its immateriality, it realises itself and forms a rhizome increasingly belonging to and inseparable from the real-material environment, assuming the position of conditioning and conditioned. Taking this to the question of the dynamics and logic of capital and how it operates in the city, a peculiar movement is observed, especially after the 2008 crisis, whose origin was the American market, more precisely real estate (Figueirôa-Ferreira; Fernandes, 2021; Hollands, 2008, 2015; Grossi; Pianezzi, 2017; Pires; Magee; Holden, 2017; Wiig, 2015, 2016).

With the emergence or deepening of the understanding on smart cities, a new form of investment and urban valorisation emerges. A virtual form, mostly immaterial, but

that deepens the logic of capital (Figueirôa-Ferreira; Fernandes, 2021; Wiig, 2015, 2016). Instead of investing in a new development or real estate project, it is enough or preferable to reinvest in an old one, be it by the owner of the devalued property, by the government, or investment funds in the creation of a new virtual infrastructural mesh (Ferreira, 2019). Digital capital is global and in constant movement, almost impossible to be tracked or to actually have a single source, it is multidimensional and transcends an idea of State sovereignty. It constitutes in all aspects, a rhizome much more complex and entangling than in the era of non-digital capital. Digital capital, however, does not substitutes the notion of Capital, it is an aspect of it.

The city is, historically, seized and appropriated to give flow to accumulated capital, consequently, smart cities possess such capacity in an augmented form. However, the city's capacity, be it smart or not, to absorb accumulated capital and enable its production has a limit. One of the alternatives is to go outside, *e.g.*, imperialism, or go inside to virtualise investments. When virtuality enters into crisis, or becomes too densified, the movement to go outside repeats itself, arising forms of digital colonialism or eco-technological imperialism. Within this imperialistic context, digital capital pushes agendas for the production of the labour force commodity, disguised as human and social capital, in the terms of a smart city. As the city is subjected to a logic of factory despotism and production anarchy, control and surveillance technologies serve as a means of deepening this twofold logic of production by the city, generating more surplus value.

Development strategies are a mirror of the commodification of the term smart cities, often an empty label but with added value (Figueirôa-Ferreira; Fernandes, 2021; Hollands, 2008, 2015; Wiig, 2015, 2016). There are cities where "smart" translates into technological advancement, not always available or at the service of the population as a whole. Mostly consisting of high-speed Internet connection, free wireless spots, or apps for urban mobility that are not bad *per se*, but do not make a city smart in their exclusivity (Grossi; Pianezzi, 2017; Lyons, 2018, 2020; Wiig, 2015, 2016). After all, the possibility of connectivity, does not translate into smartness, let alone actual connectivity.

Another point whose critique is essential is: for whom is the smart city made? Policies whose core is to provide a creative and innovative environment to promote development often depend on imported human capital, *i.e.*, outsourced labour force (Hollands, 2008). This happens in different contexts and conjunctures, but where prevails already segregated socio-political dynamics, this process only worsens it. This is not the only reason why smart cities may become small connectivity clusters in prime areas of the urban space, but this expert and skilled immigrant population usually encounters cultural, physical, and political barriers in the city. On the other hand, it contributes to the increasing polarisation between empowered citizens and the poorer population, often illiterate regarding ICTs (CETIC.BR, 2019; Figueirôa-Ferreira et al., 2023; Hollands, 2015). It is faster to import

already trained human capital, needing little or almost no investment than to create new capital. The latter demands time and high investments (Anthopoulos, 2017).

Henceforth, it can be pointed out that the digital capital and the corporate and neoliberal form of the smart city, by praising an accelerated progress of high circulation of capital, establishes itself as a new instrument for the perpetuation of inequalities and defence of the dominant classes, of the rulers whose history full of the most varied forms of barbarism is still being told.

2.4   Hemispherical realities

The smart city can be understood as an ontology of systemicity (Derickson, 2018), that intends to streamline governance in cities as complex adaptive systems, resilient to challenges and adversities through algorithmic predictions and smart mitigations. This technocratic ontology, arises as non-ideological, going beyond politics and focusing on a empiric based urban governance. However, there is a shift from data-informed to data-driven urbanism, this means that through big data and smart measures and technologies, instead of knowing more about what a city is, there is a focus on making it more legible, *i.e.*, instead of addressing and looking at the present issues, externalities, necessities, and inequalities of the urban phenomenon, possibilities and potentialities take a central role in smart cities (Hollands, 2008; Kitchin, 2014; Shelton; Zook; Wiig, 2015). This perspective accentuates the power leveraged by Capital and the State, within a neoliberal ideology that veils it self as non-ideological, to control the development strategies tailored to enhance and expand the capitalist mode of production. This power/controlling capability is deeply ingrained in the roots of the smart city ontology.

In a global context, there are multiple and profound consequences. This smart ontology becomes part of the hegemonic ideology, and the structures and frameworks of control become global. Smart cities initiatives are by concept and design ingrained with surveillance and control mechanisms, however, countries that lack the industrial and economic complexity to develop, operate, and manage smart technologies and systems, import them from international corporations and States. Therefore, the citizen, State and urban data is in the servers of international big techs. Data that is not only sensible, but extremely valuable. This data accumulations configures a transference of capital from peripheral to central economies, and on the other side, surveillance and control of the economy, the State, society, the political landscape, culture, and of the modes of production. With industries 4.0 or 5.0, workers, machinery, farms, and industries are operated and controlled by systems in which the oversight is thousands of kilometres in a central economy State.

These relations need to be investigated, specially by peripheral economies that are subjected to the exploitation of this digitalised form of colonialism. The smart urban reality must be carefully, tactically and strategically researched, and there must be a constant struggle for the recognition of social, economic, and political practises and structures opposed to the current ones under the capitalist mode of production.

Chapter 3

Die Unterdrückten

After an overall view on the smart city phenomenon, this chapter comprises an effort to draw the theoretical foundations from which this work arises. The task here was to connect the multiple authors and filed of study that are necessary to the fruition of the subsequent analyses.

3.1   The victors and the oppressed

Walter Benjamin (2007) considers two opposing categories that, within the capitalist mode of production, divide individuals of the class society: *die Sieger* (the victors) and *die Unterdrückten* (the oppressed). According to Benjamin (1991, 2007), it is imperative to take the side of the oppressed, for to do anything of the contrary is to empathise (*Einfühlung*) with those that are responsible directly (by conquering or inheritance) for the toil of their contemporaries

The essay in discussion (Benjamin, 2007) was written in the early months of 1940, arguing that states of emergency are not an exception, on the contrary, the rule of history is the oppression and violence on all forms from the victors. As a remedy to this historicism, and the empathy with the oppressors, comes the proposition to "brush history against the grain" in solidarity to those that due to civilisation, progress and modernity are oppressed. This proposition is therefore a refusal of the *Einfühlung*. The brush(ing) of history against

the grain has two aspects: (i) historical — means to subvert and question the official version of history; and (ii) political -– meaning to struggle against the tradition of the victors in order to prevent novel forms of oppression (Benjamin, 2007; Löwy, 2005).

Thus, arises an important question regarding urban spaces many times destroyed and rebuilt, modern cities that grow upon the Haussmannian boulevards, urban brown-fields, purposefully empty and underdeveloped spaces, and the newest ubiquitous virtual dimensions: who is responsible for the labour that perpetuates these processes (Benjamin, 1991, 1999; Brecht, 2019; Harvey, 2015)?

3.2   The integrated and the condemned of dependent capitalism

Florestan Fernandes (1973) in his effort to analyse class struggles within a Latin-American dependent capitalism, which by the author definition is an aggravated manifestation of the capitalist system of central economies that materialises itself by means of over-exploitation and autocracy, divide individuals and social circles into two categories. The first one named as Integrated represents all of those that are included into any of the social classes, from the bourgeoisie to the exploited working class. Those coexist with the second category of the dispossessed, which are condemned to living standards below the subsistence level, to systematic (partial or occasional) unemployment, to poverty and misery, to socio-economic marginality, to cultural and political exclusion etc. (Fernandes, 1973). The dispossessed or the condemned are reminiscent of the medieval feudal social hierarchy, *i.e.*, there are structural barriers that prevent these individuals to be integrated into class society. Which does not mean that the dispossessed cannot be exploited to generate surplus value, on the contrary, they are over-exploited or relegated to the margins of society and expected to simply disappear. This is a colonial heritage, which mean that the majority of the dispossessed are from African and Native peoples decent (Fernandes, 1968, 1973).

In this sense arises a particularity of dependent capitalism, the dispossessed are an aggravated form of the oppressed, whose marginality is so ingrained into the peripheral *Sieger* reality that these oppressors, are both over-desensitised and in a state of deep fear from the masses of dispossessed (Fernandes, 1973; Limoeiro-Cardoso, 1995). This reality poses a second particularity to the dependent capitalism, for if exist a mass of condemned that are structurally prevented from social mobility, because they are outside of class society, the integrated oppressed tend to not recognise them as fellow oppressed under the control of the same dominant classes (Benjamin, 2007; Fernandes, 1973). Both particularities of the dependent capitalism form, deserve to be scrutinised in order to

understand the specificities of their development in the Brazilian reality, a dependent economy from Latin-America.

In summary, Brazil has a particular form of capitalism that differentiate itself from central and other dependent ones, due to the form in which it objectifies itself and radiates historically as a social force. This dependent form of capitalism has two major aspects that are a necessity to its continuum: (i) the local bourgeoisie (peripheral *Sieger*) is a partner, although a minor, subordinate and replaceable one, to the central bourgeoisie (central *Sieger*); and (ii) an internal class struggle, characterised by capitalist over-exploitation and over-expropriation of labour and by the relations between the oppressed and the mass of the population that cannot even gain access to class society or remain there, the condemned (Fernandes, 1973; Limoeiro-Cardoso, 1995).

The bourgeoisie partnership depends on the transfer to central economies of the economic surplus generated by the export of primary products and commodities, resulting in a perpetual state of sub-development, for such sectors do not possess the required externalities of production and organisation to unfold into an industrialised and complex economy (Fernandes, 1968). Therefore, the peripheral *Sieger* do not confront the central imperialistic economies, accepting their role in maintaining and enforcing the global division of labour in order to secure their place as dependent rulers of the oppressed and the dispossessed, *i.e.*, the Brazilian bourgeoisie has the capacity to ensure its survival and privileges, but is incapable of surpassing the sub-developed and dependent capitalism to such a degree that it engenders and upholds an economic policy that progressively shackles itself to the domain of the external hegemonic nuclei (Fernandes, 1975).

To better understand this dependent capitalism, since Florestan Fernandes does not formulate a dependence theory (Limoeiro-Cardoso, 1995), there is a need to enlist the writings of Ruy Mauro Marini. The context and purpose of Marini's (2013, 2022) formulations are to analyse Latin America, where exists a late process of capitalist development, thus establishing a relation of dependence with the central economies. Marini's dependency theory emerges in the 1970's as a means to analyse the processes of transference of value in the global context from the perspective of the sub-developed Latin-America.

The pillars of this perspective of analysis are: (i) dependent and peripheral countries have in their structural composition the element of the transfer of value to the economic centre; (ii) the national bourgeoisies', in order to compensate for this transfer of value, operate an over-exploitation of the labour forces; (iii) the production process of dependent economies is focused on the external (central) market and consumption, *i.e.*, the internal market is subordinated to the volition of central economies; (iv) sub-imperialism, *e.g.*, a country that is both dependent and an enforcer within its region of imperialism (Marini, 2013, 2022).

Thus, in order to maintain their dominance, social over-exploitation and to compete with other sub-developed economies for the capital from central economies, comes into fruition what Fernandes (1968, 1973, 1975) calls a bourgeoisie autocracy, that is, a democratic form averse to popular participation apart from election, *e.g.*, interactive governance, public hearings, popular councils and other forms of democratic social participation. Likewise, in order to prevent class struggles, or the vertical mobility of the ruled classes, the oppressors erode every catalyst of social change (services, institutions and mechanisms), and at the same time implement elements to secure their rule.

As final remarks and to prevent any ill-interpretation of this matter, when affirming that the dependant *Sieger* is somewhat enclosed in a place of enforced partnership by the central ones, by no means it lessen their part in the toils and suffering of *die Unterdrückten*, it only serves to affirm that they occupy a particular - and fragile, hence the fear - position. Consequently, a peripheral *Sigers* split, struggle, or confrontation with the central *Sigers* is virtually impossible. They do not possess the material elements to ignite, successfully foreclose international capital, and promote a complete severance from the international capitalist mode of production. Nor they are in a position of confronting such dominance for their benefit, on the contrary, they are interested in strengthening the tethers of dependency that benefits them, and struggle within themselves to further specific ones that may give a certain margin of dominance and power of one sect/faction over the other. For, even though the general interests, fears, and strategies of the peripheral *Siegers* are aligned, each faction and sector of this class has specific tactics to extend their power and influence, *i.e.* the peripheral bourgeoisie, just like that of the economic centre, is not a monolith, there are inner power struggles that necessarily must be understood in order to tactically observe, act, and conduct a subversive process towards a truthful emancipation of the oppressed and the condemned.

Hence, an stagism notion of forcing, conducting, waiting, or depending on the system's guarded *Sigers* is at the best naive and at the worst mischievous and ill-intentioned. Furthermore, articulating through positioning struggles (Gramsci, 1999; Lisa, 1981) key elements and individuals of those that stand with the oppressed to change the system from within, or trough subterfuges guide a subversive processes towards a less predatory social structures, or even to conduct the subversive process from within when it finally occurs, it is not only a limiting strategical path, but a feeble one that can lead to a reformism that satisfies itself by conquering insubstantial wins, but continuously and blindly (or self-deceivingly) losing the war.

For Gramsci (Gramsci, 1999; Lisa, 1981), there is a necessary tactical, strategical, and practical effort, which consists of thinking about and formulating the role of an organised avant-guard group, movement, and specially a political party or organisation as a supporter, coordinator, and forefront of political forces and forms of struggle, and in

the ever changing conjuncture, analyse the propitious moments of struggling for position and the ones for active movements, and as the process of class struggle progresses, adapt and change its tactics and techniques without losing focus on the strategy and end-goal. This, positioning struggle is essential for any subversive movement, for, the avant-guard must be strategically positioned not only within the institutional ranks, but within the oppressed and condemned, for this to occur, members of these groups must compose the ranks of the subversive movement. Thence, the idea of a "passive revolution" (Gramsci, 1999: 299), by reforming the State through legislative interventions and parliamentary struggles and corporate organisation, can lead to changes within the production plans and organisation, without actually altering the paradigm of the means of production structural composition, enabling the perpetuation of capital accumulation veins for specific classes, groups, and individuals. This means the necessity of a deeper and more holistic take on the struggles for the emancipation of *die Unterdrückten.* Otherwise, Fernandes' ((1968, 1973, 1975) bourgeois autocracy will through its own positioning and movement actions, erode and dilute social organisation by promoting a "period of expectations and hopes" (Gramsci, 1999: 299), and thus preserve cohesive and coercive structures of control and domination of *die Siegers* (Gramsci, 1999; Lisa, 1981).

3.3   Philosophy of praxis, hegemony and one-dimensionality

As Antonio Gramsci (1999) states the separation of philosophy from politics is impossible, for the choice and criticism of a conception of the world is in itself of political nature. What is the city, if not the *Agora* where society express its struggling relations of power, culture, economics, philosophical or political nature? Thus, the urban space is the materialisation of class struggle, where *Sieger* and *Unterdrückten* can be identified, as well as the barriers (physical or invisible) that divide their cities apart. For, there are two cities that occupy the same physical space, the same streets, parks, monuments and even the same buildings, and they coexist only by a deeply practised habit of unseeing (Miéville, 2014), mostly by the integrated; the condemned, otherwise, must preclude themselves.

A complete and complex analysis of the smart city, as product of human society, is only possible by the critical observation of the historical process. This historical analysis must be done by the perspective of the oppressed to prevent novel forms of oppression (Benjamin, 2007; Gramsci, 1999; Löwy, 2005). Thus, there is a need to understand the capitalist mode of production from a Latin-American, sub-developed and dependent economy perspective to comprehend the peculiarities of the smart city phenomenon in such reality.

Henceforth, one need to remember that although the centre object is the smart city,

the rhizomatic multidimensional nature of its existence needs to be accounted for. If doubts about the effect of globalisation within the urban space where once questioned, the global integration of the smart city render such effects undeniable. The elaboration of a framework that does not take into account such aspect is doomed to side with the mechanisms that perpetuates oppression, over-exploitation, and over-expropriation tethering a dependent relation to the economic nuclei.

Thus, this research tries to follow a philosophy of the praxis in its scientific approach to elaborate and make coherent the principles and problems that the oppressed pose with their practical activity. Such philosophy of praxis initially present itself in a polemical and critical attitude, for it represents an attempt to overcome the prevailing way of thinking and of the existing cultural world (Gramsci, 1999). However, this overcoming is precisely what Benjamin (2007) defends, it is to "brush history against the grain" and give to the oppressed an instrument through which they can grasp a victory without glory (Benjamin, 1978b). For the philosophy of the praxis must be liberating, otherwise, the dream of the oppressed will be to become the oppressor (Freire, 2020).

To split from the existing cultural world, comes into hand the concept of hegemony from Gramsci (1999). This concept is an element of both a cohesive force of the ruling classes that influences and limits the masses in a negative way, and an exertion of coercive structural dominance. The hegemony conveys the crystallisation of an ideal hypothetical general man, that is actually a vague personification of the central *Sieger* and its culture. Consequently, causing a hegemony of central economies cultures over peripheral ones. Thus, the periphery is a result of progress efforts that are not associated with an extensive local economic development but are instead a reflection of international development, enabling a hegemony of more economically developed countries. Hegemony is a form of social consent that acts as an axis of control mechanisms, *e.g.*, dressage and discipline (Foucault, 1999), leaving the more coercive and punitive forms of the expression of power to specific situations.

Hebert Marcuse (1973) brings forth the concept of one-dimensionality, which pushes forward certain ideologies that issue material and subjective conditions, *i.e.*, it dictates material reality and conditions throughout the economy but also the subjective conditions of individuals by the medium of symbols. Hence, the individuals will voluntarily seek to be part of it, in other words, the dispossessed and the oppressed will entangle themselves with the conditions and instruments of their dressage and the peripheral *Sieger* will be unable to sever its shackles with central economic powers, culture and political dominance.

One can assume that the contrary must be also true, such hegemony and one-dimensionality must also bind the central *Sieger* to a specific international division of labour. That is only partially true. Within the capitalism mode of production, and specially in its current mode, neoliberalism, certain aspects of production were transferred from the

central economies to the peripheral ones, and to some extent this constitutes an economic tether that renders central economies relaying on the production and economic surplus transference of peripheral economies. But apart from specific situations, *e.g.*, mineral deposits, fossil fuel, or a specific kind labour force, the capital invested in peripheral economies can be easily pulled out and suffer a redirection to other better suited situations for its accumulation and circulation.

The one-dimensionality productivity model is an end in itself, because the aim of production is to satisfy society needs, but such needs are controlled and dictated by a hegemonic notion of consumerism. The one-dimensionality fixes itself in all of life dimensions through mechanisms and instruments of control, being a governing force of human subjectivity (Marcuse, 1973, 2008). Therefore, if in dependent economies production is focused on the external (central) market and consumption, a vulnerability of dependent economy arises: if the one-dimensionality mode of production is an end in itself, dependent and sub-developed countries are disposable (with different gravity of consequences) along with the peripheral *Sieger*, the oppressed and the condemned. For an economy with low complexity and low industrialisation focused on nuclei market's needs, is at the mercy of the central *Sieger* volition.

3.4   Urban spaces and mutilated citizenship

To Henri Lefebvre (1991), the physical space is the key to the urban capitalist accumulation. However, in a digitised world it loses its sole protagonism, it shares the material city with a virtual one that for an intrinsic nature compresses time and space in a more effective and inexpensive manner (Chandler; Fuchs, 2019; Fuchs, 2014; Harvey, 2015; Lévy, 2011). Because of this, the virtual city is perceived as profitable by the capitalist economy, as it lessens the time of investment return and surplus value generation (Chandler; Fuchs, 2019; Fuchs, 2014). The digital or virtual space is rapidly becoming the most crucial and decisive one to economy, society, culture and politics, and it is a social virtual reality that contains analogous dynamics and contradictions to those of the material space. Therefore, theories and analysis of the latter are a reliable foundation to investigate the former.

Milton Santos (2008a) states that the space is an instancy of society that needs to be regarded in totality, *i.e.*, it is the result of a collective praxis that reproduces social relations. Space is both the materialisation of social relations bygone and current, as it is a structure manifested through processes and functions of social relations. This structure that represents itself in social relations is the capitalist mode of production. This corroborates with Lefebvre's (1991) notion of space as part of the dialectics of production. Lefebvre

(1991) states that the space is cause and result, product and producer, while for Santos (2008a) the space is both a subordinative and subordinate structure. Both recognises the unevenness nature of the space formation and the social forces that in a totality construct it. Space, due to its characteristics and dynamics, for what it offers to some and refuses to others, is a mirror of society (Santos, 2008a).

The dichotomy of the planned — organised as abstract -– and the lived spaces serves to the capitalist mode of production. For abstract space is the organisation of abstract labour and exchange, *i.e.*, it is a medium of accumulation. As a medium, it reinforces the capitalist logic in present society, that is to say: the living experience is crushed, because the structuring of planned space entails the possibility of a ruling class (*Sieger*) to instrumentalize the social space to guard their interest disregarding other classes (*Unterdrückten*). The urban space is a hub, a magnet of social, political, cultural and economic relations, but it is also a part of those relations, a consequence and cause (Benjamin, 2007; Chandler; Fuchs, 2019; Fuchs, 2014; Lefebvre, 1991; Rolnik, 2009; Santos, 2008a)

As for the virtual or digital space, at first it was a distant concept that belonged in science fiction and cyberpunk novels, it is now more real and relevant than ever. It is not merely the screen of a device, server farms or big data, nor a smart meter or a full fledged 4.0 industry, it is all of it and more. Henceforth, like the physical space, it is a social reality, or a virtual social reality. It operates in the same logic as the physical or material space, and in doing so, it is a medium for accumulation and exchange, *i.e.*, most of what Santos and Lefebvre write about the physical space translates to the virtual.

The space, be it physical or virtual, has material and conceptual boundaries that are socially produced, permeating other spaces in an interlocking manner (Fuchs, 2019), and applying this to the virtual space ubiquitous nature, an unprecedented rhizomatic scenery arises. The virtual space physical borders are the machinery required for its production and existence, whilst the conceptual boundaries are more pliable, and its interpenetration, juxtapositions and superimposition with other spaces are almost impossible to measure or quantify. Therefore, rendering to its understanding and subsequent analysis an inherently challenging effort.

The digital space is a continuation, an augmentation, another plane of social relations that is deeply imbricated within social reality and life, with an array of products and services of ICT that are woven into the lived space and into the abstract space. The term smart city arises from the intent of the interaction between the new ever-developing technologies, with the social and human capital, aiming to improve the quality of life in urban environments (Albino; Berardi; Dangelico, 2015).

However, literature in smart cities by using the terms social and human capital,

depart from other terms that are better suited for addressing and analysing its social implications. This aggravates what Santos (1996) calls a mutilated citizenship, for there has never been in Brazil (in similarity to other Global South nations) the construction of an idea of citizenship, resulting in a challenging production of a national project capable of integrating the whole of the population as citizens, condemning their existence to one of dispossession. In other words, there is a systematised de-humanisation entrenched in legislative principles, socio-economic structures and political agendas (Fanon, 1988) that with the promised techno-structure of the smart city, perpetuates and strengths the denial of a historical and material perspective in the name of a technical and procedural view of sciences and technologies, extinguishing any kind of struggle or questioning regarding the hegemony of the productive system and the logic of capitalist accumulation (Mészáros, 2005).

Combining this with centre-periphery relations, one notices a connection of this lack of citizenship with the ease of acceptance of a hegemonic globalisation ideology: the mutilated citizenship maintenance is essential to perpetuate a structural dispossession, exploitation and de-humanisation. Therefore, the globalisation process is a facet of imperialism that comes to fruition by a market democracy that is in fact a negation of politics, with an imposed totalising and universal nature (Mészáros, 2005; Santos, 2000, 2008b; Santos; Souza; Silveira, 1998). The market democracy (Fernandes's bourgeoisie autocracy) annuls politics, imposing a single (Marcuse's one-dimensionality) vision (Gramsci's hegemonic culture or ideology) that secure the rule of the victors over the oppressed and the dispossessed. Enforcing the decerebration of a people, a deprivation of one's identity and a social structure that drives the majority of its individuals to seek desperate solutions to their needs (Fanon, 1988).

Thus, there is a need to re-structure the smart city concept, not only because the use of human and social capital, but to prevent a hegemonic ideology perpetrated by the global *Siegers* of the capitalist mode of production that enforces the dynamic of an imperialist centre and a dependent periphery. Because, the urban virtual space is the digitalisation of class struggle, *die Sieger* and *die Unterdrückten* struggle, and the barriers (physical or virtual) that divide their (smart) cities apart must be identified, analysed, and addressed. Hence, the virtual space being the materialisation of social relations and the mirror of non-viable society that perpetuates and feeds on dispossession must be replaced, that is imperative in order to stand with the oppressed and the condemned.

Chapter 4

This is the way the world ends

*Tutto l'immaginabile può essere sognato ma anche il sogno
piú inatteso è un rebus che nasconde un desiderio,
oppure il suo rovescio, una paura.
Le città come i sogni sono costruite di desiderie di paure,
anche se il filo del loro discorso è segreto,
le loro regole assurde, le prospettive ingannevoli,
e ognicosa ne nasconde un'altra.*
(Calvino, 1990: 44)

After delving into the smart city phenomenon and establishing a theoretical foundation and tone, this chapter seeks to investigate a bit more of the smart urban phenomenon, specially the impacts of neoliberalism and current modes of space production on society and individuals. In order to do that, two concepts will serve as a starting point: late capitalism and capitalist realism. Also, Baudelaire, Tolstoy, and Eliot will be evoked to, inspired by Benjamin, take a closer look on the mentality and subjectivity related to neoliberal modes of production.

4.1 Whirlpools in the void

*In den Gebieten, mit denen wir es zu tun haben,
gibt es Erkenntnis nur blitzhaft.
Der Text ist der langnachrollende Donner.*
(Benjamin, 1991: [N1.1] 570)

In his collection of poems, the Spleen of Paris, Baudelaire (2020) tries to interpret the life and struggles of the urbanity and its dwellers. In the context of the XIX century, the poet states that "those who don't know how to populate their own solitude don't know how to isolate themselves in the restless masses" (Baudelaire, 2020: 26), however, currently the restlessness becomes individualised, *i.e.*, the solitude becomes harder to be achieved, for, there is a constant search for the multitude, for movement, and restlessness of mind and body. Solitude is frowned upon, connectivity and social networks must be prioritised as a natural law, since humanity is composed of social beings. But even contemplation, idleness, and leisure are viewed as productive, creative, and a necessity to better produce and engage in systems and modes of production or as an investment in the self. Digitalisation renders the solitude a connected existence, with constant flows of information, data, and knowledge that populate the solitude with restless inflows and motion. A whirlpool in the void, where the void is the emptiness of an unpopulated solitude and an incapability of isolation within the masses. Information and data revolve in an endless space of connected individualities that are constructed by algorithms and hegemony's ideals, aspirations, morality, ethics, and ideology.

This whirlpool requires a certain performance and sociability: a constant search and display of enjoyment, where elegance is guided by the placidity of existence, of letting live. These are the spaces of polished gestures, of smiles that do not reach the eyes. If the eyes are indeed smiling, is it a true one or just the product of hegemony's cohesion? For example, Tolstoy's Ivan Ilyich (Tolstoy, 2006), who has built a life and a refuge of appearances, made for the external, for the parties of a decadent age with decadent people whose aim is only to appear to enjoy themselves, and this appearance in itself is the enjoyment of moving away from those they despise. These are often their equals, their peers, who live in endless, fruitless, and meaningless competition, the reason for which is to perform a disguised and mounted enjoyment in order to overpower the other and thus feel bigger, better, happier, and more alive.

Whirlpools can unfold in different shapes, sizes and with countless properties. In the current stage of capitalism, this whirlpools revolve, like never before, around possessions, properties, assets, and commodities. Having something, or the possibility of having something helps to constitutes and define the being itself. Just like Fanon (2020) wrote about the Martinican society and the will to magically whiten yourself as some sort of salvation through possessing and owning a place within the high society, the white-european society. The temporality of possessing, consuming, and owning something becomes constitutive of the being. There is now another form or appearance of the dialectics of being and having, a digital form.

The digital being and having is prismatic, it encompasses the model of citizenship or access to services only possible through the purchase of a smart product capable of

potentially connecting and inserting people into a higher digital urbanity, a false public space of social networks and private internet. Also, the digital being and having, refers to movements attempting to form a digital persona or Ego, capable of existing in the digitalised world, a certain type of digitalised world where some behaviours and appearances are welcomed and others marginalised. However, this must be seen as a dialectical movement, for, in one side there is a sociability of non-hegemonic cultural expressions that through digital spaces are able to exist and gain a foothold, however, on the other side, this occurs in false public spaces, controlled and monitored by companies from central economies. So, although there is a recognisable colonial aesthetic and sociability, its reach and existence is conditioned by the virtual space in which it is inserted.

Here, a parallel can be drawn between Fanon (2020) and Honneth's (2011) struggle for recognition. After all, the colonised person has their social esteem/self-esteem directly affected and compromised. The dignity of the colonised is lesser or non-existent in the eyes of the coloniser, the more distant and different the less worthy and less deserving of recognition that individual and all that they represent are. Thus, the sense of self-worth that Honneth mentions that individuals, or the "biographically individuated subjects" (Honneth, 2011: 208), can experience when entering into the "individual competition for social-esteem" (Honneth, 2011: 211) is, according to Fanon's (2019, 2020) writings, fundamentally inapplicable to the colonised.[1] Even the solidarity concept that, according

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[1] Briefly - for, it is not the aim of this work to derive a comprehensive critical analysis of the concepts around the struggles for recognition - the social-esteem relations, dynamics, and struggles between different groups are influenced, according to Honneth (2011), by three key factors: (1) the power to dispose of the means of symbolic force; (2) the atmosphere of public attention, that social movements must strive for; and, (3) the income distribution, that translates into economic struggles (Honneth, 2011). However, hegemonic forces of cohesion and coercion, the structural apparatus to enforce it, and the power distribution and exertion are complex, intricate, and distinct categories that can not be analysed as a monad. Who has the power? By which mean does this power operate and structure itself? By what means, instruments, and apparatus is this power disposed of? Is it income distribution or the economic system itself that promotes struggles? Must one await for, or engage in how many social movements to find recognition? Does this symbolic force not materialises as structural, cultural, and direct violence (Galtung, 1969, 1990)? Most of this questions will be answered along the text, however, some deserve to be addressed immediately: these "symbolic forces" are derived and derive a delocalised power holder, or a non-biographically non-individuated subject, and enforce cultural, structural, and direct forms of violence and disrespect. Hence, this dialectic notion questions the actuality of the competitiveness of individuals from diverse esteemed social groups, that can symmetrically experience the opportunity to perceive their selves, by comprehending their own achievements and capabilities, as valuable to society. For, hegemony prevents divergences from the delocalised, non-biographically, and universally esteemed social group, therefore, its individuals are always within a context of advantageous asymmetrical interactions with other individuals from different groups. Moreover, hegemony dictates a structure, that, to be accepted and reach a pseudo-symmetry, those that do not integrate this universally esteemed social group must veil themselves with a pseudo-delocalised - for more on this, see Fanon (2019, 2020) writings - hegemonic mask of acceptable performances, gestures, and epistemologies. Also, economic struggles regarding income distribution, are fundamentally different from class struggles for the means and modes of production that dictate the economic system itself. Therefore, economic struggles may fall under technocratic equations that do not account for the accumulation and dispossession principles of the current mode of production, nor for the class differences, in which one is supported by hegemonic structures and another is subjugated and condemned to mask itself.

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to Honneth, enables individual competition "unclouded by experiences of disrespect" ([Honneth, 2011](): 211) is sapped by the colonial structures of oppression and dehumanisation. This free market of individuals and their values and worth's, is not only unjust - by necessity of its logic - but it is where the voided self enlarges by festering on the desires emitted by the hegemonic ideology of the coloniser.

Accordingly, the "digital being and having" is presented in a form that even with access to the virtual, the virtual is designed to exclude, monitor, and oppress the colonised, preventing their full recognition. So whether the colonised absorbs aspects of the culture of the coloniser ingrained in their digital social being, or whether they claim their own, they are still colonised to varying degrees according to the particularities of their ethnicity, group, gender, sex, class etc., and will be watched and discriminated against as such. Hence, possessing something or being able to consume and live experiences that are deemed exclusive or desired, and leaving a digital footprint of curated data and information is the XXI century baudelairian whirlpool in the void. Only by engaging in such whirlpool, can one become recognised, and to do that, even if promoting anti-hegemonic and anti-colonial epistemology and aesthetics, one will probably do it through platforms that originate from central economies, responsible direct or indirectly for their coloniality.

4.2   Reflexive impotence

We are the hollow men
We are the stuffed men
Leaning together
Headpiece filled with straw. Alas!
Our dried voices, when
We whisper together
Are quiet and meaningless
As wind in dry grass
Or rat's feet over broken glass
in our dry cellar
(...)
This is the way the world ends
This is the way the world ends
This is the way the world ends
Not with a bang but with a whimper.
(Eliot, 2018: 166-175)

For Mark Fisher (2018, 2020), there is an overall sense of reflexive impotence, it is not a matter of apathy, cynicism, or indifference but of a knowing that things are bad and getting worse, and a belief that nothing can be done to salvage the present and the future. An existence of impotence and powerlessness that is at the roots of a capitalist realism. But before investigating capitalist realism, what are the consequences of this reflexive impotence? It is not just an escape, or an agent of indefinite control with unrestricted powers, there is an internalisation of surveillance in a disguised form. The reflexivity of a pessimistic and overwhelming feeling of powerlessness, caused by the knowledge of eminent catastrophe, hopelessness in the future, or inability to change the reality in a significant way is essential to the instruments of hegemonic cohesion.

Culture and social expectations and structures form the veil of reality, which at the same time blurs the Real, limiting and repressing the subject's perception, and also immobilises them in a certain structure, preventing them from transposing into the Real. This veil has a property that the more attacks it receives, the more energy it accumulates to return in an explosion of control, destroying any counter-control or counter-hegemonic movement. These explosions do not have to be coercive, using direct violence to inflict direct damage on the individual. It can be, and most often is, subtle behaviour training, or dressage, through the most diverse means (from co-opting agendas, to promoting moral complaints, through fake news etc). After all, human subjectivity does not need to be destroyed, remade, instrumentalised, and re-socialised like in clockwork orange. This is the reality in the world of late capitalism, the world of men hollowed out by a certain type of hedonism, moaning and whispering, where languishing in the face of a totalising impotence is often the whimpering end. A hedonistic and morbid process of the endless search for pleasurably empty and lacerating connectivity.

This whirlpool of multiple veils of reality causes a sense of something missing, a void, a desire for some ethereal thing that resides in the realm of possibilities of the virtuality. This search, this aching, and longing is a form of hedonistic depression, that resides in the never coming of the potential pleasure. This indefinite postponement is the basis of social media algorithms, as well as their production/consumption regime, therefore, essential for the reproduction of digital capitalism. Temporality is broken-down, and as a consequence the present and future become hollowed out of any spaces of praxis, *i.e.*, since praxis and effective and organised action is the only way to change the perception of the hegemonic reality, this existence within a constant potentiality removes any form of intention and action that threatens the capitalist mode of production.

Capital's need to compress time and space affects the subject. Their very notion of these concepts changes. Physical space and its connectivity limitations is modified and augmented by virtual space. Time is accelerated not only externally, in order to speed up production, consumption, and circulation, but internally, in the very conception

and perception of time, causing individual subjectivity to constantly search for more constant and unrestricted stimuli. Instead of segmented time, with "right hours", there is a constant flow of transposed and connected activities. Connectivity, despite being sold and perceived as a connection with the whole, with a community, is in fact just a wall that obstructs socialisation, a dose of enjoyment for the reaffirmation of individuality, of the private. There is an addiction of speed, connection, and stimuli, a constant search for an unattainable potential for perpetual enjoyment and pleasure. Therefore, this renders the subject trapped, for even though the age of catastrophes is coming and there is nothing they can do about it, they can potentially achieve pleasure and satisfaction just at the next package of data.

This reflexive impotence occurs in a spectrum between two types, the Descartes and the Lorde. For Descartes - a rich white-european-man - he thinks, therefore he exists, while for Audre Lorde (2020, 2021) is more of a we think, therefore we are, therefore I am. For her - a black, lesbian, feminist, socialist, mother, warrior, and poet - one define oneself as others do, as the environment allows one to define oneself. Unlike Descartes - or Honneth -, who thinks therefore exists, the being of the black person, LGBTQIAP+, native peoples, the being of the oppressed, condemned, and colonised is defined from a context. Marginalised groups do not have the luxury of thinking therefore existing and being recognised, they must constantly struggle for recognition while they also struggle for existing. They exist as marginalised, therefore thinking about not being discriminated and being able to be integrated into society, or to change society in some way. Hence, while the Descartes type can be reflexive about his impotence in his mind, the Lorde type has to struggle for their existence while brutally experiencing inequalities and discriminations that renders them impotent. Also, different from Descartes, Lorde recognises her identity as a tapestry, indivisible but composed by multiple threads of experiences, relations, culture, sociability, social groups etc. This tapestry view on identity means that are multiple ways of struggling for recognition and of being oppressed and condemned with a reflexive impotence. In other words, the emancipation of oneself must not be within individual competition once different social esteems reach a certain symmetry - for, oneself is not entirely encompassed by one single group's social esteem, but by multiple - on the contrary, it must come from a collective struggle, not devoided of pain, but free from voided selves that can understand the necessity to bare certain pains and sorrows in order to grasp for a horizon of truthful recognition. Again, we exist, therefore we think, therefore we are, therefore I am.

4.3   Late capitalism and capitalist realism

For Frederic Jameson (1991, 1996), to understand late capitalism it is essential to comprehend postmodernism, since it is the superstructure or the cultural logic of late capitalism, that in turn has as its social, economic, and political foundation the intermittent and unrelenting advancement of innovations, technologies, and techniques. Thence, postmodernism can be understood as a contradiction between the abolishment of the notion of time or the absence of historical meaning, and the attempt to historically analyse the present. This results in the theorisation of possibilities, potentialities, changes, and different modulations of a reality without a historical perspective.

Also, for Jameson, a central point of postmodernism is the dilatation of all spheres of commodities, specially, for the author, culture. Occurs an aestheticisation of reality, that is, the veil of reality becomes aesthetically and culturally structured to a simple directive: one must consume the commodification process and this must be exhilarating. And this exhilaration is in itself a commodity, a possibility to be achieved through investment in the self. And more, the possibility is the central commodity, the indefinite postponement of a potential pleasure is the driving force for late capitalism. This results in a way of living that is fetishised, meaning, the production of this commodity is hidden with the help of an Ego that is devoided of a locus and also veiled. Thus arises another contradiction, as Jameson puts forward, postmodernism abandons time and focus on space, specifically the space where the body exists through a series of singularities without temporal causalities. The space is the focus, but, the way of living perpetuated by hegemony, is without a locus and originates from a hidden Ego that exists outside of space and time, but possesses the "truth" (Grosfoguel, 2009).

Furthermore, postmodernism relativises stable and known structures, not by historical analyses but through a still image of the present as a thing of the past without potentiality, therefore, without a place in the present and the future. Historicism and relativism arise, as a structure of perpetuating hegemonic world views, ontologies, and epistemologies resulting in a push for the homogenisation and cohesion of society, marginalising and oppressing minorities and vulnerable groups, *i.e.*, hegemony dictates the norms of how and who is rightfully and humanly apt for oppressed and limited inclusion. For example, instead of the notion of becoming someone through experiences, social, and cultural constructs that have a complex historical process behind (Beauvoir, 2021; Lorde, 2020), the becoming transforms into opportunities, potentialities, and possibilities in some degree tied to having and possessing. When conformed by this notion, eventually comes in some degree a realisation that the possibilities are limited and restricted into predefined moulds and patterns, and that the power to change this limitations is not within grasp.

Here, we arrive at the first definition of late capitalism, it is a stage of capitalism

were the contradictions inherent to the system become apparent and known by the people, however the power of hegemony and of the ideology that safeguards the structure of the system and the position of ruling classes and groups, hinders possibilities of change. Even though morbid symptoms arise from a decaying system of continuous exploration of natural resources and exploitation of the working classes, the possibilities, potentialities, and opportunities all exist within the same gruesome system of indefinite growth and accumulation. This quality of decay, does not mean that the capitalist mode of production is coming to an end, it only means that it is the result of a historical process that encompasses the development and saturation of previous capital potentialities. Thus, the emphasis on innovation is the social, economic, cultural, and political basis for this late form of capitalism.

Jameson (1991, 1996), heavily bases his writings on Ernest Mandel (1999), and devises three stages of capitalism: (1) the free-competition or market phase; (2) the imperialistic phase that concentrates on the exploration of colonies by central powers; and (3) late capitalism. The first phase is based on the exploitation of peripheral underdeveloped regions by industrialised central regions and primarily takes place within national borders. Being the economical structure for the "realism" within the arts, philosophy, sciences etc. The second stage is based on the brutal exploitation of colonies and semi-colonies in an international scale of monopoly competition between imperial powers, and its ideology being "modernism". The third stage is late capitalism and it focuses on the technological innovation and in less developed production sectors and markets being dependent on more dynamic ones, heavily depending on a multinational backdrop of globalisation and a post-modern superstructure.

Late capitalism is an extended cycle of stagnation, structural crises, increase in the shear amount of information produced and its alienating capacity, development of production that rapidly increases condemnation to larger and larger parts of society, and the deepening of contradictions inherent to the system. In each cycle, the contradictions and shortcomings become more and more apparent, but the solution the system produces is to deepen its logic and create more markets, more innovation, more information, more development etc. Globalisation is central to the late capitalist logic, as it seeks to expand its accumulation by super-capitalisation, that is, the expansion of capital to new dimensions of life and reality, physical or virtual. The commodification of life takes a deeper and more vicious pace. Possessing something becomes essential, as the use value of a commodity is steered more and more towards consumption instead of utilisation. There is a consumption of the symbolic and phantasmagorical value, hence, the work behind the consumed commodity becomes even more hidden away due to the finite temporality of the consumability of ephemeral commodities.

Culture, for Jameson, is commodified to an extent that the division between

superstructure and infrastructure is blurred, *i.e.*, the economic base and logic intertwines with the cultural logic and *vice versa*. Culture becomes consumable within the economic logic of capital, this changes its own nature, as now this culture becomes commodified. To have culture is to consume culture, to posses culture is to have the capability to buy culture. Those that cannot consume, or the cultures that are not inserted into the market, are lesser forms of being and culture. Here is one of the pillars of selective epistemicide, this process will be explored in next part of this work.

In summa, late capitalism represents the increase of the subsumption of living labour by dead labour; the social labour potential or capacity is more valuable than individual labour; the use of the workforce by capital changes, in functions and proportions within the production process, while enhancing the surplus value generation through new and deepened forms of dispossession and exploitation; high investments on machinery, equipment, and technology innovations and research; compression of time and space in order to reduce capital turnover periods; fixed capital's useful life period is shortened resulting in continuous planning for crises and risk control; commodification of culture, and culturalisation of the market; the historicism of post-modernism being expanded to every possible aspect of reality, therefore, veiling the historical and material processes that congealed such reality and the Real (Behring, 2015; de Almeida, 2018; Jameson, 1991; Mandel, 1999).

So, what is capitalist realism? In a simple manner, it is the conjunction of late capitalism and postmodernity with a reflexive impotence belief that there is no alternative. That it is easier to imagine the end of the world than the end to capitalism. In other words, the constant push for development, progress, and accumulation is contrary to the natural limits of human beings and of Earth. Climate emergency is a long predicted and announced catastrophe, as the capitalist system is incompatible with the planet's metabolism. Just as the sickening of individuals by physical and mental illness, and medicalisation - not to cure but to function to ones limits - is a long warned tragedy (Clark; Foster, 2009; Clark, 2012; Crary, 2014; Dunker; Maia; Manoel, 2022; Foster; Clark, 2004; Maia, 2022; Mariátegui, 2007).

Individualism serves to feed this veil of reality where there is no alternative, where capitalism and its system of production, politics, economics, and sociability is the only possible alternative, almost a natural or divine law. That is what capitalist realism is, the supposed inevitability and natural condition of human organisation. Capitalist realism stifles, prevents, and demonises dreaming of something different. The possibilities of a reality other than the existing one are completely shattered in a systemic and conscious way. It is a belief and an attitude, that capitalism is the only viable economic system, and even if it is not good enough for all places and individuals it is the only way, and falls to the individual to meritocratically grasp opportunities and potentialities to achieve higher

quality of life, measured by consumption and possession. There is an internalisation of a certain nihilism produced by a corporate ontology, that promotes a negative solidarity: everyone suffers, you just have to endure it more than other to win the race for having and therefore being recognised. Capitalist realism differs from post-modernism in three key points:

1. **There is no alternative:** viable alternatives for a capitalist mode of production seem to be work of fiction or utopian dreams;

2. **Post-modernism has a direct relation with modernism:** capitalist realism turns modernity and post-modernity into a style and aesthetic, a commodity. The superstructure that underlines the economic logic becomes commodified;

3. **Fukuyama and the end of history:** after the USSR (Union of Soviet Socialist Republics) and the fall of the Berlin wall, the spaces for the capitalist mode of production to conquer or to absorb diminishes. The antagonist seems to be vanquished and the spaces have being conquered. So, how to develop itself without others to colonise and appropriate? It accentuates, deepens, and becomes more brutal in all its processes, specially to previously colonised countries and populations.

In capitalist realism, the capitalism becomes the horizon, it enters the mind as the only possibility, and all potentialities and opportunities derive from it. Therefore, the hegemony of its reality becomes almost indisputable. Therefore, the living, the thinking, the acting, everything is immersed in capitalism, it becomes a culture.

Here, this works differs from what Mandel and Jameson advocated. Late capitalism is the continuation of imperialism, since imperialism did not cease to exist because colonies became formally "independent". It just continued through new forms of domination and exploitation. The imperial power becomes a complexity of political, economic, cultural, and social structures that still colonises and subjugates underdeveloped peripheral countries. Globalisation, is just a phase for imperialism, just as capitalist realism is a deepening of previous cultural logic's behind the capitalist economic structure. Still, late capitalism is a valid lens through which one can analyse the historical and material progress of this mode of production that inexorably leads to an announced catastrophe.

4.4   Smart urban phantasmagoria

Benjamin's phantasmagoria originates from Karl Marx, who, in turn, used it to describe the fetishistic character of commodities. Benjamin, however, was interested in the conditions of commodity display, where the representative value of the commodity was

emphasised and confused with its real value. The luxury commodity or the space in which it was displayed was given a phantasmagorical fetishistic character where the possibility of possession was something distant or impossible. Such a commodity could satisfy, or appear to satisfy, any kind of need from the stomach to the imagination. In their fetishistic role, urban spaces, networks, and infrastructures materialise and keep alive the utopian dream, something distant to be desired at all costs, and the higher the cost within this logic the more value this promise of a future possesses (Benjamin, 1991, 1999, 2007, 2009; Kaika; Swyngedouw, 2000; Kaika, 2017; Marx, 1990).

As Kaika and Swyngedouw (2000) conclude, "the symbol of a possibility for a better world is turned into a fetish of a fragmented material realisation of that better world and, as such, an object of desire *per se*". Therefore, this fragment is a commodity and is permeated by the production logic of the economic system that surrounds it. Bringing this to smart cities, one should avoid the creation of phantasmagorical tech enclaves that bring to the present time the Arcades of Paris, which like other materialisations of future promises, were subverted becoming idols worshipped in themselves, symbols or mythological expressions of a past vision of the future. In other words, interventions, plans, and projects of a smart urbanism may, if phantasmagorical, represent only the outdated vision of a promise that never came to fruition, or they may serve as a fomentation for the anguish always present in humanity that cultivates phantasmagoria. Anguish that materialises in the incessant and insatiable search for the new that represents in its essence a reality that has always been present, in which novelty or innovation are incapable of formulating solutions that free humanity from the anguish it seeks to escape (Benjamin, 1991, 1999, 2009).

Hence, these phantasmagorical symbols of possibilities and potentialities that differentiate oneself from a social body that they seek to escape, are one of the central commodities of late capitalism. This commodity form already existed of course, but now, it assumes a more fundamental role, due the influence of postmodernism and capitalist realism. The phantasmagoria itself becomes commodified through digital technologies and financialisation, it becomes an abstract symbol of dominance over others, mostly the oppressed and marginalised groups and classes. These markers of a supposed social differentiation and esteem, often serve as identifiers and idealisations of a distancing from the proletariat and proximity with the true privileged side of society, the capitalist class. The urban space, as a construct of society, reflex these dynamics of phantasmagoria. Today's Arcades are all the objects and materialisations present in the urban environment, which the function is to serve as symbols (or idols, depending on the time) of something new and innovative, of a better and happier world, without anguish, *i.e.*, the smart, creative, green, and luxury enclaves. These are all initiatives that emphasise the mythical smart sustainable development, and rest "on various forms of behavioural, organisational, or

technological changes that effectively obscure the underlying dynamics of environmental degradation" (Gandy, 2015), social deprivation, economic inequalities, political injustice, and cultural epistemicide. Or, that prophesies the future in the form of innovative solutions and, through a cohesive force, control or dictate subjectivity, perceptions of space, the individual, and the city, causing them to buy into the phantasmagoria.

Are smart cities doomed to be an agonising and endless search for the hope or promise of a better, smarter, and ecologically sound future? No, as long as it is aware of this possibility and analyses history in a materialistic manner understanding the pitfalls and dangers of the innovative materialisation of old utopias. The awareness of addressing new old themes (Fernández, 2015), in a sense of historically analysing the material reality, is paramount to avoid the fruition of the mythical anguish that preys humanity, its habitats, its subjectivity, sociability, culture, and its environment. Arises, then, the necessity to develop a debate on the causes and consequences of this tech-driven, creative, sustainable, resilient, and humane (etc.) urbanism in order to avoid the creation of new technocratic, falsely environmental and social friendly, and purely speculative and financialised urban products as a response to economic crises, inequalities, and political struggles.

4.5   Neoliberal urbanism and smart capitalist realism

Marx stellt den Kausalzusammenhang
zwischen Wirtschaft und Kultur dar.
Hier kommt es auf den Ausdruckszusammenhang an.
Nicht die wirtschaftliche Entstehung der Kultur sondern
der Ausdruck der Wirtschaft in ihrer Kultur ist darzustellen.
(Benjamin, 1991: [N1a,6] 573-574)

The capitalist expression of neoliberalism can be understood as an economic-political and philosophical-cultural doctrine that instrumentalises in a coercive and cohesive way the forces of accumulation by dispossession through: the technocratisation and economisation of the State apparatus, economy, and social relations; the pulverised control of the means of production – of goods, services, spaces and the human being itself; the domination or subjugation of all those whose existence serves only for the production of surplus value; and, by managing the power dynamics to enforce control over labour by global financial capital. But what is the difference between neoliberalism and late capitalism, the latter is devised through a temporal analysis to describe phases of capitalist transformations, while neoliberalism is an ideological movement, a political-economic

philosophy that encompasses culture and society. Late capitalism tries to investigate the shifts within infrastructure and superstructure, while neoliberalism is a set of principles that intends to regulate a supposed ideal relation of States, property, individuals, and capital. Hence, while late capitalism arises as a means of addressing the inequalities and exploitations perpetuated by capital, neoliberalism is the antithesis, as it opposes the working classes and marginalised groups. However, neoliberalism grows stronger and expands its grasp in the current phase of late capitalism and capitalist realism (Arsel; Adaman; Saad-Filho, 2021; Fisher, 2020; Gramsci, 1999; Harvey, 2011; Jameson, 1991; Marcuse, 1973; Souza, 2018; Theodore; Peck; Brenner, 2009).

For example, neoliberal urbanism can be understood as the specific application of this doctrine of creative destruction to the planning and management of the urban space, its inhabitants and economic aspects, in order to reconfigure the territorial organisation and thus, give rise to new forms of unequal production of the urban space and capital accumulation (Farmer, 2011; Harvey, 2007; Matela, 2014; Santos; Mello, 2021; Theodore; Peck; Brenner, 2009). Contemporary neoliberal urbanisation processes advocate a set of policies aimed at strengthening market discipline and competition, as well as dismantling and hollowing out the State, making it a regulatory agent (Farmer, 2011; Theodore; Peck; Brenner, 2009). The intention is "to 'liberate' both public services from so-called 'State inefficiencies' and capital 'squandered' by taxation that could be more profitability deployed by private actors" (Farmer, 2011: 1155). Thus, the regulatory State appropriated and seized by neoliberalism promotes market discipline over society and itself through various political-economic mechanisms, such as reducing taxes on businesses and capitalists, dismantling public services, and subjecting them to the market will through concessions, permissions, public-private partnerships, or outright privatisation (Farmer, 2011; Harvey, 2015; Theodore; Peck; Brenner, 2009).

Neoliberal ideology was used as a justification to support several processes: 1) the deregulation of State control in industry; 2) the offensive against organised labour; 3) the reduction of corporate taxes; 4) the contraction and/or privatisation of public resources and services; 5) the dismantling of social welfare programs; 6) the expansion of international capital circulation and accumulation; and 7) the intensification of competition between localities (Farmer, 2011; Theodore; Peck; Brenner, 2009). Specifically in Brazil, business elites have incorporated their interests into local development policies, with the privatisation of the public sector and collective infrastructure, eliminating State monopolies for the provision of public services such as education, health, security, transportation, etc. (Souza, 2018). Therefore, creating and expanding markets that inevitably tend to private monopolies.

The neoliberal ideology is appalled by the idea of the State providing basic services to the population, restricting it to a single possible role: that of Guarantor-regulator

(Carcanholo, 2017). There is focus on the freedom of the entrepreneur and their creative and innovative spirit. This is the most crucial point to understand neoliberalism, it apparels the State to its objectives guided by a corporate ontology, so it can legislate and guarantee the rights to a certain class while regulating through instruments of coercion and cohesion the dispossessed and the damned to an existence of scarcity and deprivation, sometimes with an illusion of liberty and possibilities of change that is indefinitely postponed until reflexive impotence takes hold.

For the neoliberal hegemony to be confirmed, it is necessary to pass on the image that the State-owned companies have worse conditions to offer a service and, therefore, bankruptcy - real or not - appears as an inevitable result and privatisation as a necessary solution towards a supposed progress and modernisation of the State. The premise for this movement is the disinvestment in public services and enterprises, so that these have, in fact, difficulties in meeting the needs and desires of the population, generating a political atmosphere in which the commercialisation of the State appears as the only way out. Austerity measures and cuts to social policies to lower the State expenditures are presented as logic solutions for economic crises, just as the development of social and human capital is presented as the solution, *i.e.*, individual solutions overwhelms community focused ones, thus, ingraining the centre of attention to the self and disesteem towards the social. One perceives, therefore, a hegemonic and one-dimensional process of cohesion through objective and subjective instruments of control, in which the neoliberal way out is presented and defended as the only one that has any reason or logic (Arsel; Adaman; Saad-Filho, 2021; Gramsci, 1999; Marcuse, 1973; Matela, 2014; Theodore; Peck; Brenner, 2009).

The presence of an apparelled State is essential for the proper functioning of these governance formats, acting as an equaliser in the regulation of resources and the provision of infrastructures that encourage the presence of capital in the production of the urban space (Leal, 2017; Rhodes, 1997, 2007). As real estate developers mobilise their financial, political, and policing power to win over low-income groups for ownership to the (central) city, they push working-class and minority groups to the margins, where housing, public transportation, health service, and education is insufficient and sometimes inaccessible (Farmer, 2011). However, capitalist realism is in motion and instil the notion that the only way to have a better life is to surrender to the suffering and toil of a regime of production that is despotic and anarchic, veiled as the only alternative. In this sense, smart initiatives fit perfectly within neoliberal ideology, late capitalist economic structure, and capitalist realism - inheritor of postmodernism - superstructure, due to the following (Arsel; Adaman; Saad-Filho, 2021; Behring, 2015; Borchers; Figueirôa-Ferreira, 2022; de Almeida, 2018; Figueirôa-Ferreira et al., 2023; Fisher, 2020; Grossi; Pianezzi, 2017; Harvey, 2011; Jameson, 1991; Mandel, 1999; Marx, 1992):

1. **The subsumption of living labour by dead labour:** dead labour, Capital, is vampire-like and sustains itself by consuming the blood, sweat, and tears of living labour. Smart technologies expand the surplus value generation by compressing the time of work during which the labourer is needed and multiplying the possibilities of labour consumption by Capital;

2. **Social capital and human capital:** while human capital remains an integral part of neoliberal ideology, social capital is where smart initiatives flourishes. High-tech clusters for a creative class and digital industries do depend on high levels of human capital, however, just as social labour potential or capacity has more value than individual labour, the social capital represents to the smart city a fertile field for primitive data accumulation;

3. **Changes in the workforce:** the entrepreneurial, self-made *man*, garage originated corporations, and previous journal seller and college drop-out billionaires all derive from the focus on the individualisation of success or failure. Hence, occurs the flexibilisation of work relations through smart platforms and spaces, monitored by an algorithm that prioritises efficiency over decent working conditions;

4. **Innovation is imperative:** high investments in technology development and research that can disrupt, expand, or deepen current markets and of course, if possible, create new ones;

5. **Speed of data accumulation:** the need of capital to constantly seek better forms to compress of time and space found a perfect match within smart cities, just as, the commodification of potentialities reaches new limits with the virtualisation of cities and citizens;

6. **Fixed Capital:** in order to being able to produce new technologies and smart devices, fixed capital useful life is shortened, *i.e.*, the instruments of production, the machinery used to produce products must be constantly altering. Also, the smart devices become a form of fixed capital that produces, stores, and analyses data composing the ubiquitous mesh of big data. Those devices have an even shorter useful life period.

7. **Commodification of culture, and culturalisation of the market:** culture becomes consumable through smart phones, televisions, and computers. The consumption of this culture adapts to data flows, the valid cultures become those that possess the capacity to be transformed into data and be streamed and stored in the cloud. The very idea of world altering or ending catastrophes caused by the current mode of production become a commodity, there are post-apocalyptic aesthetics where capitalist structures persists, as if no other social organisation is possible;

8. **Veil of historicism:** as postmodernism expanded to every possible aspect of reality, the historical and material processes became hidden. And capitalist realism taking advantage of that, constructs a reality were capitalism is the only possible production logic, and in the context of technological innovation, that the smartification of reality is the only alternative. A smart capitalist realism, where technology and innovation is the primary driving force of the civilising process, and not the historical and material relations. Progress for progress sake becomes the core for a Western/Eurocentric civilisation, disregarding anything that goes against the pushes forward, it is almost a reversed luddism where technology, automation, digitalisation, and smartification are the only possible way to achieve some elusive and imponderable future.

Therefore, neoliberalism through late capitalism and capitalist realism structures promotes solitary existences, that after experiencing whirlpools in the void and expropriated labour, arrive in refuges seeking any form of living that steer them away from those they despise, their equals and mirrors of their own dispossession. In late capitalism, this alienating and phantasmagorical experience is obviously paid for. Whether it is a smart phone to read the menu of a restaurant, a car to have the necessary mobility to access certain spaces, or a monthly streaming fee. Entertainment is the search for enjoyment, for relief from frustrations through constant and increasingly accelerated enjoyment. Whoever enjoys more is less despicable. Those who show that they enjoy themselves the most are even less despicable. But it is all just phantasmagorical whirlpools in the void, these are the physical or subjective spaces where the indefinite postponement of happiness predominates. These placid, morbid, and mutilated spaces, that sow reflexive impotence, should be despised by everyone who wishes to brush history against the grain. Everything that hegemony considers "weak, ruined, afflicted, orphaned" (Baudelaire, 2020: 23) should attract attention, because it is in these places that the suffering, joy, and bliss of the integrated, oppressed, and condemned are, and they must be deciphered to realise the Benjaminian maxim, that is to stand with the oppressed. Meaning, the epistemologies, the culture, the sociability, the diverse ways of living and interacting, the aesthetics, and suffering of marginalised groups and classes must be central in order to promote counter-hegemonic structures, progress, technologies, sociabilities, recognitions, subjectivities, and consequently the knowing that there are alternatives. Otherwise, the world will end with a whimper.

Part II

Digital Imperialism, the highest stage of digital capitalism

Se veían a lo lejos
Con aires de salvadores
Se disfrazaron de dioses
Y les regalamos flores

Pero yo no veo vida
Yo veo una muerte lenta
Un silencio que aniquila
Sin que nadie se de cuenta

Y ellos miran
ellos solo miran
esperando ese momento
donde nadie más respira

Y ellos miran
ellos solo miran
esperando ese momento
donde nadie más respira

Nos abrieron el tejido
y desangraron la aldea
degollaron las palabras
Para matarnos la idea

Se pensaron inmortales
Hasta que llegó su día
que el sol nos dio de su fuego
Y la mar su valentía

Se intimidan
Ellos se intimidan
Cuando llega ese momento
De ponerlos de rodillas

Donde nadie más Respira - iLe

Chapter 5

Lost in the night of existence to prevent ruin

Nós tivemos baixas incontáveis
Na real já foi uma revolução
Foi uma comunidade
Por cima de sangue derramado
Já fomos quilombos e cidades
Canudos e Palmares
Originais e originários
Depois do massacre ergueram catedrais
Uma capela em cada povoado
Como se a questão fosse guerra ou paz
Mas sempre foi guerra ou ser devorado
Devoto catequizado
Crucificar em nome do crucificado
Seu Deus é o tal metal, é o capital
É terra banhada a sangue escravizado
Vila Rica - Don L

This chapter seeks to explore coloniality perspectives and their developments within the current economic, political, cultural, and social structures of the globalised world. Although relying on a historical analysis of colonial history and imperialism, it does not configures an in depth and all encompassing historical research effort. Hence, this chapter's aim is to better expose and analyse the inherent nature and central importance of colonialism/imperialism within the overarching theme of this work.

5.1   Those that sit in darkness

Capt. F. J. Bellew, of the 62nd Bengal Infantry narrates an encounter he had with Col. James Skinner of the Yellow Jackets, an Indian irregular cavalry regiment during the Mahratta war in 1803. And Skinner, as half-indian and as such the supposedly most impartial voice within a room of Englishmen, when asked by an English officer about how the British soldier compares to the natives, he assured his fellow office that:

> the skill of the native swordsmen has been much overrated, and that they are not equal to Europeans properly instructed in their own way, (...) he lays himself in a great measure at the mercy of a practised adversary well instructed in our European sword exercise. (Kinsley, 2017: 58)

The "dashing fellows" of the British army with the support of Skinner's Yellow Jackets, made a "gentlemen's work" by easily storming the inferior enemies, cutting down rebels and insurgents that oppose the rule of the British Empire, with their "superior" European swords and knowledge. Kinsley's (2017) book, compile multiple reiterations of this European superiority that due to their gentlemen's qualities and their more advanced knowledges and civilisation easily colonise "brutes", "animals", "beasts", and "barbarians". But it also presents contrary narrations, mostly done by soldiers and non-commissioned officers of the bravery, dexterity, nobleness, intelligence, competence, and virtues of the supposed inferior enemies of the Empire. However, the overarching narrative, as one reads the compiled extracts, is that of a superior Englishmen, and of those that abide English rule and internalise their culture. Be it Col. James Skinner's Yellow Jackets or the Highlanders division from Scotland, if one internalised the dashing way of a true Englishmen, one was integrated into the British Empire. Although, never a true Englishmen, for they only behave as one. Their skin, their faces, and accents were the markers of, however integrated, lesser subjects.

The sword, in this account, deemed better than asian counterparts, was one of the epitomes of war technology at the time (1803), and essential just as the artillery to the British Empire expansion. The British Sabre was for a fact, neither superior nor of better quality than other swords it encountered at the time, like the *Tulwar*. The same goes for the swordmanship, numerous accounts are presented where *Tulwar* wielding warriors easily hold themselves against multiple assailants (Kinsley, 2017). What was superior was the industrial capacity, to mass produce, transport, and maintain military equipment and personnel, *i.e.*, the European mode of production focused on constant expansion and industrialisation created the necessity of a well oiled war industry. At the same time, this production centred logic and its capacity equates as indicators of higher levels of civilisation, be it of military technologies, knowledge, economical organisation, State structure, and so forth. Thence, other structures that do not abide by this logic of

perpetual progress, development, and maximum potential of accumulation are uncivilised. There are, of course, other factors involved most importantly religious, racial bigotry, and national chauvinism. But the driving force is that of the expansion of Capital through the State military apparatus (Engels, 2021).

But why does the coloniser narrative imposes a superiority of the European over barbaric people? To enforce that the European, in this case the British, way of living (Dashing Gentlemen), society, culture, and technology were indisputably superior, and therefore, had the obligation of a *mission civilisatrice* or endured Rudyard Kippling's "white man's burden" to bring progress through colonialism for the "new-caught, sullen peoples, half devil and half child" (Kipling, 2015) of the world. This bringing of light to those that sit in darkness (Twain, 2015), was and continues to be a good trade with high returns to those of central economies. The blessing of progress and civilisation, *i.e.*, the commodity/property centred mode of production, is shown "in the right kind of a light, and at a proper distance, with the goods a little out of focus" (Twain, 2015: 8) so they compose a desirable exhibit to the person who sits in darkness, not to enlighten, but to keep them in darkness, as they commodify a "shadow from an enemy that hadn't it to sell" (Twain, 2015: 9) just to profit upon their land and liberty.

Returning to the British military example, along the Imperial colonies divisions and regiments of natives were implemented but rarely proved effective enough. Even when instructed, trained, dressed, and armed according to European standards, with "educated" officers that memorised rules of engagement, regulations etc, these troops would not be able to perform European tactics and strategies, and therefore be ineffective to overcome irregular and barbaric enemy armies. Only when commissioned and non-commissioned officers were fully instructed within a "modern and civilised" European system, and liberated from their previous knowledges in military, culture, and so forth would they be able to insuflate change within their regiments. However, there are numerous accounts of irregular barbaric troops out matching European born and trained regiments with superior numbers. These accounts are often suppressed, or the blame being held by the semi-civilised colonial army or to the brutality of barbaric people of the east (Kinsley, 2017). For example, according to the British Empire, China, the deteriorated, semi-decomposed, and "semi-civilisation of the world's oldest state" (Engels, 2021: 85) used barbaric tactics due to their lesser nature. But fail to mention how the same Empire reduced to ashes entire cities with incendiary bombs, introduced the opium, and killed millions to violently open new markets (Engels, 2021; Kinsley, 2017).

But why forcefully and brutally open new markets? The capitalist mode of production is a transitory economic phase, full of internal contradictions that deepen, expand, and become more apparent in proportion to the development of this mode of production. One of this contradictions is the destruction of markets at the same time that they are

created, and another one is the development differential between well developed and industrialised nations with an export market and those less internally developed. Those that reached the full capacity of their internal market and begin to rely on export to continue capital accumulation find a solution to their capital production, circulation, and accumulation issue, this solution is the violent liberation and creation of new markets. These new markets, of commodities (including labour-force) expand the mechanism and apparatus of domination and control. Capital becomes intertwined with the State, there is then a congealment of power and structures that results in another phase of capital, that of the international monopolies, *i.e.*, Imperialism (Engels, 2021; Furno, 2022; Lenin, 2021). This new phase, however, maintains the maxim that "the capitalist mode of production prepares its own ruin"(Engels, 2021: 514).

Thus, to recap, this expansion and repartition of the world between European nations in order to expand markets that lasted centuries with different phases and characteristics, reaches the XIX century and with the beginning of the XX century it enables a new form of imperial power. Not of nations, but that of capital. This different imperial powers compete with each other, and a stronger and more unified State represents protection and possibility of market expansion, therefore the national chauvinistic movements that multiplied in Europe had a materialistic element: the economic necessity. Politics were used to enforce market and stock exchange logic, while politics itself was guided "entirely on the principles of the stock exchange and speculated on the 'principle of nationalities'" (Engels, 2021: 350). The *mission civilisatrice*, the notion of superiority of the white-european man, the bigotry, and national chauvinism are still foundational in this new structure - and would eventually develop into extreme forms within Europe itself, *i.e.*, the superiority of a certain type of white-european over others. In the colonies, the structures produces class divisions and inequalities deeply rooted on colonial heritage. Where, what one must crave for is constructed in the image of an white-european man, determining the dominant class and the very conception of the self. This results in extremes such as eugenic theories and policies, but also in the current daily reality of racism, misogyny, and LGBTQIAP+ phobia that permeate politics, culture, and society.

5.2 Epistemicided subjectivity

Não mais ser refém desse sequestro que vem
De 1500 pra frente, quem hoje fala "axé"
Nos obrigou a falar amém
(...)
Amo vida, mas por que tão injusta?
A solução pra autodefesa é vestir a carapuça

Não é que não querem ver a gente com dinheiro
(...)
Ver meu povo com dinheiro é mole, pô
O que não querem é ver a gente de cabeça erguida
Nós - Djonga

Amidst the colonial practises arises a powerful weapon, a demeaning instrument of the coloniser, of the white-european man, and of those who try to fit into the hegemonic stereotype of the acceptable subject. Selective epistemicide is, as Fanon (2020) demonstrated so well, the ability to arbitrate on the use and exchange value of an other's culture, society, subjectivity, and consequently labour power, considering oneself the undisputed appropriator of the world and the holder of the staff that commands the civilising floods of progress. This violence, which condemns and corrodes the colonised, forces them to forget their past and their history, because it is rarely presented, or portrayed as minor, savage, uncultured, mystical, and alien to civilisation. This erasing of the past, compromises the perception of the future, the semi-absent of *locus* universal history, sets the movements of progress to desirable pathways that continue to materialise the oppression of those that lost their cultural heritage to the same ones that write this history. That is why it is semi-absent of *locus*, for, however abstract and presented and spoken as universal or natural, it has an origin and it is Eurocentric. However, in the moments when the current victors of the historical process need to reconnect with nature or their humanity lost to the rhythm and values of the "civilised society", they choose which aspects of the defeated and subjugated, of the creatures, in their eyes, closest to the animalistic past of humanity - and thus, to nature - they can use and exchange in order to consume and sell a phantasmagoria of connection with the secret that escapes them, the secret that was lost in sacrifice of the march of progress (Fanon, 2020, 2022).

In order to justify this cultural prejudice, it is argued that the colonisers exhausted their mystical knowledge and placed it in the past, forgotten, as a sacrifice or deliberately because it was cheap and unreasonable non-knowledge. So the colonised and their ancestral technologies and knowledge are only at a very distant stage of intellectual and moral development. That is why they need to be helped to advance in leaps and bounds in the process of civilisation. But how many cities, societies, cultures, and nations have not been broken, violated, destroyed, and forgotten, only to be remembered by insults and belittling.

Just as the knowledge, philosophies, and ancestral technologies of the colonised should be forgotten and discredited, the reclamation of ideas and experiences is extirpated

and ravaged. The rescue of the past, the reconstitution of a Black identity, of the culture of Native peoples, and all colonised ones, is allowed in scattered, generic, and homeopathic doses. Simultaneously, this maintains the sensitivity and the secrets that elude white colonisers but condemns those who seek to reclaim their heritage to a perpetual state of infantilisation, primitiveness, and brutish barbarism. Thus, the individuality and specific historical processes among the multicultural defeated peoples are violently destroyed and pillaged.

The result is non-existence. Guilt and the veil of sickness and misery are always imposed on the non-white, the non-human, the formerly-caught, sullen peoples, who insist in being half-devil and half-child (Kipling, 2015). In varying degrees of imposition and recognition, the one-dimensionality of the hegemonic ideology of the ideal subject, the only one to be understood and perceived as human, prevails over any other existence, invalidating and subjugating any other to an inferiority due to the civilising process. However, "consciousness engaged in experience ignores, must ignore the essences and determinations of the being." (Fanon, 2020: 121), *i.e.*, the consciousness of non-white individuals must cling to and adhere to itself. Furthermore, after these consciousnesses have been shattered, exploited, silenced, and violated, they must rebuild and reconstitute themselves by their own experience and the experience of those around them. This does not imply a solitary struggle but a collective one, and this struggle is a historical duty, it is the duty of all who brush history against the grain.

The "consciousness needs to lose itself in the night of the absolute, the only condition to achieve self-awareness" (Fanon, 2020: 121), and however this night appears to shroud devilish and infantile Cambios of the past, it is only by sitting, experiencing, and embracing this apparent darkness that one can find the self-awareness and consequently awareness of those of the past and the present. However, this does not signifies that the consciousness of the oppressed is only constituted by the lack of something, of a destroyed past. "It *is*. It adheres to itself." (Fanon, 2020: 122) This consciousness must not be composed of possibilities and potentialities of what it could be when fully immersed in the night and one with its ancestry, it *is*. In other words, however one fights to prevent the continuous epistemicide of one's culture, sociability, heritage, and knowledges and to reclaim and rebuild one's past, these struggles must not represent the fulcrum for consciousness, for the self-awareness, and for being. The experience, the praxis, and the living are the night where one must lose itself to exist, and the absolute has its foundations on existence. We exist, therefore we think, therefore we are, therefore I am (Lorde, 2021).

Another effect of the selective epistemicide is what Fanon (2020) calls, collective catharsis, *i.e.*, a determined form of catharsis to serve as an escape valve for all the repressed energies, often in the form of aggressiveness. This relief of an collective aggressiveness is represented as a form of evil, and often assumes the appearance of oppressed people, of

Black people, Native, Asian, Slavic, Jewish, Arab, Latin, women, LGBTQIAP+ etc, and the conquering of this evil, the civilising of the savage and wild people is often portrayed by a white-european man, that becomes victorious by bringing the righteous hand of progress and universal history. It is necessary to emphasise, that black people, were and are the ones who most suffer from this process, for, it was upon the black body that capitalism most aggressively enforced its logic of expropriation and ruin. Henceforth, what is related to the oppressed, even for them, symbolises a thing, idea or condition to be vanquished and avoided. The subjectivity that is constructed mirrors that of the oppressor, of the coloniser. When the exception happens, and the oppressed are portrayed as noble defenders of their land and culture, it passes though a white-man who internalised their culture - the "good" parts - and with his civilised knowledge understands it better, hence, validating it. Or, by the oppressed who let the "good" parts of civilisation in and reaches true self-awareness. There are, of course, exceptions but they only serve to prove the overwhelming majority of examples of the contrary.

Hence, this collective catharsis acquired from colonised nations operates within the constitution of their individual subjectivity and society (Fanon, 2020). Thus, obviously to a much lesser degree, the peripheral bourgeoisie that exploits its (vilified) nationals while being used by the central bourgeoisie. They identify with the culture of the central economies and abhors any aspect of the mixed culture of its own land, unless to reconnect with the lost secrets of old. There is a push to cleanse or sanitise the lesser cultural forms and epistemologies in the name of "beauty" and "true art", the kind that is produced following the patterns of the coloniser. This has a cascading effect that permeates the entire colonised society. Take, for example, the petite bourgeoisie or the wage labourers' elite who culturally identify with the national bourgeoisie, even though the latter despises the formers. Even though, they are much closer economically and culturally to the oppressed and the condemned than to the owners of the means of production. This salary and labour dependent elite tries to emulate what they perceive as the culture of their bourgeoisie and the central bourgeoisie. In doing so they create, just as it is created for them, and generate a phantasmagorical culture that becomes real in their schizophrenic and performative, alien and alienated experience. This is selective epistemicide, the subjugation of one's identity by demonising all heritages that are not part of an hegemonic understanding of what it good and truthful, and selecting which aspects of this repressed elements are useful and exchangeable within a supposedly civilised (capitalist) society. Hence, this phenomenon is closely connected to the capitalist mode of production and, therefore, to imperialism, as it takes part in the expansion of the commodification process. In this case specifically, epistemologies, subjectivities, and the selective epistemicide itself become fetishised, *i.e.*, constitutive elements of colonised and oppressed peoples become alienated and reified, the ways of living, cultures, religions, sociability, and the individual are inserted in the capitalist structure and mode of production as commodities.

5.3   Social decomposition

Furthering the discussion of the previous sections, this work delves back into capitalist realism. Specifically the effects of the current stage of capitalism on the subjectivity and social structures. Thence, to recapitulate, capitalist realism is a belief and attitude that regards capitalism as the only possible system of political, economic, and social organisation. The belief means that the ideas and subjectivities are constructed to better suite the capitalist logic of production. The attitudes encompasses, all daily practices that permeates the social fabric. Hence, capitalist realism is the reshaping of both the infrastructure and the superstructure of society (Fisher, 2018, 2020).

A crucial aspect of this restructuring passes through a social decomposition. That is based according to Fisher (2020), on a "Thatcherian Deleuzianism", which is the promotion of the notion that the human action or agency has reached its limits, therefore, its end. That is, the dismantling or interference of capitalism's structures are beyond any human and social intervention. The path is set, and it encompasses the continuous acceleration of technocratic progress and capital accumulation, and, the steering towards a less predatory and brutal dynamics is the only possibility. There is no alternative, and when one glances upon other possibilities, monstrous forces are evoked to steer back those who wander into the night.

The sense of belonging to a society, a collective, or a community is systematically decomposed, for, only through organisation can an alternative be realistically and efficiently presented. The success and the suffering become privatised as a means of hindering the organisational capacity of the working class (integrated and condemned), of anti-hegemonic political and social organisations, and overall class solidarity. Hence, the aggravation of neoliberal practises, entrepreneurialism, and corporate ontologies are facilitated resulting in post-fordism, post-politics, post-ideology, and post-history (Fisher, 2018, 2020). The opening of new markets is not questioned, in fact, is presented as the viable solution, *i.e.*, products are developed to apparently resolve problems (that often never existed), but in fact serve the purpose of capital realisation.

Competition is the rule, and individuals must compete within their life span with others. Hence, the social praxis is compromised, for, it is based on a market logic averse to cooperation and communal organisation.The sociable human animal is transformed into the competitive human animal. This shift causes psychological suffering, *i.e.*, the mode of production causes psychological suffering. Also, this suffering, as well as its causes and solutions, are individualised, in this way, the capitalist system hides itself as the true culprit while creating new markets to alleviate this suffering with products (medications and productivity apps) or services (coaches, masterclasses, and productivity methods on how to move forward and undertake) (Fisher, 2018, 2020). Hence, anxiety and depression are the

predominant psychological side effects of contemporary capitalism. If previously, during the Fordist era, the predominant effect was boredom, currently, with the acceleration of all aspects of life, there is a shift from boredom and monotony to the affects of flexibility, fluidity, instantness, and a need for an unreachable thing (Dunker, 2020; Dunker; Maia; Manoel, 2022; Fisher, 2020; Maia, 2022).

Finally, what is the central consequence that arises from the social decomposition, the hyper-individualisation, and the supposed impossibility of alternatives other than those offered by the market logic? It compromises the dialectical requirement of historically analysing materiality, in order to develop, propose, and put into practice radical movements that aim for the "transformation of men and structures" (Fanon, 2020: 211). When inserting into the analysis, the notion of coloniality, one can observe an overlapping of systems and instruments of oppression. For, at the same time as the colonised have their epistemologies, consciousness, self-awareness, identity, culture, and sociability compromised and reconstructed - and bear all the consequences of this violence - they (we) must struggle with the social decomposition of a system that evolves upon the suffering and toil of the oppressed.

5.4   Imperialism, a historical and material expression

The "economic" imperialism, characterises as the stage, within the capitalist mode of production, where international monopolies appear and the financialisation of politics and ideology establishes a set of contradictions that occur in a global scale. The expansion of capitalist dynamics deepens the contradiction between the owners of the means of production. While monopolies owners struggle to maintain their expansion and profit, those who do not have monopolies strive to achieve one, both utilise whatever means necessary to reach their goal (Lenin, 2021; Luxemburgo, 2022; Marx, 1990). This is not a matter of morality, of good and evil, but of a material and historical process that is deeply rooted within the structures of society. Hence, Imperialism is not a political choice made by an abstract subject, it is an expression of the contradictions of the capitalist mode of production. It is worth to stress out that, the concept of "mode of production" developed within Marx's Capital (Marx, 1990, 1992, 1993) and others works, does not limit itself to the economic activity, it encompasses the entirety of social life production and reproduction, *i.e.*, albeit considering an economic analysis, the investigations of the capitalist mode of production must be attentive towards the social relations that sustain capitalism and the construct of a mercantile, corporate, entrepreneurial, competitive, and individualistic human nature (Fontes, 2008).

But what is capital? It is wrongly or falsely equated to money, and by this

comparison a capitalist would be defined by having large sums of money, which can be in fact the case and most commonly is. However, this equation veils the complexity of the means of capital reproduction. Capital is an especial kind of value (or money) that has the potential to transform into a thing (commodity), and then revert back to a capital with a profit margin, hence the universal capital formula of D-M-D', where, D'= D+ΔD, *i.e.*, the initial sum of money (capital) invested plus an increment. This increment, or surplus over the initial investment, is surplus value. This surplus originates from the only unavoidable commodity within the capitalist mode of production, labour force. This commodity is essential for, through the means of production, the reproduction of capital. Capitalist and owners of the means of production, pay a wage to use the worker's labour force in order to produce commodities, and the realisation of profit - therefore, of the capital cycle - happens when commodities interact with the market. However, the surplus value generation does not occur at the same time of capital realisation, it happens within capital's transformation process to create a commodity, by exploiting the commodity of labour force, *i.e.*, when workers are paid for their labour force, they are paid for the necessary amount for social reproduction of the labour force, this does not encompasses the resulting increment(ΔD) of the production process, hence, there is a surplus labour which is not paid for and, instead, is appropriated by the capitalist and owners of the means of production (Marx, 1990).

This basic understanding of the capitalist mode of production, already shows that the production structures and activity is not purely economic, it involves the entirety of social existence. For, only by the expropriation of labour can capital reproduce itself. Hence, as "this expropriation is accomplished by the action of the immanent laws of capitalistic production itself, by the centralisation of capital" (Marx, 1990: 929), their aggravation its not a matter of choice, but of the inherent and historically developed structure of this mode of production. As for current forms of this aggravations, uberisation and the overall process of flexibilisation and precarisation of labour serve as examples. Thus, the historical process of the capitalist development has in its basis a violent processes of creating the availability of labour force, of reducing the acceptable conditions for subsistence, increasing the surplus labour, and a structural control of society in order to optimise, expand, and aggravate the capitalist mode of production (Marx, 1990).

This historical process, however, hidden by the processes of fetishisation that is in essence a "definite social relation between men themselves which assumes here, for them, the phantasmagorical form of a relation between things" (Marx, 1990: 165), *i.e.*, commodities become the medium of social relations. Hence, the mode of production of these commodities controls the medium of human interaction, therefore, controls society and individuals. Furthermore, as a historical and materialistic expression a veil of ideology if formed, it is the ideology of the ruling classes that corrupts all layers of the working class, thus keeping their place as rulers of society (Luxemburgo, 2022; Mészáros, 2005).

This can be read through Gramsci's hegemony (Gramsci, 1999), or though the writings of Mark Fisher (Fisher, 2020) on the culture of entrepreneurship and the domination of subjectivity by the ideological hegemony of neoliberalism. This domination through cohesion and coercion works within Imperialist States and in their colonies. For example, the English working class peacefully took "advantage of the English monopoly on the world market and the colonies" (Engels, 2021: 490), instead of solidarising with oppressed nations and peoples by their Empire. While in the colonies, be it occupied by settlers or controlled from afar, occurs the manufacturing of an ideal subject based on the principles, morals, and culture of the coloniser. This inaccessible construct operates in the metropolis as well - ensuring their indifference towards the colonies and each-other, by distancing or approximating oneself and the other from it - but in the colonies it serves as a brutal and daily instrument of oppression. Also, this construct has a profound contradiction, for, when evoked by the coloniser to dominate the colonised it both resembles the speaking subject and a non situated Ego, devoided of a locus. Thus, for the colonised this delocalised almost mythical Ego holder of truth, natural laws, civilised knowledge, and writer of the universal history is personified in the image of their coloniser (Fanon, 2020; Grosfoguel, 2009; Luxemburgo, 2022). For example, the previously mentioned, Col. James Skinner, half-indian and half-british, when speaking to his fellow officers, says "our European Sword Exercises", he renounces his native heritage in the name of a more civilised culture personified by the officers in the room where he spoke (Kinsley, 2017).

Arises then, political, economic, and conceptual disputes over the phenomenon, *i.e.*, the proper classification and theorisation of the constituent elements and totality of imperialism is essential, both on the hegemonic side and on the counter hegemonic. Therefore, the understanding in this work about the phenomenon of Imperialism encompasses (Lenin, 2021; Luxemburgo, 2022):

1. A stage of the capitalist mode of production, that is a results from the historical and material process of capital structural organisation, specially the unequal capitalist global market formations, tendency for economic stagnation due to monopolies, financialisation, and the intensification of capital's reaction against democratic freedom and social organisation;

2. Imperialism is centred on monopolies which the driving force is financial capital, *i.e.*, the interests of the productive sectors, banks, financial sector, and the State are closely linked;

3. Capital export gains relevance, therefore, economic internationalisation and competition between monopolies and financial Capital, foster competition between States and Nations.

4. Capital, through the power of the State, seeking to expand its modes of production and structures of appropriation uses forces of coercion and cohesion to dismantle, subsume, or adequate alternative modes of production and social reproduction, enabling primitive accumulation;

5. International conflicts are inherent to the capitalist system - albeit co-operations do occur, violent struggles are unavoidable. This occurs not only between imperialistic economies, but the States to where the capital is exported following the logic of the system, would eventually reach a state of development that could present a treat to the Capital exporter, this could result in the erosion of power from the centre and its distribution among newer and more dynamic centres;

6. To avoid newer power nuclei and the dynamisation of global economy, potentially endangering central economies monopolies, political-economic, ideological, and military structures are implemented to assure the prevalence of central economies - be it the transference of capital of developing nations, the imposition of low complexity economies, the conceptual debate over economic and social policies, or outright destabilisation of foreign sovereignty;

7. The limits of the capitalist production is capital itself, *i.e.*, capital seeks self-valorisation as it is the starting and finishing point of production, therefore, production exists for and according to Capital. Hence, "the means - the unrestricted development of the forces of social production - comes into persistent conflict with the restricted end, the valorisation of the existing capital" (Marx, 1993: 358-359);

8. Decrease in profit and surplus value realisation are not the primary causes for the international market expansion, however, they can be a driving force in some situations (Luxemburgo, 2022). For example, the 2008 economic crises that originated in the United Estates of America financial and real state market, rendered large sums of capital without circulation and, therefore, compromised their valorisation. Hence, new markets were created to attend capital self-valorisation needs, receiving large investments to foment production and circulate capital. One of this new markets, was the smart city, instead of developing the physical space, stagnated financial capital tied to real state developed a virtual space with higher rates of investment returns within a shorter amount of time (Figueirôa-Ferreira et al., 2023; Grossi; Pianezzi, 2017; Hollands, 2015; Wiig, 2016).

9. One of the effects of national chauvinism within the imperialistic State, and supported by the necessity of surplus labour, is the naturalisation of the colonial oppression and dehumanisation of the colonial labourer. Resulting in the internationalisation of the industrial reserve army, that is, the pressure of competition between workers of

different nationalities. Also, it results on the super-exploration of colonial workers, due to less protective labour laws or violent domination - as they and their nation must serve to realise the interests of the colonising capital.

Thence, the driving force of imperialism is financial capital, and contrary to what hegemony claims, it does not seek the free enterprise and liberty of individuals, but an ever growing control over the means of production and labour power. The superstructure of imperialism arises on the basis of an ideology that socialises and expands production while the appropriation of value continues to be restricted to few. And to maintain this superstructure, imperialism - as an organisational form of capitalism - develops and applies new forms of domination and violence in order to maintain its particular operations of capital self-valorisation. For example, the world was distributed and disputed by imperial nations, and because of the close links between state, banks, financial capital, and production sectors, particular situations arise. Compared to England, France, and Belgium in particular, Germany had fewer colonies, then its capital self-valorisation relied on the financialisation and banking. Thus, indirectly financing colonial enterprises and developing countries efforts in structural development while retaining a share of the revenue and investment returns (Furno, 2022; Mariutti, 2015; Lenin, 2021; Luxemburgo, 2022; Sabadini; Campos, 2021; Soares, 2021);

In summa, the capitalist mode of production is within itself a historical process of contradictions. As it constantly seeks new forms of appropriation, primitive or not, and saturates them as newer ones are being developed, violently liberated, or cohesively created. In colonial countries, the appropriation of the most essential means of production is crucial, creating dependency, control, and capital transference. Land, culture, social, and political structures are the initial barriers for the capitalist mode of production expansion, especially in regard to native populations, therefore, the systematic annihilation of non-capitalist structures is the initial method of accumulation, but it is an endless process that still occurs and expands. Each expansion, characterises novel and deeper forms of capital valorisation through colonial exploitation. The means of production, the labour force, the subjectivity, and all aspects of life are transformed and integrated into a capitalist logic. If capitalism brutally oppresses the working classes of central economies, it eviscerates those of dependent colonial economies (Lenin, 2021; Luxemburgo, 2022).

5.5 Late imperialism: productive, financialised, and despotic globalisation

The nature of the capitalist mode of production is to deepen its logic and to potentialise foundational elements of its structures. Thus, a matured form of imperialism

can be identified, were imperialistic domination over global economy reaches a new zenith. Late imperialism or contemporary imperialism, is primarily characterised as a productivist and financialised globalisation as a continuum of "classical" imperialism (Fernandes, 2021; Foster, 2019; Magdoff, 1969). Monopolies, corporation, and economic conglomerates have an expansion in power, and the production, circulation, accumulation, and centralisation of capital reach unprecedented levels. This transpires due to the domination of knowledges, sciences, and technologies that enable control over the means of production and forces of social reproduction, which, not exclusively, include: financial flow of capital; natural resources extraction and usage; control of information and communication technologies, social medias, propaganda, and entertainment; military technologies, that serve as an extension of political-economic power; surveillance technologies and structures that serve both as coercion and cohesion forces to expand control over the most precious commodity of capitalism, labour force (Amin, 2005; Fernandes, 2021; Foster, 2019; Suwandi, 2019).

There is also a prevalence of banking and financial institution, resulting in the financialisation of capital and its mode of production. This is a crucial element to understand the use of imperialistic or colonial nomenclature, for, the economic and development disparities and asymmetries within the global market formation are aggravated, widening the rift between global periphery and centre. Because, the transference of capital becomes not only seamless, but naturalised as a constitutive and unavoidable element being ingrained in the infrastructure and superstructure. For example, industrial production relocation intensifies the transference of value process, enabling higher profits and surplus value appropriation, enforcing hemispherical economic disparities. There are multiple and complex veins of capital transference, that form a rhizome of disperse value chains of global unequal exchanges, between imperialist and peripheral countries (Amin, 2014; Sabadini; Campos, 2021; Smith, 2016; Suwandi, 2019).

This scenario enables the rise of a particular caste of the bourgeoisie, that assumes the leading position within the many segments of international capitalist class, the financial oligarchy, *i.e.*, the holders of interest-bearing and fictitious capital (Fernandes, 2021; Fontes, 2008; Sabadini; Campos, 2021). Hence, if capital seeks self-valorisation and is the end in itself of the production system, that is, the limits of capitalist production is capital itself, when occurs a prevalence of financial capital and the rise in power of an financial oligarchy, the means and modes of production are dictated by speculative structures and most importantly, hegemony becomes tied to speculation (Smith, 2016). The self, the way of living, the forces of social reproduction, constitutive elements of subjectivity, culture, economy, politics, and the needs, desires, and dreams become speculative. The structures of recognition are co-opted and transformed to serve this speculative hegemony of possibilities, potentialities, and constant struggles with and for the nothingness that fill a non-belongingness in time and space - which are compressed to extremes, making it

harder to gain awareness of contradiction and alternatives.

Thus late imperialism, represents the aberrant centralisation and expansion of capital and capitalists' power, enabling incisive, acute, and robust movements and reactions against historically achieved rights, and democratic structures, *i.e.*, a stronger form of bourgeoisie autocracy instrumentalises the State apparatus to their interests and as a mechanism of installing and perpetuating class violence against a decomposed society. One example of this State violence, is that labour markets are created, managed, and limited by State action, a global labour arbitrage enforced by instrumentalised States. This despotic organisation of global labour, happens due to the internationalisation of productive chains that enforce a differential between labour force exploitation, *i.e.*, labour force is exploited in various and distinctive ways, thus, this unequal exploitation increases surplus value extraction rates. The global labour arbitrage enables and aggravates the internationalisation of the industrial reserve army, as a means of wage control, and the transformation of the Global South into labour and resources reserve for a more industrialised North. This arbitrage, has close ties with racism, epistemicide, politic-military violence, disregard for national sovereignty, and other forms of oppression (Foster, 2019; Sabadini; Campos, 2021; Smith, 2016; Suwandi, 2019).

Apart from the EUA-euro-asiatic axis, other regions particularities within late imperialism should be investigated, for example. Latin America, suffered from a restructuring within the global social division of labour. Deindustrialisation escalates and a low complexity economy is enforced by imperialistic tendencies resulting in: the precarisation and flexibilisation of the labour force, resulting in higher rates of surplus value appropriation; increase of capital transference, hence, the production is controlled by external forces; overaccumulated capital transforms Latin America in a space for expanding the apparatus of revenue and surplus value transference, thus realisation and accumulation, without long term commitment and risks; and, occurs the intensification of a subjugated and dependent position within global structures. This deindustrialisation, of the South, is sometimes equated to that of the North, however, the North holds the technological control of the global production structure, and it hosts most of the baking and financial institutions, corporations, conglomerates etc. Therefore, it can not only afford deindustrialisation, but it may occur as a consequence of the late imperialistic process, *e.g.*, post-growth, post-industrial, post-labour, and other forms of post-deindustrialisation phenomena (Fernandes, 2021; Schirmer-Muratt, 2021).

Constructing on Mandel (1999) and Jameson (1991, 1996), this work proposes that: if realism is the superstructure of the first phase capitalism, characterised by the free-competition; modernism is the ideology of the imperialistic phase that concentrates on the exploration of colonies by central powers; late capitalism, as a deepening of the imperialistic logic, has post-modernity as its ideological structure; Late imperialism,

has as its superstructure capitalist realism. For, late imperialism, has transformed the technological innovation focus of late capitalism into inherent structural components of its capital flows, means of production and social control; peripheral economies become more dependent on central ones, due to the aggravation of international division of labour, resurgence of international capital flows, and productivist and financialised globalisation; stagnation cycles are not only predicted but are ingrained within the production structures, risk analysis, speculation, new market creation etc; the contradictions become not only more apparent, but become commodities themselves; the inevitable catastrophe into which marches humanity steered by the capitalist mode of production, is palpable and needs no significant exercise of imagination, it is now a matter of how - and who - to last longer; Imperialism becomes the horizon, it begins to colonise itself, forming greater monopolies, and imperial powers stand offs with proxy and hybrid wars; brutal resurgence of colonial expropriation, causing constant migrations; information and communication technologies, digitalisation, and virtualisation become unavoidable elements in the mode of production, consequently, by their nature accelerating the rate of capital realisation and expanding the means of production and primitive accumulation (of data).

Hence, the truthful representation of the subject-matter of realism, that set the tone for the first phase of capitalism, is now reincarnated as capitalist realism where capitalism is the only viable representation of the subject-matter. Hence, becomes easier to imagine the end of the world, than the end of capitalism. This is the superstructure of late imperialism, it subsumes all the previous superstructures by negating and accepting, by excluding and commodifying, and making use of the indefinite postponement to speculate with the survival of everything and everyone - read it, the condemned and the dispossessed - when catastrophe hits, after all, competition is the rule. Also, the driving force of imperialism, financial capital, re-surges at the centre of capitalism's march of progress. After a late capitalist period of imperial power concentrating in a more inner speculative growth, a barrier similar to the one on the beginning of the XX century is formed by the material nature and expression of late capitalism. Capital must be forcefully expanded just like once was before, but to where? The subjective self. Hence, Late Imperialism is another cycle of imperialistic expansions but with unveiled, blatant, and apparent contradictions, inefficiencies, and catastrophic collapses that are not only laid bare, but are beyond unavoidable. It is not a matter of pessimism, but of fact.

It is important to point out that Fukuyama's end of history is not without cause, it is born out of "there is no alternative", as well as the notion that the class struggle has come to an end, that political philosophy is dead, or that there is no longer a dispute over ideologies, after all, is enforced that there is nothing beyond capitalism. Also, capitalist technocracy prevents ideologies that could confront it, and in the process deliver alternatives to the imminent catastrophes to which rapidly advances the chariots of capitalist progress. The

premises of: continuing to laboriously believe in the future utopia of the free market and capital; that the class struggle is over, and thus the category of "exploitation" is no longer applicable; and, that a unconstrained communication and its developments are enough to observe, understand, and address the problems of societies and more, become inherent, and as such, the tendency in which the ruling ideology produces "a categorical framework that attenuates the ongoing conflicts and eternalises the structural parameters of the established social world" (Mészáros, 2005: 15). Hegemonic ideologies, in some manner, acquire a timeless element, of (overestimated) negation of the past and representation of the future (not so different at its centre from a distant past it seeks to detach itself from) (Mészáros, 2005). Realism opposes the subjectivity and idyllic abstractions of romanticism dwelling within urban spaces and social reality, the modernity negates the old regimes, post-modernity promises to transcend the position of beyond ideology sustained by modernity, and capitalist realism turns capital's logic itself in the ideological superstructure. If "theory" and "method" were offered as alternatives for ideology or something beyond it, capitalist realism offers the contradictions themselves, thus, it does not exactly goes beyond ideology or method, theory, etc, it negates the negation, for veiling conflicts is not a feasible possibility. Hence, struggles become attenuated by disclosing and eternalising the contradictions of the social parameters, but not as a means of igniting change, but to foster conformity and powerlessness. Hence, late imperialism is not only the matured imperialist expression, but it represents a new phase of expansion and global economic shifts between imperialistic centres, that offers nothing but deceptive expectations.

Accordingly, this work defends the expansion of late imperialistic analysis. Political economic analysis are essential for expanding the understanding of the current form of capitalism, and the debate over the economic determinants of late imperialism is an ongoing process. However, as an effort to avoid a technocratic economicism, this works argues for the drawing of parallels with other perspectives and fields of study to perform analysis regarding other aspects of its constitutive structures. For example, the previously mentioned characteristics of late capitalism can be transposed to late imperialism, however, key distinctions must be made clear and taken into account by any analysis, proposed course of action, study, or praxis within late imperialism, also, they must be of a radical nature, *i.e.*, it must not remain as a secluded academic exercise, it must address the needs and desires presented by the social praxis. Precisely because, anti-imperialistic knowledge must be produced as a means to an end - the end of imperialism and, therefore, of the capitalist mode of production - and uphold a commitment to liberate those that are oppressed by analysing and unveiling reality so alternatives can be visualised, individually and, most importantly, collectively. In order for this to happen, the processes that forms social decomposition, the epistemicide of subjectivity, and hegemonic structures must be addressed, for, one must never lose sight of the historical materiality of the social praxis that - objectively and subjectively - enables the reproduction of human existence. In

essence, it is a matter of avoiding the ruin that the capitalist mode of production inevitably devises through critical analysis and organised practical actions.

Chapter 6

From digital imperialism to an anti-imperialistic praxis

Nous verrons qu'une autre solution est possible.
Elleimplique une restructuration du monde.
(Fanon, 2020: 71)

Based on the last chapter, this work will now explore two key concepts to better understand the global political and economic dynamics of the smart city as a strategic development framework, not only for the city and its surroundings, but for regional and national development. Understanding the global dynamics is essential to critically observe the digitalisation push within urban environments, and the materialisation of hegemonic ideologies and epistemologies. Hence, first eco-technological imperialism will be described and explored, then, digital colonialism. It is the understanding of this work that these concepts complement each other, as it will be demonstrated.

6.1   Eco-technological imperialism

It is unprecedented the force which the globalisation process presents itself, with its capacity for dismantling, controlling, and expropriating the global periphery, the dependent sub-developed economies. Globalisation appears as humanity's ancient ideal of universal communion, but in practice it serves to eliminate or reduce the possibility of this communion, because it articulates a process of anticipated constructions of deliberate violence, that is, in fact, an aggravated and deepened form of imperialism (Santos, 2000, 2008b; Santos; Souza; Silveira, 2000) . For it perpetuates a logic of accumulation of wealth and power

in the hands of few, and the growth of exploitation, expropriation, and discrimination - however veiled - as essential and necessary elements of this system. Therefore, every mechanism of globalisation that weaves itself into social reality, perpetuating the hegemony and one-dimensionality of the current rulers and their mode of production and social structure, needs to be thoroughly analysed in order to prevent further enslavement of dependent economies. Otherwise, the stagnated dragging of dependent economies will continue as it has since colonial time and the initial phases of (economical) imperialism.

To better grasp this issue, this work offers the analysis form of eco-technological imperialism, which can be defined as an aggravation of the exploitation logic by central economies, through "new" markets and international policies, *i.e.*, renewed cycles of primitive accumulation - or David Harvey's (2011) accumulation by dispossession - forced by political-military coercion and cohesion. The form of Eco-technological imperialism arises from the necessity to better understand the relations between the Global South (periphery) and the Global North (centre), seeking to apply a historical materialistic analysis to economic, social, cultural, and political context. Thus, making an effort to understand the relations of dependency and control by central economies and imperialistic powers. Although this analysis takes place within the scope of mechanisms and instruments orchestrated under the banner of sustainability and digitalisation within the urban space, it can be expanded to other areas of research. Eco-technological imperialism is by no means a new stage of imperialism, it serves the purpose of investigating the particularities of the current aggravated form of imperialism, which is late imperialism, *i.e.*, it is a characteristic, a facet, a constitutive element of what can be understood as late imperialism.

This form of analysis is based on the studies of Ecological Imperialism, that dwell upon five general aspects: (i) pillage of the resources of some countries by others, causing ecosystems transformation; (ii) population and labour movements, interconnected with the extraction and transfer of resources; (iii) exertion of imperialistic control by the exploitation of ecological vulnerabilities; (iv) ecological waste management that contributes to the imperialistic relations between centre and periphery; and (v) the creation of a global metabolic rift that characterises capitalist relations to the environment, as well as, the limits to the capitalist development (Clark; Foster, 2009; Crosby, 2004; Foster; Clark, 2004; Frame, 2016; Qingzhi, 2017; Tomlinson, 1998; Saito, 2020). Eco-technological imperialism encompasses such aspects of investigations, while seeking to encourage and promote the socio-technological study of the digitalisation of society and its mechanisms of control, even at their dawn, because only some smart cities technologies are materially present in the dependent economies reality, but are still a global trend, with an algorithmic, imperative and modulating character (Deleuze, 2017; Sabariego; Amaral; Salles, 2020).

6.1.1 Periphery and centre

Saudade do amigo-irmão que morreu em vão
Até tentou sonhar mas tiraram seu chão
Já tentei de tudo, eles me querem morto
Mudei minha postura, eles me querem morto
Não é questão de tempo, eles me querem morto
Me querem morto, me querem morte
Essa é a morte do esquecimento
Morte colonial
Com pressa
Com dor
Com sofrimento
Morte sem moldura, sem retrato, sem família
Morte sem poder se transmutar na travessia
Morte sem poder atravessar
Morte pra matar
Morte prevista nas estatísticas

Pose de malandro/Me querem morto - Mateus Fazeno Rock, Big Léo

Although, Global South and Global North are similar terms to Centre and Periphery, the first ones can be deceiving, for they can hide the dependent relations and all of its problematics. Santos (2000, 2008b) pointed out this same problem about globalisation, which can be an imposed ideological form to construct a narrative that perpetuates dependency relations, and that the solution is to focus on the analysis. Hence, the terms can be used as synonyms, since the imperialistic relations are not ignored but of central importance to the analysis. With that said, Global South countries are defined by a more recent process of industrialisation, having in common a colonial history and generally presenting a low complexity economy, that is, production of low complexity commodities and raw materials for more industrialised and advanced economies. As for the Global North, it mostly encompasses Western Europe and North America.

As Domenico Losurdo (2007) states, liberalism hides its real face in the centre, and shows it with scorn in the peripheries. This includes neoliberal strategies and policies, which are based on relations of colonial heritage, exploiting natural wealth and applying a logic of primitive accumulation (Harvey, 2011; Foster; Clark, 2004). This logic seeks to generate surplus value and profit by any possible means, including: epistemicide, which is the killing of knowledge systems, *i.e.*, dispossession of knowledge; through an hegemonic

one-dimensionality, exerting cohesive and coercion forces; irreparable exploration of the periphery's natural wealth and ecological resources *i.e.*, metabolic rift (Clark; Foster, 2009; Foster; Clark, 2004; Frame, 2016; Gramsci, 1999; Hall; Tandon, 2017; Marcuse, 1973).

Again, the North-South divide preserves the colonial heritage, and this aspect is linked to the exploitation and enslavement of native populations specially black people, as Mbembe (2019) states the black body is the point of construction of modernity and its neo-colonial and imperialist expressions. And black people are the majority of the dispossessed and the condemned that live apart from class society, they are Agamben's (2017) homo-sacer, *i.e.*, those that are easily sacrificed by the logic of economic development. A similar argument, can be made regarding native populations of the America continent, that from the extreme North to the extreme South of the continent were slaughtered and massacred by colonisers and settlers. Thus, following Benjamin's (2007, 2009) unlimited distrust, progress for progress's sake or the end in itself of the capitalist mode of production must be questioned, the same goes for its mechanism and instruments of hegemonic objective and subjective control.

The imperialistic North perpetuates and constantly reshapes the global organisation of capital since its original form in the 16th century, through a process of political, economic, cultural, and military domination over States, Peoples, and Nations. In this context, arises a need to analyse the digitalisation of the urban environment and smart city initiatives from an anti-imperialistic perspective.

6.1.2   Metabolic rift, cohesive and coercive structures

Maldita polícia que se corrompeu
Por causa da política de escassez
E extermínio que o estado me deu
Das pistolas antes das escolas
Dizem que essa vida nós que escolheu
É pouca encomenda de quadro
Pra muito enquadro levado
Muita chacina do estado
Fei', preste atenção!
Desse lado política tem nos matado
Meu talento não é entregar quentinha
Nem portar ferro o dia inteiro na esquina
Mudar de vida é o plano dos cria
Tirar mais vida é o plano da polícia
Me querem morto ou estirado no chão

Vendendo droga ou matando alguém em vão
Desgosto pra mãe preta, cheia de frustração
E o ciclo se repete entre os preto que se vão
Polícia entra na favela e faz chacina
O estado assina
Ainda é chamado de doutor
Dá licença, por favor!
É um milhão de dor que nós não assinou
Direito que eles nos roubou
Somos apenas números nas suas pesquisas
Dores que jamais saberão
Fome que eles não matarão

Pose de malandro/Me querem morto - Mateus Fazeno Rock, Big Léo

The current economic system and its production structures have as one of its consequences the disturbance of metabolic interactions between human beings and nature, *i.e.*, it prevents the existence of a complete metabolic cycle where there is an extraction consistent with the return capacity and recovery of natural resources. Thus, there is a prolonged but perceptible process of planned and consented (imposed) destruction in order to maintain a logic of self-propulsion, where the surplus accumulated in one stage becomes the investment fund for the next. Nature, the human being, and the land are nothing more than resources or commodities. Therefore, the current production system undermines nature, the space, and its dwellers (Clark; Foster, 2009; Crosby, 2004; Foster; Clark, 2004; Marx, 1990, 1992, 1993; Saito, 2020).

The concept of metabolic rift arises within this scenario, where prevails the logic of transferring natural resources (in the most diverse forms), from the periphery to the centres of transformation and consumption, which have no obligation to return to the point of origin the (renewable and treated) waste generated, thus feeding it back into the system. Or, in some cases, non renewable resources are transferred without any regard to the ecological balance, focusing on profit margins and leaving the environmental, social, and economic impacts. The most classic example is given by Mariátegui (2007), when writing about the exploitation of guano and saltpeter in Peru. The author demonstrated how the extraction of natural fertilisers of high value culminated not only in a process of aggressive exploitation and socio-environmental destruction, but also in the Nitrate War (or Pacific War). In this example, it is easily perceivable how the processes of natural resource transferring allowed the concentration of ecological resources in some economies within the flow of international capital, while others have their potential development

hindered. While Britain benefited from "High Farming" fed by Peruvian nitrates, the cities of the Latin America country reaped the spoils of the predatory system (Foster; Clark, 2004; Hodson; Marvin, 2010; Mariátegui, 2007). This rift, is central to the imperialistic system, for some countries will be forced - through political, economic, military, or even international law - to maintain a certain position in the chains of production, to supply the industries and markets of central economies with: Natural resources; unprocessed materials; food; water (virtual or not); and, cheap labour, employed in Global North owned or dependent industries.

Here, it is easily perceivable the connection with some elements of Ruy Mauro Marini's dependancy theory. For, within dependent and peripheral countries reality, the metabolic rift is a structural component of the transfer of value to the economic centre. For that to happen, the national bourgeoisies, or the peripheral *Sieger*, in order to compensate for this transfer of value, operate an over-exploitation of the labour forces, *i.e.*, the surplus labour necessary to maintain this system tends to be higher on the periphery. Thus, the production process and the development strategies of dependent economies are subdued to those of the central economies's market and consumption, *i.e.*, the internal market and industrial production (if any is present) is subordinated to the volition of central economies. Therefore, this control configures a barrier or handicap to the sovereignty of dependent economies, and to enforce this logic, the capitalist system - currently in the form of late imperialism - utilises sub-imperialistic countries as enforcers and bastions, within a region, of the imperialistic logic. However, this countries continue to be dependent of the central economies.

This can occur in many non-exclusionary ways, but two are specially worthy of a description. In the first one, economic and political power plays a more apparent and central role in this sub-imperialistic placement. This happens by hegemonic cohesion enforced by the central power, and by the false notion that attaching and drawing near central powers dependent countries can reach a growth in tandem. However, the capitalist system itself impede this growth above a certain point, because it would hinder the monopolies and capital from the centre. The second has a military emphasis. The sub-imperialistic country serves as a proxy to extend the coercion reach of the centre (Marini, 2013, 2022). The current most prominent example is the State of Israel, that with the economical, political, and military support of the Global North, imposes an apartheid system over Palestinians. This serves, amongst other things, to compose an image of Arabs' and Muslims' as "human animals", of incarnations of evil and pestilence, thence, all violence against these "inferior" beings is not only justifiable but are the good and right thing to do. Terrorism is associated with Arab and Muslim symbols, culture, beliefs, and society, consequently, the subjugation, the cleansing, and the eradication of those peoples is not questioned, but expected. The invasion of other countries and the brutal violence used, has little to no consequence,

for it all becomes desensitised. Also, as a consequence, the economic underdevelopment and supposedly laggard civilisational progress, in this view, does not occur due to a historical imperialist oppression suffered from the central economies, but due to their barbaric and archaic culture, society, beliefs, symbols etc. This logic, was the same used on the native peoples, of multiple tribes, languages and ethnicity, they all must accept progress and relinquish their land and culture, because, for what good use so much land and resources are being utilised? Primitive accumulation must expand, the production logic must expand, and the property, *i.e.*, the domination over land and resources in order to optimise and liberate the flows of capital is a natural law. This liberation was one of the ideals behind slavery, the centuries long forced African diaspora occurred not only due to the dehumanisation of those with black skin, but as an economic system and regime. Then, slavery was the columns and foundations of capitalist/imperialist development, the Native Americans genocide was its earthwork, and the colonisation of Middle East and Asia the ceiling and walls of the Northern palaces and castles where the bourgeoisie reside.

Hence, few people could better demonstrate in such a concise and well spoken manner the underlying thoughts of the imperialistic *mission civilisatrice* of progress as Churchill at the Peel Comission in 1937. First he addresses the Palestinian people by comparing them to dogs, and later continues to justify the imperialistic intervention within their land, by comparing to historical precedents:

> I do not admit that the dog in the manger has the final right to the manger, even though he may have lain there for a very long time. I do not admit, for instance, that a great wrong has been done to the Red Indians of America, or the black people of Australia. I do not think the Red Indians had any right to say 'the American Continent belongs to us and we are not going to have any of these European settlers coming in here'. 'They had not the right, nor had they the power'. 'I do not admit that a wrong has been done to these people by the fact that a stronger race, higher-grade race, a more worldly wise race to put it that way, has come in and taken their place'.(Bowler, 2017: 45)

To put it in a succinct way, it is a matter of progress. The progress of the worldly wise ones, that because of this self-granted notion possess the right to colonise and put in practice any form of violent practises:

> I do not understand this squeamishness about the use of gas (...) I am strongly in favour of using poisoned gases against uncivilised tribes. The moral effect should be so good that the loss of life should be reduced to a minimum (...) Gases can be used which cause great inconvenience and would leave a lively terror (Ali, 2022: 518)

Colonisation, is viewed as the right of the civilised, and to expropriate, enslave, and massacre native populations is only a matter of having the power and possibility to do so. Hence, the metabolic rift is not an issue worthy of notice by the colonisers, the

global transferring of resources is merely an economic element, technicality, or rightful of those with power. This logic of global transference of resources is applicable to the regional and local level, where resources (human and natural) are exploited and consumed by an urban center free of the responsibility to coexist in harmony with the ecosystems that sustain it. This maxim is true for, not exhaustively, food production, pluvial and fluvial waters, air quality, waste management, and labour force. To understand the metabolic dynamics of the city is to rethink how it relates to the environment and nature, not only in its surroundings, but internally. However, the analysis of metabolic rift must also address the subjectivity, and the hegemonic structures of knowledge in vogue, otherwise, even high quality and innovative interventions may find themselves in a void without real consequences or serving a purpose contrary to the one intended, that of enlarging the rift (Abarca; Moraes, 2019; Foster; Clark, 2004; Gandy, 2015; Harvey, 2011; Hodson; Marvin, 2010; Ross, 2011; Zimmer, 2010). Hence, metabolic rift analyses can be used as a response to the depoliticised structuralism and postmodernism that, coupled with a predatory neoliberal economic structure, removes from the notion and understanding of the world any significance of human intervention (Guattari, 1996; Mariátegui, 2007). In other words, the hegemonic structure of knowledges and sciences is constantly reinforced by sociocultural and political-economic forces in order to form a cohesion (Gramsci, 1999) averse to the necessary self-awareness to envision an "authentic political, social and cultural revolution, reshaping the objectives of the production of both material and immaterial assets" (Guattari, 1996: 9).

The structuralism and postmodernism, that serve as a cultural logic or as constitutive elements of the superstructure of the current phase of the capitalist mode of production, are still present in both immaterial spaces of human subjectivity and in the materiality of physical and virtual spaces, so it is capitalist realism. Thus, the task is clear, alternatives to the present hegemonic structures must be presented and fought for, otherwise, with the current logic and pace of progress, catastrophe is inevitable. The fragility and un-sustainability of physical and virtual spaces production can only be analysed while considering the spaces' mode of production, otherwise, one may fall into the trap of not addressing the roots of the problem. The same goes, for the hegemonic processes that fall upon human subjectivity. As Milton Santos (2008b) states, space is the materialisation of social relations, past and present, as well as a subordinate and subordinative structure. Conforming to technocratic solutions disconnected from the needs presented by the social praxis is preparing the field for the current hegemonic structures to sow it in order to raise their monoculture of accumulation by dispossession (Gandy, 2015; Harvey, 2007; Hodson; Marvin, 2010; Ross, 2011; Sonn; Shin, 2020; Thatcher; O'Sullivan; Mahmoudi, 2016).

However, it is necessary to avert at all costs potential tautologies that may take the form of magical solutions, on the danger of just deepening current issues by feeding the

mode of production more ways to accumulate and circulate capital. The propositions of change have the difficult and necessary task of examining the possibilities and potentialities through the analysis of the past and present, of the social relations, and political-economic forces in a dialectic materialism, where the praxis and the brushed against the grain history are the main criterion. Hence, radical and counter hegemonic solutions are the only ones that can possibly defeat the capitalist logic. Drawing a parallel with Lefebvre's (1991) conception of space, the self-awareness needed to strategically compose pathways for radical change is cause and result, product and producer, *i.e.*, the continued struggles within the realm of concepts and praxis needs to be constantly aware of the dialectics of their tasks.

6.1.3 Smartified imperialism

Within the scope of this study, eco-technological imperialism will be explored a bit further in the context of the urban phenomenon, by analysing three key facets: (i) economic; (ii) the primitive accumulation of knowledge; and (iii) the subjugation of the consciousness, the being, and the self.

As a focal point, the urban space presents itself as a crucial fulcrum of analysis, for, the urban phenomenon is permeated by processes of investment of over-accumulated capital, *i.e.*, the production of the city operates for speculative purposes and on a large scale, since "the profit on the actual construction is extremely slight; the main source of profit comes from raising the ground rent, and from the careful selection and exploitation of the building land" (Marx, 1992: 312). The contractors and real state developers - that procure the funds for their enterprises within financial capital, often based on mortgages and credit systems - do not build for the clients, they follow the capitalist logic, *i.e.*, the production of the urban space has the aim of accumulating more capital. However, the turnover cycles of physical space can be measured in decades, and with the need of accelerated investment returns, a world crisis originated from the real estate, and the advancement of technologies a possibility for newer investment lines of over-accumulated capital presented itself. The smart city appears as a potential phenomenon, structure, and techno-political agenda for accelerating the over-accumulated capital, due to a world wide financial crisis. This is the essential economic foundation to understand historical and material origins of the smart city. Capital was in need of a new realisation space, thence, it created the "necessary" ubiquitousness of the virtual space. Enhancing its turnover, and expanding the possibilities of primitive accumulation due to newer markets creation and liberation.

Henceforth, the urban phenomenon is the space for the venting of capital over-accumulation, and the smart city arises as a strategy to accelerate turnovers, equating to an

increase in the accumulation of capital. The virtual space as an expansion of the physical space, realises financial and real state capital and increases the investments a certain locality attracts, thus, enabling physical space (re)development. Again, this possibility of rotating capital much more rapidly, is the economic foundation of the smart city.

Furthermore, there is an important process that must not be overlooked. The appropriation of a collective knowledge, specifically in the realm of information and communication technologies and the virtual space. This results in the privatisation of knowledge, social relations, and individualities. Additionally, there is a redirection and instrumentalisation of this knowledge for the dressage and increased exploitation and expropriation in the name of capital accumulation. However, it is important to avoid a luddite conception where the machine enslaves people, and it is the source of sorrow and toil. Technology is not inherently evil, it is designed for a purpose and to serve certain interests, by people immersed in ideological contexts and working for people whose interest is the maintenance of their ruling status. Hence, the (primitive) appropriation of knowledge will not be halted by aimlessly attacking the virtual space and its technologies. Only by strategic and tactically organised actions against the structures (infra and super) of this digital appropriation, an end to it may come.

Finally, there are drastic consequences of the smartification of everything to the subjectivity of the human being. Due to the sheer amount of information, data, and knowledge a diffuse sensation of panic arises. Information is all encompassing and ever available, or at least that is the imagery, the possibility that is apparent when gazing the structures and rhizomes of information and data. If one has access to it, by buying their way in, the realisation of the impossibility to consume all, the constant potentiality of the next piece of information, and the accelerationistic evoking nature of capitalist digital spaces are the serrated blades of the unrelenting human meat grinder that is the current mode of production. On the other side, if one does not have access to this plethoric cornucopia of information, the point of stress and distress is the further mutilation of their condition as humans, of their citizenship, and their recognition. When glimpsed, connectivity becomes a thing of the other, of those that are integrated, accepted, and recognised, however little, within the system and society that oppresses them. There is a schism within reality, between those connected, and those that are not. The latter is forcefully connected, not by his own volition but by external forces, *e.g.*, surveillance technologies and government open data (Thatcher; O'Sullivan; Mahmoudi, 2016).

Thence, within late imperialism these three factors operate a digitalised structure of domination. The economic and political aspects are instrumentalised, culture and social structures becomes a weapon of cohesion, and each individual becomes the agent of its own subjectivity control. Here, becomes more apparent the connections of late imperialism and capitalist realism, for, albeit contradictions and problems are at the centre stage, the

solution is to double down and go further (a conservative, neoliberal, centre, and right-wing preference), or to soften it (a progressive and left-wing inclination). Data is overwhelming, capital is to big to fail, epistemologies are lost or emptied, sociability collapses, the being becomes a collection of "havings", and the self is its own overseer. The rule of law translates into lawfare and warfare and it is know whom it favours, but what can be done about it? There is no alternative other than late imperialism and catastrophe. But there are alternatives, and they must be pursued.

6.1.4   Illustrating the eco-technological imperialism

Morozov (2018), Sonn and Shin (2020), Thatcher, O'Sullivan, and Mahmoudi (2016), Bruno et al. (2018), Löwy (1998, 2002b, 2013, 2017), Wiig (2015, 2016), Hollands (2008, 2015), and Grossi and Pianezzi (2017) make valid arguments for understanding that surveillance and smart city technologies, as well as sustainable development initiatives are a business model, a market in which this logic of accumulation by dispossession is the rule. Some examples of such imperialistic logic regarding smart cities, are:

1. Smart, sustainable, and humane initiatives are not necessarily socio-politically nor economic or culture adjusted to specific social urban realities, in fact, are often applied in isolation and not integrated into a system. This promotes the creation of clusters of smartness and creativeness, made for a certain type of people and to exclude the rest. These spaces, derived from hegemonic dressage and control, serve as instruments to ensure physical and virtual layering of behavioural conditioning and subjectivity restraint and modulation (Grossi; Pianezzi, 2017; Hollands, 2008, 2015;Wiig, 2015, 2016).

2. Smart cities represent a development strategy, and in their current form, the human aspect is reduced to that of labour power, or the management and control over the labour force is presented as a human aspect within smart strategies, *i.e.*, human and social capital focused strategies that depend on a universalised and naturalised notion and epistemologies of progress and development (Ferreira, 2019; Fuchs, 2014);

3. The technological market of a dependent economy, that imports models and technology from the Global North, has little technological sovereignty. Configuring, for example, a dependent entrepreneurship, where innovation is always inserted in the logic of the international division of labour. There is an absence of complex and capillarised national industrial sectors, although technical capacity and skill may be high, because of the lack of the retention of capital and strategic, organised, and significant national development projects the investments in human and social

capital are more beneficial to imperialistic countries that to those of the periphery that raised their citizens capital.

4. International digital platforms and corporations take over urban functions of the State, compromising national sovereignty through a transference to the Global North of data and digital capital, returning hegemonic and globalised structures of discrimination, racism, misogyny, inequality, LGBTQIAP+ phobia, and sharper grinder blades that can not be avoided, just endured better. One must conform, accept, internalise, let the skin peel off, the bones splinter, and the blood serve as lubricant to the inevitable rotations of progress' gears and grinders. Digitalisation is enforced as the only realistic alternative for humanity's pressing issues, there is no other logical option.

Some examples of this form of imperialism on the ecological side:

1. Undivided responsibility for the climate crisis, hiding the main polluters, as the central economies transfer to the periphery enterprises responsible for the productions of greater environmental impact while keep "clean" hands and low emissions (Clark; Foster, 2009; Foster; Clark, 2004; Qingzhi, 2017);

2. Production and consumption capacity discrepancies of North and South are not taken into account (Clark; Foster, 2009; Foster; Clark, 2004);

3. The centre of capital, while passing laws and taking initiatives of supposed sustainability, impose an abstract and diffuse defence of sustainability, preventing an industrialisation process due to issues of environmental impact, therefore creating a barrier to economic development. The Global South must present not only an alternative to this narrative, but for the mode of production and its environmental externalities (Clark; Foster, 2009; Foster; Clark, 2004);

4. Appropriation of "ancient" knowledge to promote green capitalism or an environmental justice that instead of addressing the roots of the problem, implement "appease and divert" strategies. This particular issue is of most importance to observe, because it may present itself as a solution or a product of the struggle for recognition, but it is instead a selective epistemicide, *i.e.*, what is not absorbable by strategies that promote appeasement and diversion, is deemed unworthy or of a lesser nature and are marginalised (Crosby, 2004; Frame, 2016; Hall; Tandon, 2017; Honneth, 2011).

Regarding this work object of study, smart cities emerge in the context where the financial and real estate capital, in crisis, needs new forms of circulation and realisation. It is important to remember that the crisis is not due to a lack of capital, but rather an

excess of it and a lack of places to invest to ensure its appreciation. In this way, smart cities appear as a viable strategy for the investment of over-accumulated capital with rapid turnovers. Hence, it is deeply infused with late imperialistic structures and neoliberal ontologies to enable a process of capitalist digitalisation. Not only does the urban space become digitalised, but the individual, and social relations. All become digitalised or smartified to an extent that, in some cases, only smart individuals are able to access physical and virtual spaces. The most widely accepted definitions in the literature are profoundly neoliberal. The almost complete acceptance and use of the concepts of human and social capital as the only paths to pursue the social development of a city is one of the proofs. And, the qualitative "smart" in its various forms seems to be intricately and inevitably linked to a multitude of aspects of life, culture, and society. Smartphones, smart homes, smart urban planning, e-governance, and so on, are in their essence - in the majority of cases - new tools and constraints to consolidate and expand late imperialism dominance over various aspects of life, society, politics, the state, and more.

6.2 Digital colonialism

Addressing digital colonialism enriches the discussion on the impacts of digitalisation, ICTs and late imperialism. The concept of eco-technological imperialism, as an aspect of the current form of imperialism, can be relevant for understanding the intersection between environmental issues and a digitalised coloniality. Hence, just as studies in ecological imperialism were used to look into the environmental aspect, now, digital colonialism will provide a deeper understanding of the technological side. The relations and dynamics between both (ecological imperialism and digital colonialism) deserve deeper, more complex, and thorough research and analysis. However, due to the nature of this work, the following efforts are an attempt to ensure argument consistency, attend the goals, and scope of this research.

6.2.1 Beta testing new old industries

Much is talked about industries 4.0 or 5.0 as practises and promises to revolutionise the means of production, by utilising new and emerging technologies and optimised labour structures. Before delving into the definitions of these two forms, what precedes them? The different phases of industrial development are divided according to significant technological advancements and changes in the way industries operate. Briefly, they can be understood and defined as follows:

1. **Industry 1.0 - Mechanisation (Late 18th Century):** it refers to the first

industrial revolution, characterised by the steam engine and the mechanisation of production within a factory-based production. Departing from craft-based system, manual labour was transformed and thus work relations; also, the volume and capacity of production rose substantially;

2. **Industry 2.0 - Electrification (Late 19th Century):** this phase refers to the second industrial revolution, that was guided by the development of electricity usage and internal combustion engine. In this scenario, arises taylorism and fordism, focusing on furthering the automation of production and to extract the most out of the contracted labour force. Car industry and telecommunications are the driving force in this era;

3. **Industry 3.0 - Automation (Late 20th Century):** the third industrial revolution is tied to the large insertion of computers and automation within the means of production. Internet also plays a significant role by the end of this phase. Industries became more dependent of digital processes that improved efficiency through production automation;

4. **Industry 4.0 - Digitalisation (Early 21st Century):** the fourth industrial revolution, as it presents itself, changes the nomenclature of the past industrial phases. Adopting a digital ontology, it is an update not a revolution. This phase represents the shift from "outdated" industries towards "smart" industries, marked by high connectivity and data-centric production. The physical and virtual become inseparable, ICTs, big data, artificial intelligence (AI), cloud computing, smart technology, smart production, smart storage, smart etc. This updated industry prioritises production and labour optimisation, predictable supply chains, and smart decision-making processes for enhanced market insertion, control, and risk assessment;

5. **Industry 5.0 - Personalisation (Emerging):** industry 5.0 is not yet fully defined or accepted as an update, it is mostly associated with prioritising the interaction between the human and machine elements of production. It aims to personalise and deepen the connection of this two poles, promising a seamlessly, collaborative, and flexible relation. Hence, AI integration is central to enhance production and to bridge the gap between human and machine, just as the human aspect must be improved by tailored technologies and skilled labour.

These industries phases represent the historical and ongoing transformation of industrial processes, emphasising the increasing role of technology and automation in shaping the way we produce goods and deliver services. Industry 5.0, being an emerging concept, may continue to evolve as technology advances. With each new update, labour relations change, and so the social structure. For, each industrial revolution inevitably

results in changes within society, just as social changes reflex on the industrial production. Then, what is the most crucial point that differentiate 5.0 from 4.0? Precisely the optimised social and labour control it enforces. If industry 4.0 focused on the rapid expansion of smart technologies being used as means of production, 5.0 seeks to personalise and tailor these technologies to optimise production. The personalisation seems to be for the benefit of the worker, making more flexible work relations, hours, and deadlines. However, the contrary occurs. Work becomes more flexible, but, informal, precarious, and flexible to the benefit of the employer aims. Working hours can be extended or irregular, deadlines shorter, and human resources turned into heartless performance and deadline focused algorithms. In this context, Faustino e Lippold (2022), point out some issues about the current and future technological developments and its modes or configurations of production, *i.e.*, industry 4.0 and 5.0, due to their nature of relentless growth and progress:

1. **Uncontrolled consumption of natural and energy resources:** it is a critical global issue with far-reaching environmental, economic, political, and social implications. Unsustainable exploitation of natural resources occurs not as a choice, but rather as a logic of production, causing: depletion of non-renewable resources; climate change; scarcity of resources; energy producing issues; global "cooperation" or rather division of markets and labour; metabolic rift; regulation disparities, a shared universal responsibility and a centralised accumulation of value; conflicts and wars for resources; and, environmental injustice, where "uncivilised" groups and peoples are brutally expropriated as sacrificial lambs to the march of progress;

2. **Heightened domination (subsumption) of life into the (abstract) times of capitalist production:** this domination of life occurs in different aspects, for various reasons, all due to the material conditions in which these developments and technological advancements occur, namely: the practical activity of reproducing the workforce; time outside of work and leisure; social relations; the subject's intimacy, subjectivity, and psyche;

3. **Industry 5.0 promise of a welfare state:** 5.0 emerges as an attempt to amplify the synchronisation of working times, solving the problem of the "absolute collapse of the conditions for the reproduction of capital within a self-devouring productive logic" (Faustino; Lippold, 2022: 21). Thus, the digital welfare state is configured in the same way as the post-war welfare state, being necessary and only possible if it does not occur in other parts of the globe other than that of the Global North.

Updates in the mode of production are commodities themselves, just as they are a measure of industrial development and capital investment returns. Specially, industries 4.0 and 5.0 are sold as products, as commodities to produce other commodities, *i.e.*, the means

of production, like never before, become a commodity that enters the market to compete with others. Industries 4.0, are sold as a form of organisation and operation, through systems, structures, and specific software and hardware. Also, 5.0 represents a combination of structures that are sold as an update, therefore, more valuable or more capable of creating value. Both of theses structures, are idealised, produced, and managed from the Global North, and enable deepened and aggravated forms of late imperialism, by ingraining enhanced control and coloniality within the means and modes of production in the Global South. Hence, the idea, the project, the potentiality of an updated (smarter, better, sophisticated, faster, optimised, evolved, innovative) system or structure of production is sold and bought. In this context, Digital Colonialism materialises from two origins (Faustino; Lippold, 2022):

1. **New elements in the territorial division of the Globe:** Big Techs, the major monopolies of the information and communication industry, transform the structures of imperialism and sub-imperialism, propagating late imperialism. This division adds a new layer of expropriation on the Global South, with exceptions, into a territory for relentless extraction of information, data, raw materials for the construction and development of technologies, and cheap and skilful labour;

2. **Datafication:** data subsumes human life, leisure, recreation, creativity, cognition, and productive processes into the extractive, automated, and (post)panoptic logics of digital colonialism. It is not just a change in the pace of life, but the intentional and programmed manipulation of human cognition by large corporations and companies to enable new and deeper forms of capital appropriation and production, *i.e.*, the expansion of capitalist accumulation. Idleness, contemplation, and rest are only allowed if data is being produced, if not, hegemony tends to turns them into guilt and unproductive, hence, worthless (valueless).

Therefore, digital colonialism does not arises as a rupture from older and "outdated" capitalist organisational structures of life and modes of production, it is only an update at different layers and levels, depending on the space and time within the logic of capitalist production, economical placement and development, and labour division. For example, in the Global North there are studies and a push for a "post-labour" society, where manual and low complexity jobs should be substituted for AI, robotics, and other technological solutions, or, a "post-growth" society, where means and modes of production should change in order to seek a less profit seeking capitalism. However, this post-labour is unthinkable in the South, and only possible in the North to a small margin of the population due to the labour of others, but, where is the novelty in that? The only new thing, is that the percentage of the population possibly affected by this increases, whereas the nobility, aristocrats, and bourgeoisie were the ones who lived without the necessity of labour, now

the proletariat elite may be affected by this. Or, at least, made believe they are, for they still depend on the renting of their labour force to live. The true impact of this, is on the immigrant and unskilled labourer, both would have less opportunities, creating a lesser inviting atmosphere for immigrants and pushing the latter into informality and precariousness. As for post-growth, it suffers for at least two major issues. First, just like the sustainability efforts it can disguise the problems of the North, while subsumes the South with regulations and undivided responsibility that halt economic development and enforcers the dependent position. Secondly, and most importantly, this is just the defence or proposition of a "better" version of the current mode of production. Again, better for whom? Better according to whom? Also, if a post-growth society is intended, from whom will the surplus labour be used to produce wealth and maintain the capitalist system? The Global North bourgeoisie is the answer for the first two questions and the Global South to the second.

6.2.2   Constant and variable capital

Analysing the present and incoming future without a deep understanding of the past is to deny the historicity and material conditions of contemporary digital transformation processes. Even the nomenclature can be viewed as a masking of the past, for, instead of a descriptive name, there is a number that gives the notion of an outdated past and a future of updated versions to come. The historical changes in the mode of production, therefore, become shrouded and immaterial like a software. The focus is on the present, but most importantly in the future, in the potentialities of shifting the industrial organisation, the machinery, technology, production output, and labour relation towards optimisation. Optimisation itself is not a issue, it is an instrument - and an important one - that is utilised for achieving a certain goal, thence the problem. The predetermined goal, the parameters set, those who develop optimisation models, and those who's interests optimisation serves are, if not the issue, part of it, *i.e.*, all of these usually (consciously or not) shroud and veil hegemonic structures. In other words, the problem is not in the technic *per se*, but in the underlying and surrounding structures that utilises it, *i.e.*, the content that shapes and is shaped by the technic.

In this context, digitalisation becomes a phantasmagoria capable of solving all issues, and devoided of context, content, political tendency, or ideology, it merely exists as a natural result of the civilisational process. For example, in industries 5.0 the personalisation and inclusion of the human aspect, is only to better build machines that can take humanity into account and optimise production, enhancing the extraction of surplus value. Hence, relative surplus value is increased, as every working hour is and must be productive, and also absolute surplus value, for the flexibilisation and personalisation leads to extra hours,

compensatory time off, working as an investment in the future, informality, loss of labour rights etc. However, personalisation is presented as an attempt to humanise technology and production, therefore, amending the hyper-focus on technology innovation of 4.0. Hence, what is the role of information and communication technologies in reshaping the current stage of capitalist accumulation? Those smart and humane technologies serve to increase labour time synchronisation, and thus, reduce the self made ruin and collapse of the capitalist mode of production, and to at least push forward the next crisis or reduce a fall. The self propulsion, and the end in itself of capitalism, continues to exist and contradictions continue to pile up, these updates do not resolve these issues. However attenuated they may appear to a spectrum of the population, this is not nearly true for the lasting majority.

To better understand these processes, the notions of constant and variable capital come into play. In a simple manner, constant capital is the capital fixated in machinery, and all the components that transfer part of their value to the produced commodity. Variable capital is the capital transformed into labour force, that transfers the capital of constant capital to the commodity, *i.e.*, it is the variable for capital reproduction and the place of surplus value extraction (Marx, 1990). Hence, within a digitalised system and mode of production, what constitutes and how they operate? Even though there are terms for the physical part of digitalisation (IoT, hardware, server farm etc), the virtuality of it surpasses to an extent that it becomes frugal, ethereal, and without intersection with physicality. It is not a question of being unreal, virtually is more and more a constitutive element of reality and the real. The point is its infrastructural detachment, *e.g.*, the cloud is very much material, and however any figment of data seems to be non-physical it must be stored somewhere and processed by something, the data itself was produced by someone and stored into what others produced. Hence, the physical objects, raw materials, auxiliary materials, and means of work conditioned by the "hardware" are all integral part of late imperialism digitalised mode of production, but some are also commodities. Then, what is the variable capital? Here is a point of contend. From the miners of raw materials to the software engineer, all whose labour force is rented for the production of commodities and constant capital are part of variable capital. But what about those that produce data? The commodity for which digital constant capital was created to produce? Are they at the same time producer and consumer of data, a Prosumer?

One thing is certain, the line that separates the roles if looked closely becomes blurry. The consumer of a commodity, that at the same time is a mean of production, is a producer? Moreover, the commodity that serves as constant capital within digitalised capitalism is still a commodity? This work advocates that the term prosumer seeks to unify within the same person producer and consumer of data as a novelty, but have not labourers always been dependent on selling their labour force in order to consume commodities and

enable the reproduction of life? Hence, even if the producing of data - that results in the transference of capital from constant capital within the data flow - occurs in the same time as one consumes something, these are two different processes, obviously connected, but so were the salary of a XIX century factory worker and the bread that after being bought feeds him. What happens here, is the compression of time and space, enabling faster circulation and realisation of capital. Therefore, a similar logic is applied into the commodities that are also constant capital. A smartphone is a commodity, developed, produced, shipped, and sold. It is a commodity that enables access to other commodities, and access to the virtual, a whole new realm of existence and reality. But it also is an integral and fundamental part of the means of data production. Hence, it is both, and not new form or element of capital, nor the owners of smartphones become the owners of the means of production, merely the owners of a cog within the digitalised means of production.

On the other side, prosumer theories defend a prosumer commodity, with use and exchange values, dictated respectively by the personal data stored and some form of subscription or potentiality of future capitalisation (Fuchs, 2012, 2014). But, if the premise of the prosumer is - as this work defends - incorrect, as a consequence this also is. The production capacity, the unpaid labour force that generates data, and the data itself are commodities, just as the possibility or potentiality amassed through collecting large amounts of data, is a commodity. Data is the product of digital unpaid labour (unpaid variable capital) and the terminal of digital access, the server farm, the connection cable and etc (constant capital). Hence, the consumer of data appears, in a chain of production, as one who consumes a commodity, however, at the same time, in another chain of production, as one who produces data. The production aspect continues to exist as a distinct element from the consumer aspect, however, intermingled and synchronised. Prosumer, can still be used as a phenomenon of blurring the division of each category, and of compressing time and space to an extent that producing and consuming happens concomitantly. But not as a new element that changes value theory.

6.2.3   Global capital flows and the globalised individual

Digital colonialism is also defined by large investments into social and human capital, for they are the basic requirements for the industrial update. Human capital provides skilful labourers, who can push innovations forward, produce and consume large amounts of data, and be inserted into clusters of tech-driven initiatives. As for social capital, it enhances the penetration percentage of digitalisation and the potential of data appropriation. Hence, it is not a coincidence that human and social capital are one of the central characteristics of smart cities. Smart people, *i.e.*, the human aspect of the city, the

creative class, are essential for the capital production within the virtual/digital realm, and its anchor on the physical reality. Within this premise, when paired with global division of labour and the international flows of capital, arises another aspect of digital colonialism.

Human life, which produces social wealth, "devalues itself at the same rate at which it generates value, subjected to powers that imprison, kill, and mutilate, turning the body into a quantifiable and disposable commodity of a spectacle of necropolitical terror" (Faustino; Lippold, 2022: 40). Information and communication technologies steal precious aspects of individuals, while transforming all aspects of their existence into commodities. Additionally, due to hegemonic processes of cohesion and coercion, these technologies - and strategies and structures based on them - lead to a voluntary servitude. As exemplified by Mark Fisher (Fisher, 2020), there is a permissive hedonism and a reflexive impotence that feed into each other, making the increasing permeability of digitalisation and of virtual potentialities easier. This constitutes a dispersed control over human life.

Reflexive impotence has already being explored within this work, therefore, what is permissive hedonism? According to Fisher (2018, 2020), media, in all its forms, from TV to social networks, fundamentally serve the purpose of catering individuals within their own existence and nothing more. Sociability is conditioned by the individualism of childish and unrestrained hedonism. Freedom, is buried under layers of emotional and moral control, causing intoxicated and hypnotised beings to continue producing and consuming data disguised as entertainment. This burial is precisely the dumbfied (contrary to smart) hedonism, or a permissive hedonism. Humans, become trapped within themselves, imagination, dreams, aspirations, and emotions all tend to become individualistic and hedonistic. There is an overall sense of isolation and self-absorption, hence, society and people tend to orbit within their own self, often to the point where they become disconnected from the experiences and perspectives of others. The idea of being trapped within themselves, also implies the sense of being constrained or limited by one's own inner world, which can lead to difficulties in relating to or empathising with others, and personal desires and emotions take precedence over collective well-being and social connections. This excessive individualism can lead to higher degrees of alienation, reification, and disconnection from the broader social fabric.

Hence, voluntary servitude by the workings of permissive hedonism and reflexive impotence, enables the acceptance of digitalisation processes and the overlayed phenomenon of prosumer. Arises a cyberpunk scenario of "low life, high tech", for, sociability and overall social conditions are continuously ravaged. However, the hegemonic proposed way out of this individualistic structure is more technology, the same one that incarcerate individuals within predetermined social existences. Hence, surges a totalising ubiquity as a *modus operandi* through which capital subjugates all aspects of life and inserts them into its mode of production. Thus, the digitalisation and appropriation of the virtual

reality's aspect of life, transformes, even more, the human subjectivity and existence into a commodity. Hegemony propagates this structure to create a materiality where the virtual and the actual are dominantly controlled in a totalising manner by the digitalised capitalist mode of production. For the efficiency of this onslaught, ubiquity surges as an oppressive, resolute, and "neutral" force that formulates and enables the symbiosis between the living and the cyber, in order to strengthen the shackles of the current mode of production's structural organisation (Faustino; Lippold, 2022; Fisher, 2020). Drawing a parallel with the writings of Faustino and Lippold (2022) and Fanon (2020), cyberspace is colonised, there is the cyberspace of the coloniser and the cyberspace of the colonised.

For example, smart cities within data-centric capitalism allows for the transformation of urban life into a monotonous and interchangeable collection of commodities. After all, the reality of constant shifts in perception and possibilities follows a movement that seeks to intensify and diversify the old and familiar forms of production, extraction, accumulation, and re-investment. Smart cities, within this context, become conduits for the international flow of capital, for, technologies used, data produced and consumed, social media, apps, and etc, hardly ever are totally protected by strong and effective regulations and protective initiatives on an international and national scale. Hence, international data and capital flows found smart cities, as an almost inevitable partner. This flows operates within homes, public spaces, work spaces, and above all, on the globalised individual, *i.e.*, producer and consumer, creative and uncreative, and within higher and lower levels of human or social capital.

6.2.4 Fetishism and coloniality

Before advancing to the next chapter, it is important to emphasise the fetishism involving digital technologies and the deriving coloniality (Faustino; Lippold, 2022). Henceforth, fetishism within the context of technology is characterised by issues that encompasses the ways in which technology is often uncritically perceived, idolised, and applied, that hide historical and social relations that are an essential constitutive element of technologies and their modes and means of production development. Thus, this fetishistic element influences power dynamics and socio-cultural relations configuring a close link with coloniality, by influencing the perceptions and notions of the late imperialistic era. Technology's impact on social, political, economic, and cultural structures is veiled, not hidden, but transfigured into something that contributes to hegemonic perpetuation. Therefore, technology fetishism can be understood as the belief in the neutrality, the linear progression, and apolitical quality of technological structures and innovations within the capitalist's mode of production. Thus, it lacks critical considerations regarding the social consequences and implications of tech-driven development. Finally, it shrouds the social relations that

underlie technological progress and its production, preventing a deeper understanding of the impacts, the collective contribution to technological advancements, and the importance to capital flows. Here are some crucial elements to understand the bridge between the technology fetishism, coloniality and this work's object of study - the urban space:

1. **Fetishism of the commodity:** technology, especially communication technologies, is at the same time liberating and confining. However the case, they are not autonomous beings that manipulate, control, and expropriate humans. They where created by humans to serve certain interests, functions, and directives. This mystification grants an almost magical and whimsical character to technology, an existence without cause and with only one effect: the unavoidable march of progress;

2. **Political power of processing:** the power of information processing is a political force, neglecting this premise render individuals vulnerable to mystification processes that propose neutrality, non-political, and absence of power. However, such power exists and is constantly utilised on onslaughts to labour relations, reproduction of the work force, and various aspects of life that are transformed and dictated by capital's structures;

3. **Organic composition of capital:** the introduction of new technologies into capitalist production has led to transformations in exploitation and control, hence, favouring a revisiting of classical studies on capital structures. For, although changes have occurred, capitalism maintains its logic of accumulation, centralisation of profits, and socialisation of the costs. Although, new elements arise, they are a derivative of past structures, not a complete rupture as some may suggest. This distinction is important, for it puts an emphasis on the historical and material process of the capitalist mode of production. Also, whichever changes may have arise within Capital's composition, class struggle is still a reality;

4. **Neutrality and eurocentrism:** an apolitical stance is assumed, which involves the reduction of democratic socio-political debates, for, if technology is impartial, why a debate? Only the privileged few of a political and economic elite, have the capacity - not to debate, but - to better organise and align interests with policies and political strategies, as they neglect social indicators and cultural aspects. Tech-driven solutions become the go to, "one size fits all", and technocratic notions prevail. Reality becomes a game of exact numbers, hence, reinforcing a detachment from historical processes. Here, arises a universal history, that not coincidentally tells the story of the coloniser;

5. **Smart cities as techno-political development strategies:** one of the constitutive elements of the smart cities concept is that digitalisation brings progress due to

its impartial and purely technological nature. However, this perspective completely disregards the complex social, political, cultural, and economic factors at play in urban development;

6. **Fetish of imported technology:** this is not just the phantasmagoric character of an imported technology - granting luxuriousness and prestige - it is a matter of veiling the international chains of production, compromised sovereignty, and transference of capital to the Global North;

7. **Digital racialisation:** "tendency to materialise and subjectivise racism, not only in the development of technique, implicit in the organic composition of capital, but above all in the unequal distribution of its destructive character" (Faustino; Lippold, 2022: 26).

In summa, technological fetishism plays a key role in coloniality, and coloniality a crucial role for the global distribution of labour and capital accumulation. Hence, critical thinking and a nuanced approach is essential to research the impact of technology advancements in the context of globalisation and colonial legacies.

Part III

Structures, Strategies and Tactics

Wer, Verlorener, wird es wagen?
Wer sein Elend nicht mehr tragen
Kann, der muß sich zu jenen schlagen
Die aus Not schon dafür sorgen
Daß es heut heißt und nicht morgen.
Keiner oder alle. Alles oder nichts.
Einer kann sich da nicht retten.

(Brecht, 2018: 750)

Chapter 7

Power structures and the auratic destruction by pulverised control

Les psychanalystes disent que pour le jeune enfant
il n'y a rien de plus traumatisant que le contact du rationnel.
Je dirai personnellement que, pour un homme qui n'a comme arme que la raison,
il n'ya rien de plus névrotique que le contact de l'irrationnel.
(Fanon, 2020: 98)

In order to understand the current smart city phenomenon is essential to comprehend it's inherent struggles for a synthesis, for wholesome definitions, and dimensions. It is a struggle between different techno-political agendas of: data usage and protection; technologies providers and developers; politics; and users (McFarlane; Söderström, 2017; Reia; Cruz, 2021). This struggle deepens pre-existing social, political, economic, and cultural realities, and it arises from new technologies, production logics, and structures of dominance and control. However, it is important to understand that the "smart city" onslaught upon urban spaces does not originates from a vacuum of pure technological and technic advancements. This struggle, that resides within smart policies, measures, and technologies, is the continuation of the progress that leaves aghast Benjamin's angel of history.

This effort of developing a restructuring or a different view on this phenomenon that has dominated the urban agendas for the past decades, represents a necessary movement in other to achieve social oriented democratic smart development strategies. In that regard, it is imperative to investigate it from a Global South perspective, to present an alternative to hegemonic and one-dimensional Global North notions of what constitutes this ongoing

technopolitical process of urban space transformation, the smart city.

Some crucial perspectives must be raised, as they are essential in this effort to compose a comprehensive analysis on the matter. Starting from the benjaminian concept of aura and its urban aspects an investigation of control mechanisms and power relations within the urban space is conducted, while the consequences of digital ubiquity to the urban dweller are also addressed and developed.

7.1   Urban "Aura" loss, post-panoptic and digital control

One can extend the concept of aura worked by Walter Benjamin (2009) not only to the built environment without singularity and personality, but also to the urban environment as a whole inheritor of a Hausmannian modernity (Benjamin, 1999, 2009; Harvey, 2015; Savage, 1995). In an era of extreme and intense reproducibility, how much of the urban aura is compromised for the adjustment with global technological and aesthetic trends? How much of the culture and heritage of a locality are subjugated to a false need for intermittent development and progress? What is the negative impact of excessive reproducibility on the urban experience and perception of the aura dispersed in the city by the urban dweller (Benjamin, 2019; Braga; Rubbo, 2018; Löwy, 1998, 2013)?

Urban environments, permeated by the concomitance of internal and external factors, are increasingly subject to a standardisation, logically averse to authenticity. The technical and economic progress in their current form, are a threat to humanity, so how to preserve humanity and urban aura in the face of an era of extreme reproducibility and promotion of a technopolitical agenda that steers history towards catastrophe? What is the role of the urban planner or anyone working with the city in the face of constant onslaughts from the instruments of intermittent progress? The possible answers to such question can be found by always keeping an organised pessimism, in analysis and praxis. One must distrust the fate of freedom, the fate of privacy, the fate of urbanity and "smartified" citizenship, placing oneself in a position of counterpoint and of unlimited distrust (Benjamin, 2007 2009; Löwy, 2002a, 2011). On the other hand, this distrust must be organised to achieve any change, otherwise it will remain as a pessimistic shout in to the storms of progress .

When Benjamin (2009) states that "having the experience of the aura of a phenomenon means endowing it with the ability to return the gaze" little did he know that in fact the urban phenomenon would look back via surveillance technologies. The current reality is that of the urban aura subjected to these technologies and the experience of each citizen being compromised by a schizophrenic post-panoptic (Bauman, 2014; Foucault, 1999). This compromise of the aura and its experience undergoes an alienation of the urban and an individual reification, *i.e.*, standardisation and loss of individuality and

subjectivity in the face of a movement towards homogeneity of what it is and means to be human (Honneth, 2011). Benjamin was initially concerned with the loss of the singularity of the work of art and moved on to analyse the urban phenomenon, now is necessary to discuss the aura of a digitalised urban environment where a pulverised post-panoptic reason reigns (Bauman, 2014; Foucault, 1999).

7.2   The urban "aura" and its destruction

Aura is a singular existence or essence, composed of spatial and temporal elements, it has the unique appearance of a distant existence no matter how close it is. The destruction of aura has a twofold origin: the first one being the need to make such existence or essence closer, and the second is the will to overcome the uniqueness through their reproducibility. Within the destruction process, becomes increasingly clear the quality of reproduction and the intention to steer reality towards the masses and the masses towards such reality (Benjamin, 1999, 2009).

However, there is an aggravated and deeply irrational form of this process resulting in the disregard of the reproducibility capacity to remove the aura, or even, a total inversion of Benjamin's concern. The greater the capacity of reproducibility, the greater the value of the object and of the work. There is still a search for singularity, for authenticity, but the value of the work and of the artist is now determined by the sharing and engagement capacity, or of the copy of this authenticity and originality by others. In other words, the value of exposure and reproducibility not only supplanted that of the cult, but also almost completely absorbed it. The cult value, previously associated to a ritualistic reserved to the few, becomes associated to the capacity and value of exposure, *i.e.*, the greater the exposure value, the greater the cult value related to an object or work. There is then, a cult to reproducibility itself, *i.e.*, there is an aura to reproducibility, the process by which aura is destroyed.

However, the cult or the "auratic" nature must be approached with care. Cultural heritages for instance, the transgenerational arts present in the urban environment represent and symbolise in a certain way barbarism. Their survival attests to the representativeness to a certain degree of the interests and values of the dominant classes, even if in a diffuse and dispersed way, *i.e.*, the "auratic" condition of these cultural treasures. The existence of these works represents the efforts of the great minds and talents who created them, but also the anonymous labour and toil of their contemporaries (Benjamin, 2007).

7.3 Changes of perception

Cansado dessa confusão entre vida e publicidade, arte, geração de likes
Cansado dessa sensação que todos 'tão fingindo ser o que não são
E crendo que o resto do mundo não
Cansado de coaches, cansado de posts
Cansado de estar sempre cansado e cansado de dor
Linha de frente - Amiri, Don L, Rashid

The cult of reproducibility brings consequences to society and to the human individual. These, conditioning and conditioned by their works, are inevitably influenced by the cult of exposure value (Benjamin, 2007, 2009; Fuchs, 2010, 2012), especially when this value is linked to a virtual persona, composed and curated daily. This persona, in turn, is increasingly significant as to the perception of one's identity, either by oneself or by society. This virtual identity is an exhibition of supposedly singular and original individuality, in search of an attribution of value based on its capacity for exposure and reproducibility. Thus, individuality enters into crisis. The virtual and the material (Lévy, 2011), become dissociable, causing an irrationality in the perception of identity. Identity is steered towards the masses, and the masses towards identity.

In this context, the importance of analysing the changes in the mediums of human perception arises, which can be understood and identified by a loss or fading of the aura, making it necessary to observe the social conditions of this loss. In other words, if the urban environment is the focal point, one should investigate the social conditions and changes in the means of perception. For example, the way a smart city is perceived differs from the perception of another with a low density of such initiatives.

It is worth noting that the city has a collective aura, however, as well as everything that possesses an "auratic" condition, it represents those who created it and those who laboured to build it, *i.e.*, the urban work makes explicit, the relations between the rulers and governors of the civilising process and those whose oppressed or dispossessed condition is hidden, erased, and suppressed (Benjamin, 1999, 2007, 2009). The means of perception of the urban within the smart city technologies are deployed, controlled and operated by the rulers of change, the ruling classes or *den Siegers* (Benjamin, 2009; Fuchs, 2010, 2012; Löwy, 2002a). Therefore, the aura of reproducibility is curated and controlled by the same entities to serve as a means to, through cohesion - and if necessary coercion -, produce a virtual image subdued to a standardised, ubiquitously produced and "smartified" urbanity.

7.4 The dialectics of the digital commodity-being: the *flâneur* and the condemned

If the virtual image that represents and is imbricated in the conception and perception of the urban is, in its dialectic form, a manifestation of the history of the oppressor, of the victors who command the production of urban space, what effect does this virtual image has on today's *flâneur* from the bourgeois, petite bourgeois and specially the highly paid proletariat, the only ones who can access this expanded and luxurious urbanity of virtual arcades? And also, what about their counterpart the condemned of digital urbanism?

The proliferation of a supposed exclusivity and of an aggrandised and augmented citizen participation, to selected individuals (the *flâneur*) who in turn necessarily need to be - in their subjectivity and objectivity - the sufferers and perpetrators of an oppressive unidimensionality and of an existence linked to the masses, a person of the masses and reified in his relation to the urban and his political activity as a citizen. A commodity-being, who is made legible by exchange-value and use-value. The former urban *agora* is transformed into a desert space of exchange of commodity-beings, it becomes in appearance apolitical in the name of a supposed technical and data efficiency. The very structure of the capitalist system and its urban materialisation shape the social and cultural production so that the time of the commodity-being is optimised for the production of surplus value and not for the nourishment of a sensibility essential to the authenticity of the urban experience, or to the perception of it's aura. As this structure shapes the subjectivity of the commodity-being it auto-regulates this subjectivity and regulates the space where the commodity-being dwells (Faustino; Lippold, 2022; Fisher, 2020; Mészáros, 2005; Santos, 2008b).

The existence of this digital *flâneur* of the masses who voluntarily glimpses and deceives himself as the holder of small virtual exclusivities and luxuries, or as one whose citizenship is less mutilated than those around, therefore existing in a superior realm of urban reality, is deeply connected to the infrastructure and superstructure of the urban virtuality and its means of perception. The existence within the virtual urban structure, consequence of the excess of capital, becomes the only possible existence of this modern-day *flâneur*, *i.e.*, his actuality and potentiality intermingle. His own physical existence is conditioned and ruled by the phantasmagoria of the virtual, by its reproducibility capacity, that is, its use-value is dictated by its exchange-value resulting in the compression of the time for capital accumulation and therefore increasing the potential surplus value of the commodity-being. This is the digital commodity-being, the one whose virtuality is a potentiality constantly updated by algorithms and data analysis and is sold, stored, and

consumed. Deeply influenced and influencer (as a cog in the reproduction of the ideology system) of the urban aura of reproducibility.

However, this is just one side of the commodity-being, the side of those that are integrated in this form of citizenship. What about those that are, not forgotten, but even more condemned by it. The dispossessed are presented with a digital barrier, with newer and innovative forms to mutilate their citizenship. They are the keystone for the metaphorical and literal arcades that grant the sense of superiority for the other side of the commodity-being. They have only being granted (limited) access to the former urban agora, through struggle and toil, and their practical existence is full of constant reminders that they do not belong in the now desertified urban space. For, the urban space is not built for them, however, by their hands most structures are made and they are those who most use, work, and depend on the urban materiality. The smartification of the urban environment augments its phantasmagorical elements and creates a virtual distancing, relegating them to an unseen existence. They are also a digital commodity-being, and their virtuality and potentiality is also constantly updated by algorithms and data analysis, they are also sold and consumed. However, the primitive digital accumulation operates on them more fiercely and viciously than on their counterparts. They do not harvest the benefits of the smart cities, they are reaped to concede the benefits to others. From the extractions of raw materials essential for the march of technological advancement, to the victims of racial profiling by supposedly impartial algorithms (Faustino; Lippold, 2022), the digitally dispossessed are essential to the accumulation of (digital) capital.

This is the dialectical nature of the digital commodity-being. A spectrum between the digital *flâneur* and the digital condemned, whose both existence are subordinate and subordinative of the virtual space and of each other. Hence, the aura, that in this context can be understood as the virtual image - the content - and the methods or technics of its dissemination - the means of perception - is essential to the maintenance of these roles, and they presents themselves in way that no other alternative is feasible, a sort of "smart" capitalist realism (Fisher, 2020). It is worth stressing that, the *flâneur* and the condemned do not necessarily exist in different bodies, the commodity-being has a prismatic existence, that is to say, a single individual can manifest different levels of "flâneurism" and condemnation.

7.5   Power, post-panoptic and digital pulverised control by self-incarceration within the urban space

Publicitários confundindo música e marketing em nome deles
Cansado de bots, cansado de blog

E todo dia um bota amarra um favelado num poste
O máximo que rola é um protesto nos trending
Mobilizem os bilionários, não queremos cops no mercado (racistas)
Eles vendiam corpos no mercado
Agora dizem querer corpos diversificado' em postos de mercado
Mas são os donos do mercado que escravizaram os corpos
Que fizeram deles bilionários
Cansado do tal de mercado, cansado da bolsa
Cansado de ver meus comparsa tirado de trouxa
Com a mema estampa de bolsa Gucci ou Prada
Comprada no camelô e ainda propaganda grátis, chapa
Cansado desses porcos de corporação usando corpos
Cooptados contra nosso próprio
Cansado do tal de mercado que elege a bancada da bala
Fecha com os moderados ou com Bolsonaro
Cansado de saber que eu não vou descansar
*(...)*
Linha de frente - Amiri, Don L, Rashid

What about the mechanisms and the contents of control, discipline and even power relations that enforce the commodity-being form? Although criticaly, the contributions of Foucault (1999), Bauman (2014) and Deleuze (2017) can be used to construct a analysis similar to that of Fisher (2020).

To better understand Foucault's panoptic (1999), one must resort to an architectural metaphor. The figure of the panoptic, based on the design of a penitentiary developed by Jeremy Bentham, is represented by a circular prison with cells arranged around a central tower. Thus, a single person could watch and control all the cells, because the inmates would not know when they were being watched, since they could not see inside the tower. The idea can be better understood in Figure 1 and Figure 2. In this way, according to the philosopher, the logic of discipline of modern society operates, which through imposed surveillance, controls and directs in a coercive way citizens and society (Foucault, 1999).

Bauman (2014), building on Foucault's panoptic (1999), states that in current power relations, the watchman of the architectural metaphor, who holds the control and surveillance capacity, has the frightening nature of inaccessibility. Therefore, surveillance becomes more diffuse as its data-driven nature observes from a multiplicity of places, nationalities and social reasons. The means by which this supra territorial surveillance is

enabled comes from data and information freely and voluntarily provided by the observed individuals, *i.e.*, a self-incarceration. This voluntary movement is ingrained in society and individuals not only by the reproducibility cult, but by hegemonic coercive and cohesion forces instrumentalised by technology.

Figure 1 – Panoptic Blueprint, Jeremy Bentham.
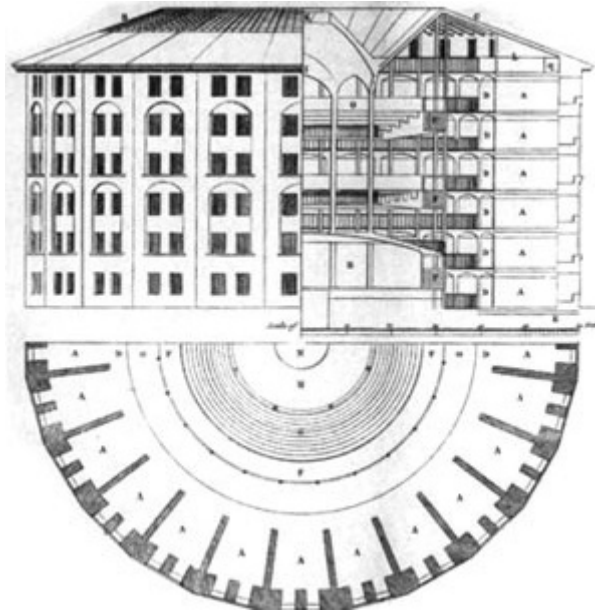
Fonte: Nascimento (2008).

Figure 2 – Detainee inside the cell in front of the Panopticon's watchtower.
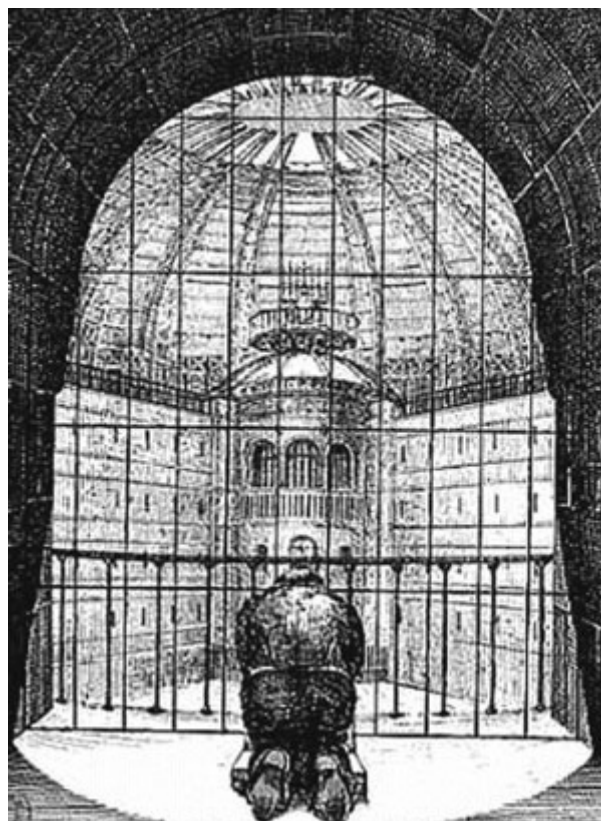
Fonte: Nascimento (2008).

The post-panoptic operates in the sphere of the aura destruction, because the more alienated the objects and information that make up and enable surveillance are, the easier the process of deepening this surveillance becomes. If the value of individuality and the work depend on the value of exposure and capacity for reproducibility, greater amount of data provided and reproduced equates to greater value. Consequently, individuality and the work become more susceptible to post-panoptic control and surveillance.

Therefore, the urban environment - physical and virtual space, plus the socio-cultural aspects - represents the prison where human subjectivity is in the process of watched destruction. With the deployment of more and more technologies in the city, this process tends to aggravate. The technologies themselves may not have the objective of control and surveillance, but their nature allows this distortion. It is necessary to adopt standards and regulations capable of curbing this supra-territorial surveillance that is almost unreachable, inaccessible, and unable to be held accountable

However, the concept of the post-panoptic and its understanding of a diffuse nature and inaccessibility of those that hold the surveillance power, sometimes fail to acknowledge that the power itself is not diffuse or dispersed and, therefore, not attainable or struggled for. There are entities that hold this power - corporations, big techs, the Benjaminian *Sieger* etc. - and entities that are used to enforce such power - the Estate - over the *Unterdrückten* and to maintain the status quo. That is to say, however diffuse, disperse, and insurmountably ubiquitous the post-panoptic may appear and operate, it is not diluted to an almost ethereal state that is impossible to conquer, to hold it and use it to stand with the oppressed (Boito-Junior, 2007; Foucault, 1999; Klauser; Paasche; Söderström, 2014). This scattered appearance must be overcome, however unreachable those entities and structures that hold the whip and key to the self-incarceration of the post-panoptic logic must be identified, otherwise the digital bastille of current times wont fall.

Another consideration must be made in regard to the self-incarceration aspect of the control structure, which representes an individualistic atomisation, and a grammar of social powerlessness. The control mechanisms are internalised and ingrained into the individuals, dominating and possessing their existence. Control becomes pulverised to an extent that the individuals become their own jailers, and the jailers of those that are around them. The hierarchy of control appears to be flattened, but in reality the surveillance power however pulverised is still in the hands of few. Hence, a parallel can be drawn between Fisher's (2020) reflexive impotence and a foucaultian dressage (Foucault, 1999), or a post-dressage, where hegemony has become so entrenched that it goes beyond the discipline of bodies. The mind itself and subjectivity are in a state of constant surveillance of the self. The knowing that things are nearing a catastrophic state and the belief that nothing can be done is one of the deepest roots of this pulverised control.

This forms of surveillance, control, and dressage overlap. Just as neoliberalism

doesn't represent the end of taylorism, only a non-exclusive succession, where the old form doesn't have to die for a new one to emerge. There is a constant autopoiesis, which is at once chaotic and despotic, schizophrenic and rational, depressive and euphoric. There is a post-discipline, where beings are addicted to control and have been dominated and possessed by control, but somehow are against it and firmly believe in their freedom from it.

7.6   Smart structures and the need for radical organisation

Making an analysis through Walter Benjamin's writings, it can be pointed out that the digital capital and the corporate and neoliberal form of the smart city, by praising an accelerated progress of high reproducibility, intensifies the process of auratic destruction. Establishing a new aegis to the post-panoptic, an instrument of perpetuation of inequalities and defence of the dominant classes, of the rulers whose history full of the most varied forms of barbarism is still being told.

There are two articles written by Robert G. Hollands (2008, 2015), that are within the most cited articles regarding smart city definitions, and together with articles by Komnios (2011), Nam and Pardo (2011) e Caragliu et al. (2011) are the go to pieces of work to define smart city's concepts, definitions, and domains. But instead of furthering the critical aspects of some of this articles about the smart city, what is seen on literature is a *pro forma* section to get rid of the need to characterise the object of each study. Be it a survey on frameworks, different indicators comparison, or even new indicators being proposed. Theoretical articles on the other hand fail to pin point the real issues with the smart cities. Of course, there are exceptions, but by definition this attempts do not represent a significant percentage of the accepted and most cited literature. Let's take Hollands for example, in his 2008 article he cites many definitions and authors in vogue at the time, but the author's tone is a mostly critical one. In fact, the title of the article being "Will the real smart city please stand up?" may be a clear indicative that the author does not agree with what the current trend of the smart city was at that time. By the end of the article Hollands proposes a progressive smart city that should (1) pay more attention to the people, to the local aspects of the community, instead of focusing only in the high-tech aspect; (2) propitiate a real shift in the power dynamic within the urban space, using IT to enhance democracy itself; (3) should not be an new form or façade of an entrepreneurial city, or a urban creative cluster; and (4) cease to serve as an ideological mask that disguises the underlaying changes and agendas of accumulation infrastructures of capital's mode of production (Hollands, 2008). However, most articles that cite Hollands, fail to consider the suggestion for the rise of this supposedly progressive smart city.

This progressive smart city, that in 2008 was already being evoked, and in the second article - of the pair previously mentioned - the author redoubles his efforts, calling for the people to take care of their human capital and promote initiatives to enrich their social capital (Hollands, 2015). However, this perpetuates the logic of accumulation by dispossession, as it only tries to hide it with a more beautiful mask the individualistic tendencies of neoliberal ideology, as well as, it fails to point out that those who hold the power are responsible for the suffering they cause to held on to it. There are no alternative being presented other than a less predatory form of the existing one. Only a refurbishing of the methods and technologies, that do not look into the contents and origins of such structures. It falls to the citizens to make changes that make their existence less susceptible to control and domination, they should undertake the responsibility to change State practices and corporate agendas, aiming to change the power dynamics. Hence, if citizens fail to do so, it is due to their own incapabilities and limitations, for, there are possibilities that they must make use of, high-tech initiatives to capitalise on and so forth.

However, how can real change be made within the rules and confines of a system that is designed to protect and perpetuate itself? Yes, citizen organisation is essential to change the paradigm, but what citizens? This change will occur when society and existence become radicalised, *i.e.*, when they are grasped at their roots. And this roots must be seized by brushing history against the grain and standing with the oppressed, this struggle is the essence, it is the struggle for the individuals and the society to comprehend themselves and what they are without alienation or reification. It is a struggle that must strive for new forms of social relations. This radicalisation must come through organisation, cooperation, and comprehension of the necessities presented by the praxis of the whole of society and individuals (Bloch, 2006; Gramsci, 1999).

Chapter 8

Restructuring the Smart City: structures, strategies and tactics for democratic and socially conscious smart development

A única luta que se perde é que se abandona
E nós nunca
Nunca abandonamos luta
Nunca, nunca
(...)
As tecnologias ancestrais nós temos
Pra induzir o sonho dentro de um pesadelo
Entre um traçante e outro
Dilatar o tempo e imaginar um mundo novo
(...)
Eu que sou donde a miséria seca as estações
Vi a primavera
Florescendo entre os canhões
E não recuar
Primavera - Don L

In this final chapter, conclusions, future researches, and final considerations regarding strategies and tactics to deal with smart development within a globalised economy of late imperialism will be presented. The efforts expended in this work were an attempt to analyse the complexity of urban environment and its digitalised forms, also, the economic, social, cultural, individual, and political elements, that of course were not exhausted, but

hopefully were sufficient to construct a cohesive and coherent narrative to expose the research analyses and results.

8.1   A smart city for and from the Global South?

Following the theoretical developments and findings of this work arises the following question: a smart city from and for the Global South is possible? In the current structures of late imperialism and hegemony, yes, but only while maintaining the dependent and peripheral global placement of Global South nations and countries. Smart cities, in their current form, serve only as novel structures (infra and supra) to continue, preserve, and aggravate economic, political, military, cultural, social, and environmental ideas and ideologies of the Global North's *Siegers*. It is an instrument of control, power, and hegemonic expansion over urban space (physical and virtual), society, culture, politics, and individuals and their subjectivity. Smart cities, imbue the urbanistic discourses with a neoliberal ontology that strengths late imperialism, and cements digital colonialism and eco-technological imperialism within hemispherical relations. It serves as an market expansion strategy, with faster capital realisation times and with lesser space needed. The technology within smart cities is not the issue, the issues reside on the content and methods these technologies are used, *i.e.*, the subjective aspects and structural frameworks that delimits and dictate what a smart city is and should be.

Smart city projects that are originated, idealised, developed, and managed from the Global South are nearly impossible in the current global scenario. For any attempt at challenging central economies and imperialist monopolies' interests is met with hegemonic instruments and frameworks of control and subjugation. Smart technologies enforce a third kind of power that together with the soft political, ideological, and cultural power and the hard economic and military, reshape imperialistic structures of dominance and control, sharp power rises with the efficiency of a bomb and the evasiveness and subterfuges of intelligence agencies. Surges a hybrid warfare that topples states and governments that are in the way of a civilising progress, that are anti-imperialistic, counter hegemonic, or simply that make an attempt of escaping from a dependent relation searching for true sovereignty. The *mission civilisatrice* continues, the "white man's burden" is not so blatantly orientalist, racist, and xenophobic. These frown upon prejudices of the past become veiled and hidden, but the dehumanisation that entails the desensitisation of any form of violence committed towards peoples deemed lesser is still present and largely used. However, violence comes in many forms, not only direct violence is inflicted on the dispossessed, structural and cultural violence corrode and impair attempts of resistance or revolt. Hopelessness, disbelief, anguish, and despair are the menacing emotions that take the lead charge on the continuous march of the spiked chariots of capitalist progress.

Hence, this despondency is a late imperialistic tactic that plays a key role into the strategy of solidifying the notion of capitalism being the only possible reality, and the current structure of it, unavoidable.

With that said, what a smart city should be? A techno-political agenda that does not fell under the fetishism that technology can solve all problems, nor a Luddite notion that from it all problems originate. It must represent a conjunction of initiatives to promote a social and structural change, giving instruments to the oppressed and the dispossessed to procure a victory without glory, that is, a victory that does not only replace the *Siegers* without significant and meaningful systemic and structural changes. The smart city should not be a tech-utopian dream, but an urban reality, virtual and material, in which the disregard for mutilated citizenships is addressed. Smart cities should procure to implement participation and open data systems and structures to counter the hegemonic violence of one-dimensionality's cohesion and coercion. Smart cities should implement ICTs technologies within techno-political structures of co-creation and citizen driven initiatives, creating anti-hegemony and anti-imperialistic resistance barriers. With this, protecting local culture from selective epistemicide. It must also strive for different social, economic, political, and cultural relations that do not alienate or reify existence, by deriving methods, techniques, and technologies that grasp the roots of current inequalities and power structures. It is not an easy task, nor it is a short-term project. But it is a necessary effort for attempting to instrumentalize resistance efforts by dependant economies and all of those on who's blood, sweat, and tears the current mode of production was and is build upon. That is what a smart city from and for the Global South must be, it must represent and be part of tactics and strategies for national sovereignty and South to South relations that oppose hegemonic structures of control.

8.2 Just technological advancements or does it goes further?

Technological advancements in the context of smart cities does not resumes to cutting-edge technologies. While technological innovations and widespread usage and are central to the concept, smart cities strategies influence and are influenced by multiple and complex relations and struggles. Previous challenges and opportunities in urban life, sustainability, governance, quality of life, economic stability, social disparities, mobility, and individuals subjectivities persist and gain a new digital layer. Even the most reductionist and technocratic concepts of smart cities, do not resume it to technological advancements. Hence, it is vital to critically examine the promises, the historical and material background, drawbacks, compromises, and phantasmagoria associated with this development strategy. For, while smart technologies may offer numerous benefits, what about its damages, impracticalities, and short comings? And again, to whom these benefits are deployed and

who pays for them? Following are some key aspects that deserve special attention regarding such questions:

1. **Economic growth:** The development of smart cities often spurs economic growth, as it attracts businesses, research institutions, skilled workforce, innovation seeking start-ups and entrepreneurs. This can lead to a heated labour market, with positions creation and increased per capita income, as this strategy aims to provide fertile ground for tech driven and disruptive initiatives that capitalise on the city's digital infrastructure and human and social capital. However, this digital economic utopia does not reach all layers of society, nor it equally develops within all economic scenarios and hemispheres. The economic growth and capital concentration of some economies are sustained by the stagnation, deindustrialisation, and dependent position of others. While smart cities initiatives rise and fall within central economies, late imperialistic structures dilapidate peripheral economies smart enterprises through various means. Also, smart cities' development often requires substantial amounts of capital investments in technological infrastructures configuring an obstacle to full fledged implementation and the diversion of resources from other citizens' necessities, with the excuse of technology potentially solving all of society's issues.

2. **Efficiency and sustainability:** Smart cities can significantly enhance the efficiency of various urban functions including transportation, energy use, waste management, communication, and leisure time. This could lead to reduced resource consumption and diminished urban environmental footprints, contributing to a more sustainable urban environment. However, that is not often the case. Efficiency and optimisation strategies are often use to enhance profit and capital realisation, not to reduce expenditure of resources and environmental impacts. The negative effects are often redirected to outside of the urban environment or even central economies, thence they remain veiled and hidden, but not for those that pay the price of this reallocation of externalities. Smart cities potentially widens the metabolic rift between central and peripheral economies;

3. **Data-driven decision-making:** smart cities rely on information analytics to better address issues, that could potentially lead to more evidence-based policies, optimised resource allocation, and better urban planning through predictive modelling of infrastructural development like transportation networks and public spaces. Hence, more efficient land use and improved resource allocation would be more easily achievable. Then again, the potential use of a technology does not equate to a guarantee of materialisation of impactful transformations. Disruptive initiatives often fell into the logic of capital accumulation and dispossession. Also, it serves as a the basis for a false neutrality, a delocalised and universal ideology. Shrouding

surveillance, privacy, vulnerabilities, lack of accountability, and digital divide issues. While technology can certainly enhance State and government transparency, it also heighten the obscurantism of algorithms based and automated systems decision-making processes and, therefore, hollow out accountability. A corporate, bureaucratic, and technological ontology arises as a veil of false intellectuality, elitism, and capacity or aptitude for participation within the public digital *agora*, this ontology creates a language and epistemic barrier for citizens to challenge decisions, strategies, and tactics that directly affect their lives. Because, they lack an accepted and validated knowledge, whatever they think their real necessities are, they are wrong due to their inadequacy of language and knowledge system and unenlightenment. Or, they simply are illiterate in technology and internet due to social and economic reasons, hence, are unable to access digitalised governance instruments;

4. **Digital divide:** the benefits of smart cities are not equally distributed, exacerbating the digital divide. Vulnerable populations with limited access to technology are excluded from most of the advantages these cities offer, and the the Global South can only enjoy limited benefits. Aggravated social and political isolation is also a consequence of the reliance on digital interactions and automation, community engagement and organised action are reduced as non-virtual interactions become less frequent and individualism enforced. Smartness becomes a barrier, as reliance on technology can not only create vulnerabilities when systems fail, but essential services are locked behind internet access, technological aptitude, and consuming capacity. For, while smart cities equates to large and substantial capital investments, raising GDP, per capita income, human development index and other indicators, class struggles continue to be a reality. Hence, inequalities tend to rise as smart initiatives are often tied no neoliberal economic policies. In this context, smart technologies promise improved delivery of public services, such as healthcare, education, public safety, and transportation. However, this often comes in conjunction with privatisation, mostly in the Global South, that facilitates the structures of capital accumulation. This is not an inherent issue of tech-driven initiatives, but rather an issue with the system they are produced in and used by, one that perpetuates a logic of accumulation by dispossession.

In summa, while smart cities offer the promise of greater efficiency, sustainability, improved services, and economic growth they also raise significant concerns related to privacy, equity, security, accountability, social exclusion, economic inequality, and many others. Careful planning, regulation, and citizen engagement can reach less predatory smart strategies and thus enable more benefits and quality of life to working and lower classes. However, there is a limit to what these democratic mechanisms can achieve, for, the State and government are instrumentalised to safe guard the *Siegers'* interests and

volitions. Since smart cities strategies encompass a holistic approach to urban development that extends beyond technological advancements, they are a fertile conceptual and physical instrument to the propagation of hegemonic tendencies and agendas, thus weakening any glimpse of an alternative or attempt of radical change.

8.3 Socially and ecologically conscious smart indicators and development

Smart city's indicators are plenty and somewhat varied, with different focuses and efficacies. But the underlying issue is, what exactly they measure? According to what was developed and investigated in this work, a smart city indicator system that measures the smartness of a city at the best case scenario will serve as a parameter for future interventions and development strategies and at the worst as a ranking system of cities which sole objective is to signal to investors and venture capitalist where to funnel capital for a more rapid and guarantee return. In other words, indicators systems often serve as "City risk", that measure its dominance and influence over other localities, and internal stability. Taking into account the risk associated with investing, lending, and trading in that city due to potential changes in the business environment that could negatively impact profits or devalue assets. Assessing this risk is crucial for businesses and investors to make informed decisions, *i.e.*, smart city's indicators are data for market research. However, even in the aforementioned best case scenario, the indicator system will be biased and conditioned by the hegemonic understanding of what a smart city is and should be. Hence, the attempts and initiatives that may in some aspect diverge from the accepted course of smartification, if not for the benefit of the market, will receive lower scores, be badly ranked, and consequently receive less investments and development pushes.

Another critical aspect is the contrary movement of measuring the smartness of a city, that is, the moulding, growth, and build-out of smart strategies based on a pre-fixated script, or in the primer set by indicators systems. Development strategies are, therefore, based on ranking higher to attract, circulate, and realise more capital. Paraphrasing Marx (1992), the profit on the actual smart interventions and initiatives is extremely slight; the main source of profit comes from raising the city's value, lowering its risk, and from the careful selection and exploitation of the physical and virtual space. Smart city strategies, following the financialised and speculative neoliberal capitalist ideology, seek to enhance the possibility of soaring capital turnovers and favourable odds in the stock exchange abiding economic structure. Hence, with all ideological, subjective, and philosophical dressing and backbone that was discussed within this work, there is a distinctly identifiable economic reasoning: capital accumulation by centralising profits and socialising liabilities, risks,

losses, damages, precarisation, suffering, hunger, insecurity, depression, anxiety, extreme medicalisation, burnout, gentrification, inequality, ethnic cleansing, prejudice, xenophobia, racism, and whatever tool can be effectively used to accomplish whichever goal is needed to preserve and further the logic of accumulation by dispossession.

For example, just as in the evaluations regarding country risk, the political scenario is one of the main elements in assessing the risk and value of a city. Changes in government policies, political unrest, citizen satisfaction or resistance towards government, account-ability, transparency, governance system, system to be governed, governance interactions, corruption, legal system and many other characteristics are evaluated and taken into account. All of which are measured in accordance to the interests and by the premises of the hegemonic corporate ontology that dictates good and evil. And based on this supposedly innocuous dichotomy, a deliberately insubstantial and deceiving debate occurs over the acceptable ratio between exploitation and profit, to achieve a mythical sustainable development. Universally waved, unilaterally enforced and unachievable in the current economic system that knowingly seeks its own ruin and predetermine the order in which the acceptable sacrificial lamb of the day will suffice to push forward the maxim of progress.

Strong and reliable legal and regulatory frameworks are an imperative, not for the protection of mutilated citizens' rights and political voices, but to secure the "better interest of all" by liberating private enterprise and capital flows, boosting revenue, per capita income, gross domestic product, and quality of life to central and creative (often gentrified) regions of a city. Law is the *aegis* of the dominant classes, even though it may seem just and fair and that without it chaos would reign, Law is not a monolith or a monad of codes and jurisprudence that however unjust and unequal in enforcing is always justifiable by the idea of: at least there is Law, at least citizen are protected. But what class reap the most benefits from legal structures, those that wrote and by it stay in positions of power, or those that are condemned, persecuted, exploited, killed, or sentenced to a life of servitude under the shackles of the victors of the civilising process?

Enters entrepreneurship, the importance of raising human and social capital, in order to promote an economic stability, not necessarily of stable companies and jobs, but of stable speculation and financialisation. A Californian dream of start-ups, turtlenecks, financing rounds, buyouts, and hostile takeover to feed up monopolies, big techs and global corporations that with instrumentalised States expand late capitalism, toppling trade barriers, social and cultural aspects that impede a certain idea of progress, environmental protection, health, security etc.

In conclusion, smart city's indicators systems provide assessments that involves evaluating these and other factors to determine the overall risk associated with integrating a certain locality within a cycle of capital accumulation. Various organisations, non-profits, institutions, and researchers offer frameworks, tools, and services to help cities better

visualise their current status and communicate with companies, investors, and the overall market, to attract capital flows and manage the cities' development and risk. Hence, proper smart city measuring, in accordance to the hegemonic logic, is essential for making informed investment decisions and developing risk mitigation strategies.

However, what is really needed is a framework for the implementation of smart technologies that truly addresses the needs and desires of a population, that do not stimulate discrimination, gentrification, inequality, racism, and the concentration of capital. More research and initiatives must be made in this direction, that is, on the creation of socially conscious democratic strategies for smart urban development that are aware of environmental, social, cultural, political, and economical issues. This must not be a new framework of indicators, but a framework of strategies and tactics to achieve better usage of smart technology and the socialisation of profits and de-privatisation of capital, and consequently, the suffering by the oppression it necessarily produces.

8.4   Principles for strategic and tactical research and action

First and foremost, before even defining this work's understanding of strategy and tactic, the guiding principles that any formulations for significant transformation of the current economic and political systems must abide to are: an organised subversive praxis and radical consciousness (Fernandes, 2012). Hence, the struggle for strategic positions within the social, economic, and political structures is essential. Not only to create opportunities for defiant, radical, and subversive organisational development, but to maintain the offensive without fearing the triumph of reactionary forces, and later sustain the established new hegemony, that of the currently dispossessed and condemned. The action ground must be prioritised by those that side with oppressed, not without critical thinking and knowledge, but always attentive to the needs of the oppressed. This struggle for positions is not merely a struggle for seats in parliament or State structures. The trenches of this struggle for positions are in the whole of civil society. However, sometimes more active actions are needed and strategic and tactical movements must be made, because the State is still the guarantor of the *Siegers* class violence, and the current hegemony is deeply rooted within individuals and social structures. Whether this movement has a finality to it, or just a small resistance or advancement towards a final objective, it must be always supported and support the positioning aspect of the subversive praxis (Gramsci, 1999, 2002a, 2002b, 2002c). This praxis must be permanent and unyielding until the roots of the issues in the current system of social and political organisation and economic logic are not only attenuated or reformed, but abolished. Otherwise, there will be a constant danger and treat of the spectre of old hegemonies (Marx; Engels, 2010).

Now, what constitutes strategy and tactic? "Tactics teaches the use of armed forces in the engagement; strategy, the use of engagements for the object of the war" (Clausewitz, 1989: 128). And following the principle that war and physical violence are only other means of political struggles, one can transpose theses definitions and concepts - that are simple yet difficult to fully comprehend and use - to political and economic conditions. Therefore, tactics, comprehend the daily struggles and manoeuvres within an specific conjuncture and situation, while strategy, encompasses the intended changes of the organised subversive praxis, the historical undertaking and responsibility of a long-term commitment with the radical aims. Strategy also signifies the analyses, coordination, and organisation of varied, multiple, and concomitant struggle for the abolition of deep rooted issues that are responsible for the suffering and toil of many that provide the feasts of few.

Hence, it is important to understand the correlation of short-term manoeuvres and long-term objectives that must serve as a guideline. Defining, determining, and adhering to strategies are, in comparison to tactical decisions, rather more demanding, requiring lucidity and firmness of resolutions not to deviate the path or set one that leads to the softening of exploitation and expropriation, that may result in the de-organisation of subversive movements. The *Siegers*, fell somewhat comfortably protected due to their reliance on the State structures to provide, legal, political, and police safeguard. Also, making use of few adjustments and improvements on the expropriation processes and conditions. This temporary quelling of subversive impulses propitiates a favourable political and conflict theatre, that enables the recrudescence of the *Siegers* hegemony (Fernandes, 2012; Lefebvre, 2020).

To illustrate this distinction, considering a subversive movement, and in the context of this work, tactics may involve organised, planned, and spontaneous demonstrations, occupations, general or partial strikes; constitutions of temporary alliances with groups with similar strategies to push for immediate political changes and struggles; counter-hegemonic actions; increase in the capillarisation of organised citizens that are conscious of their oppressed condition; the seizing of opportunities and responsive actions to specific situations; hacktivism; the creation, support, and protection of community and citizen based digital initiatives to provide alternatives from imperialistic platforms and technologies; through organisation and strategic positioning orchestrate and act on different operational theatres; preservation of environmental protection areas; demarcation, protection, and expansion of native peoples land, *quilombos*, river side and *caiçara* communities; promotion and valorisation of local cultural events, expressions, and manifestations; participation in public hearings to impose a dissonant voice, even though success may be far reaching; actions to contain "sustainable development", and promote industrialisation processes of dependent economies that change the logic, resources, and means of production; and many other examples. Hence, tactics may and should shift in accordance with the conjuncture

and situations ebbs and flows, but always serving strategic goals. Therefore, defining the short-term course of action of subversive movements, creating, resuming, and updating forms of struggle, using methods of agitation and propaganda to raise awareness of the dispossessed of their condition and afire willingness to participate in initiatives that may overthrow current hegemonic structures. If strategy, for instance, sets the goal of carrying the struggle against big techs in order to topple primitive data accumulation structures, tactics will seek cursory objectives - not less essential for they compose the path to the greater goal - that concern specific struggles, conflicts, and campaigns of a concrete situation within the cycles of ebb and flux (Engels, 2021; Fernandes, 2012; Lefebvre, 2020; Lenin, 2020).

Strategies on the other hand, serve as guiding principles and horizons to strive for. A subversive movement without a goal, a hope, or a driving stratagem may fall into conformity and adherence to the very hegemony it seeks to overthrow. The strategy may involve identifying the necessary stages, not in a stagism notion, but in order to better structure and organise lines of action within a long-term period of time. The long reaching goals (wealth redistribution, oppression and inequality elimination, socialisation of the means of production, end of a class based society, etc) are the guiding principles that must aid and assist tactical decisions and understanding of reason behind each battles and the war. In other words, strategy consists of determining, at a specific point, the direction of the main efforts of a subversive movement, thus, deriving a coherent and adequate plan for the deployment, positioning, and movement of forces and resources, enabling stable and steady implementation and execution of the previously established strategy (Engels, 2021; Fernandes, 2012; Lefebvre, 2020; Lenin, 2020).

The combination and application of both principles within a subversive praxis is what enables smaller (in a sense), weaker and feeble forces - that represent the oppressed - to resist, face, overcome, and vanquish Goliath and Leviathan like forces of the *Siegers'* instrumentalised cohesive and coercive apparatus of State violence, control, and oppression. Even though rational conditions and "fabulous superiority of forces" (Engels, 2020: 445) exist, breaches and weaknesses must be found or produced, to create spaces of irrationality possible of carving out serendipitous and beneficial resolutions. These opportunities must be shaped by making "use of the modern means of war and the modern art of war in the struggle against the modern means of war and against the modern art of war" (Engels, 2021: 70), *i.e.*, knowledge and use of modern and state of the art technologies, tactics, and strategies are essential for any subversive movement to create and maintain a momentum for achieving its goal. The nature of the exchange between feather and sword is of "neither absolute discontinuity nor absolute continuity" (Lefebvre, 2020: 248). There is a state of unity with ebbs and fluxes, but with two hidden advantages for the oppressed classes, even though the *Siegers* have the advantage of holding the seat of power: (1) the sheer number

of the masses that when armed with boundless will and commitment, and (2) equipped with the ammunition of critical, conscious, and practical knowledge can take control of the seats of power, thence ruin the system before it ruin the whole of society (Lefebvre, 2020).

Henceforth, the oppressed must have political interest and be armed with critical thinking to pursue their "real conditions of emancipation" (Marx; Engels, 2003: 99), *i.e.*, there must be subversive principles imbued within the oppressed, and their own peculiar principles, not a distant idea derived from a "momentary enthusiasm and merely apparent exaltation" (Marx; Engels, 2003: 99) or far removed from their reality, but principles in accordance with their daily praxis. This critical consciousness is essential, for, the true enemy of the oppressed spirits are not only the *Siegers* and the system of oppression, but the false notion that the products, objects, and other oppressed individuals that surrounds them are the embodiment of "the self-humiliation, the self-reproach, the self-exteriorisation" (Marx; Engels, 2003: 99), and therefore, the enemy. These are the consequence of economic, political, and social conditions, they do not exist independently, hence, it does not suffice to combat materialised alienation and reification with interior and spiritual critical action, a philosophy of praxis is essential. The oppressed, do not need driving motifs and examples to afire their indignation and understanding of reality, for they live within such reality. Critical thinking's task and role is to unveil reality and to support, organise, and give the means and instruments for tactical and strategic actions (Gramsci, 1999; Lisa, 1981; Marx; Engels, 2003). Thus, understanding and effectively combining both, tactic and strategy, is essential for any movement, organisation, or theorisation seeking to achieve significant societal changes (Lenin, 1986, 2017, 2018, 2020).

8.5   Brushing smart cities against the mainframes

Based on everything that has been said, worked on, and explored in this work, the reached conclusion is that the understanding and analyses of smart cities concepts and experiences must be reformulated as a whole. However, within the Global South reality of late imperialism, this restructuring of the smart cities must take into account broader, deeper, and constantly shifting elements and paradigms.

Smart city technologies and their techno-political agendas are, in fact, a reformulated onslaught by capital on urbanity, in its neoliberal way of depoliticising and depriving urban spaces of ideologies and alternatives. After all, smart cities are the advertised "pinnacle" of technical, scientific, and technological neutrality. At the same time, smart cities manage to make debates and alternatives to the imposed hegemonic system unfeasible, as well as increase the control of society and urban space in a pulverised way, and of course, they manage to expand the "factory floor" to the entire urban environment,

commodifying, alienating, and reifying parts of human existence and experience that were previously unreachable by capital. The datification and digitalisation of human existence and sociability then seeks, within the current hegemonic system, to prioritise the efficiency of compressing space and time, whether in the means of production or the circulation and realisation of capital. In this way, pulverised control and obedience to hegemonic cohesion transform human beings not in monolithic commodities, but into spaces to be sliced up, expropriated, and then turned into commodities, mirroring what happens in urban areas. Exploitation through labour power is no longer enough; the individual needs to (read as: is forced to) participate in the capitalist process in more ways than ever before. Social life, through the current trends of digitalisation, undergoes a process of total bureaucratisation, enabling the total commodification of life through hegemonic cohesion and coercion. Smart cities are the Haussmanian boulevards of current times, where the great virtual avenues provide vast paths for the domination and control of insurgent and subversive movements, whilst its virtual arcades provide the necessary phantasmagoria that sterilises and clockworks subjectivity displaying its polished and alluring promises and potentialities of a better future, accessible by selling the past and using the present as a security deposit for the investment in the abstract tomorrow, that may never come, with an indefinite liquidation.

This work does not hold the answers, nor it attempts to, of the smartification and digitalisation issues, and their interweaving with imperialism and coloniality. It sought to explore, unveil, and weed out the terrain for future researches, initiatives, organisations, and practice based actions to subvert current hegemony by seeking, proposing, and attempting viable alternatives for economic, political, and social organisation of the means and modes of production. Alternatives that do not accept environmental catastrophe as a satisfactory consequence and result, nor that watches and actively enforces the destruction of human subjectivity, sociability, community belonging, and the dreams and desires being subsumed by the current hegemony's ideologies, images, discourses, narratives, and phantasmagoria.

Thus, smart cities, the urban expression of the digitalisation push of progress, must be up turned and investigated against its grains. Otherwise, it may only become one of the latest additions to the pile of debris that grows skyward blown by the storm of progress burying, suffocating, and turning into the humus of civilisation's next phase all of those that do not currently control the storm, the oppressed and the condemned of capitalism.

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