Smart Cities: The Loss of the "Aura" and Post-Panoptics in the Age of Digital Control

Victor Garcia Figueirôa-Ferreira

Doctoral candidate, UFSCar, Brazil
victor.figueiroa@estudante.ufscar.br

Tatiane Borchers

Doctoral candidate, UFSCar, Brazil
tatiane@estudante.ufscar.br

Ricardo Augusto Souza Fernandes

Professor Doctor, UFSCar, Brazil
ricardo.asf@ufscar.br

ABSTRACT

Urban environments, permeated by a concomitance of internal and external factors, are increasingly subject to a standardization, logically averse to authenticity. This study proposes to conduct an analysis, in the context of smart cities, of the concept of "aura" worked by Walter Benjamin and the liquid surveillance in the form of Zygmunt Bauman's post-panoptic. We sought to identify in urban development strategies and plans, as well as in politics and relations within the city, the destruction of "aura" and the intensification of control and liquid surveillance. At the end, it indicates possible developments of the current paradigms and issues to be investigated by future research in the area.

KEYWORDS: Liquid surveillance. Mechanical reproduction. Smart cities.

1. INTRODUCTION

One can extend the concept of aura developed by Walter Benjamin (2009) in his seminal writing on the mechanical reproducibility of the work of art to the city (BENJAMIN, 2009; ELLIOTT, 2011; SAVAGE, 1995), not only to structures without singularity and personality but also to the urban environment itself inherited from a Hausmannian modernity (BENJAMIN, 1999; HARVEY, 2003). In an age of extreme and intense reproducibility, how much of the aura of the urban is compromised in the name of fitting in 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? 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? (ADORNO; SCHOLEM, 1994; BRAGA; RUBBO, 2018; LÖWY, 1998, 2013, 2015).

Urban environments, permeated by the concomitance of internal and external factors, such as social relations, housing configurations, use of products and services as well as - more recently - Information and Communication Technologies (ICT) and the Internet of Things (IoT), are increasingly subject to a standardization logically averse to authenticity. Benjamin, as Löwy (2002) states, is concerned about the threats that technical and economic progress "poses to humanity," so how to preserve "humanity" and urban aura in the face of an era of extreme reproducibility? What is the role of the urban planner or anyone who works with the city in the face of constant onslaughts from the instruments of intermittent progress? The answer, following Benjamin (2007), succinctly, is to always keep in both analysis and praxis an "organized pessimism". 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 or of brushing history against the grain and "unlimited distrust" (BENJAMIN, 2007, 2009; LÖWY, 2002, 2011).

The concept of "smart cities" arises from the proposal of interaction of new technologies (ICTs and IoT) with human and social capital aiming at a higher quality of life of urban environments (ALBINO; BERARDI; DANGELICO, 2016) and is at the same time a development strategy as a horizon (GROSSI; PIANEZZI, 2017; SCHAFFERS, 2012). Even though it brings in its theory and practice problems, challenges and misrepresentations, it is, without a doubt, the analysis model that best reflects the future challenges of the urban environment (ANTHOPOULOS, 2017; BATTY *et al*., 2012; BAKICI; ALMIRALL; WAREHAM, 2013; FERREIRA, 2019; PIRES; MAGEE; HOLDEN, 2017; WIIG, 2015a). In a future whose deepening influence and dependence on technology is virtually impossible to avoid, one must unravel all the minutiae of

the range of changes brought about by this imbrication of technology in society and the ubiquity of the built environments (MOROZOV, 2018; MOROZOV; BRIA, 2019; BRUNO *et al.* 2018).

When Benjamin (2009) states that "having the experience of the aura of a phenomenon means endowing it with the capacity to return the gaze," little did he know that in fact the urban phenomenon would look back at us via surveillance technologies. The current reality is that of the urban aura subjected to these technologies and the experience of every citizen being compromised by a schizophrenic post-panoptic (BAUMAN, 2014; FOUCAULT, 1999).

This compromise of the aura and experience undergoes an alienation of the urban and reification processes, *i.e.*, standardization and loss of individuality and subjectivity in the face of a movement towards homogeneity of what it is to be human (HONNETH, 2018). Benjamin was initially concerned with the loss of the uniqueness of the work of art and moved on to analyze the urban phenomenon, and this article proposes to initiate a discussion on the aura of the urban environment where post-panoptic reason reigns (FOUCAULT, 1999; BAUMAN, 2014).

2. OBJECTIVES

This article aims to draw a parallel between Benjamin's (2009) concept of aura and Bauman's (2014) post-panoptic concept, analyzing the issues related to surveillance in the prism of smart and sustainable cities. Finally, it seeks to point out opportunities and gaps in the research on the themes worked.

3. METHODOLOGY

The methodology of this study is composed of three stages: i) conducting an extensive bibliographical survey; ii) descriptive analysis of central concepts to be developed and discussion of them; and iii) indication of prospects, pathways, and theoretical and practical research efforts of analyzed objects.

4. RESULTS

4.1 The concept of aura and urbanity in Benjamin

Benjamin (2009) defines aura as a singular figure, composed of spatial and temporal elements: "a unique manifestation of a remoteness, however close it may be." The author argues that the destruction of the aura stems from two specific points: the first is the need to make things closer, and the second is the desire to "overcome the uniqueness of all facts through their reproducibility." It becomes increasingly clear the quality of reproduction, of copy with the intention of "orienting reality towards the masses and the masses towards reality" (BENJAMIN, 2009).

However, the deepening of this process has made it more irrational, the capacity of reproducibility to strip the aura from something becomes almost ignored, or the total reversal of Benjamin's concern occurs. The greater the capacity of reproducibility, the greater the value of the object and of the work. There is still a search for uniqueness, for authenticity, but the

value of the work and of the artist is now determined by the capacity of sharing and engagement of the created object, or the copying of this authenticity and originality by others.

In other words, the value of display has not only supplanted the cult value, but has almost completely absorbed it. The cult value, previously associated with a ritualistic reserved for the few, is now associated with the capacity and value of exposure, *i.e.*, the greater the exposure value, the greater the cult value of an object or work. There is then, a cult of reproducibility itself.

Benjamin also states that the cultural heritages, the transgenerational arts present in the urban environment, represent and symbolize barbarism in a way. Their survival attests to the representativeness to a certain degree of the interests and values of dominant classes, even if in a diffuse and dispersed way, *i.e.*, the "auratic" condition of these "cultural treasures." These works "owe their existence not only to the efforts of the great minds and talents who created them, but also to the anonymous toil of their contemporaries" (BENJAMIN, 2007).

4.1.1 Changes in the perception environment

As shown above, there is a cult of reproducibility, and this 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 a supposedly unique 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), less and less dissociable, cause an irrationality in the perception of identity. Identity is oriented towards the masses, and the masses towards identity.

In this context, the importance of analyzing the changes in the environment 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 must 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, like everything that possesses an "auratic" condition, it represents those who created it and those who work in it, that is, in the urban "work", the relationship between the rulers and governors of the civilizing process and those whose defeated condition is hidden, erased and suppressed is made explicit (BENJAMIN, 1999, 2007, 2009). The means of perception of the urban in the form of smart city technologies are deployed, controlled and operated by the rulers of change, the ruling classes (BENJAMIN, 2009; FUCHS, 2010, 2012; LÖWY, 2002).

4.2 Panopticon and Post-Panopticon

To better understand Foucault's panopticon (1999), one must resort to an architectural

metaphor. The figure of the panopticon, 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, but the inmates could 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, modern society' logic of discipline operates, which, through imposed surveillance, controls and coercively directs citizenship and living in the society (FOUCAULT, 1999).

Figure 1 - Plan and vertical layout of Jeremy Bentham's Panopticon, 1787.
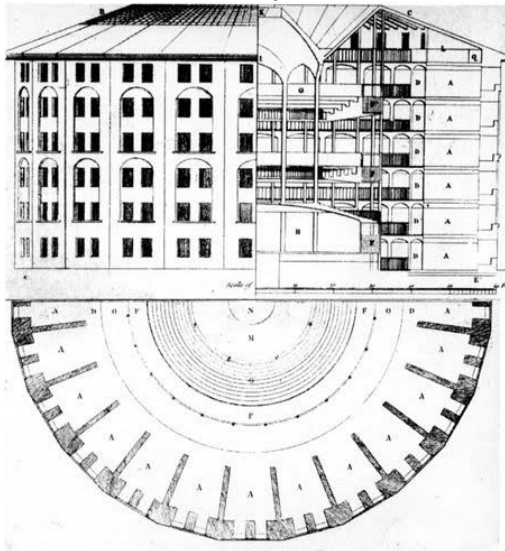
Source: NASCIMENTO, 2008.

Figure 2 - Detainee inside the cell in front of the Panopticon surveillance tower.
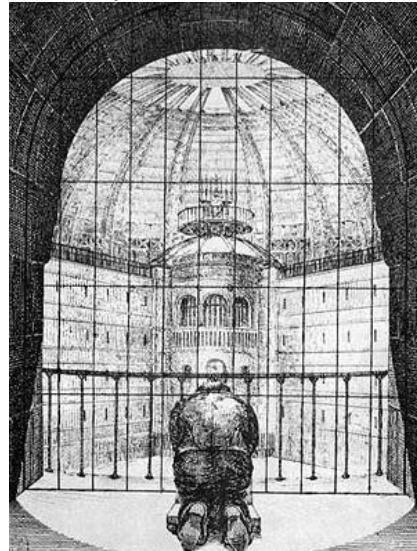
Source: FOUCAULT, 1999.

Bauman (2014), building on Foucault's panopticon (1999), states that in today's power relations, the watchman of the architectural metaphor of the panopticon, the one who holds control and surveillance capacity, now has the frightening possibility of "at any moment, fleeing to some unreachable place - to pure and simple inaccessibility," while maintaining his surveillance capacity. This surveillance is itself somewhat diffuse, for its data-based nature observes carbon-based beings 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 (MOROZOV, 2018; BRUNO *et al.* 2018).

4.3 Smart cities and digital control

But what does Bauman's Foucauldian post-panoptic (2014) and Benjamin's (2009) loss or fading of aura have to do with the city and the urban? The post-panoptic operates in the loss of the aura realm, for the more dehumanized the objects and information that make up and enable liquid surveillance are, the easier the process of deepening this surveillance becomes.

If the value of aura, individuality, and the work depend on the value of exposure and capacity for reproducibility, as already demonstrated in this article, the more data provided and

reproduced, the more value there is. Consequently, individuality and the work become more susceptible to post-panoptic control and surveillance. Therefore, the urban environment - physical and virtual space, plus the sociocultural aspects - represents the prison where human subjectivity is in a process of watched destruction.

With the perspective of more and more technologies being implanted in the city, the tendency is the worsening of this process. The technologies themselves may not have the aim to exert control and surveillance, but their nature allows this distortion. It is necessary to adopt norms and regulations capable of curbing this supra territorial surveillance, unreachable, inaccessible and incapable of being held accountable (BAUMAN, 2014; DOWBOR, 2020; SABARIEGO; AMARAL; SALLES, 2020).

4.3.1   Smart cities as development strategies

Constant debates take place about the future of cities 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 (BIBRI, 2017; HOLLANDS, 2008, 2015; WIIG 2015a, 2015b). The point of criticism is not on the economic promotion, nor on the development tied to it, however, they should be closely observed in order to realize which strategy and which economic policy they subscribe to, one that seeks to remedy socio-environmental, political, and economic inequalities or to deepen them.

A common strategy is to create a brand for cities, promising advantages, incentives, and profits to external and internal investors (WIIG, 2015b). "Digital City", "Intelligent City", "Ubiquitous City", "Knowledge City", are just some of the most prominent terms that at one time or another tried to establish themselves as the true definition of what a smart city would be, as well as the possessors of the true "smart development strategy" (MORA, 2017; FERREIRA, 2019). The dispute occurred in academia, but was fueled by the market, by the desire to own the smarter, more sustainable, more humane, and more resilient label (FERREIRA, 2019; WIIG 2015a, 2015b).

Among the various development strategies or modes of existence in smart cities, three can be identified: (1) state and technology driven urban development strategies; (2) forms of platform urbanism led by companies and corporations; and (3) citizen and civil society driven urban interventions based on data and technologies (SÖDERSTRÖM, 2020; FERREIRA, 2019).

The former can follow either a supply logic, where technology companies in some form of partnership with the state provide a product or service, or by a demand logic, 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 remedy. However, Söderström (2020) and Ruppert (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 a process of emptying that also pervades a neoliberal economic logic (FERREIRA, 2019; GROSSI; PIANEZZI, 2017; PIRES; MAGEE; HOLDEN, 2017; WIIG 2015a, 2015b).

The second form, based on the platform economy, is "arguably more impactful" than the first in the current context (SÖDERSTRÖM, 2020). 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 of these platforms, platform urbanism increasingly establishes itself as a governing force in the city.

The third, according to Söderström (2020), is driven by "Data Activism" that "produces and uses data - not produced or disseminated by the State - to enable rights claims in the context of social or environmental injustice and public inaction." However, this third model, according to Ferreira (2019), also pervades by encouraging innovation, entrepreneurship and the participation and collaboration of society, and may cater to the ruling classes, working to perpetuate the logic responsible for creating the problems that gave rise to citizen initiatives.

These modes of existing are not exclusionary, however, in cities whose cultural, economic, political, or social realities make one of these models impossible or limit it, there is a tendency for the others to stand out. The context of the COVID-19 pandemic, says Söderström (2020), helps to reveal more easily the most problematic uses and risks, as well as the opportunities related to these three modes of existence.

Advocating citizen and civil society driven urban interventions promotes, to a certain extent, the retention of aura as well as the diminution of supra-state post-panoptic digital control. By encouraging co-creation with citizens, *i.e.,* the community and representatives of the culture and identity of a given locality, the State allows for the emergence of a unique, smart and 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 influenced is an entrepreneurship native of an internationalized and globalized urbanity, where the flow of international capital and technologies is almost inseparable from the urban fabric (FERREIRA, 2019; GROSSI; PIANEZZI, 2017; SÖDERSTRÖM, 2020; SONN; SHIN 2020; THATCHER; O'SULLIVAN; MAHMOUDI 2016)?

4.4 Digital capital and urban virtuality

The power and influence of capital in urban development planning and strategies is undeniable. To address rights to the city, dynamics of digital control in the city, and urban studies in general, disregarding the economic influence is a futile effort. Capital is a fundamental actor (HARVEY, 2003, 2005).

To perceive the ways of capital before the emergence of the internet and the technologies coming from it, was already a Herculean work, 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; GUATTARI, 2017; LÉVY, 2011). This article then seeks to raise initial considerations about the role and dynamics of this digital capital inserted in urban dynamics, especially in the context of smart cities.

Initially, one can understand the virtual as "a node of trends and forces that accompanies 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 comprehended, to the real. The virtual is a set of potentialities always in metamorphosis and development. As Deleuze (1968) states, "the virtual possesses a full reality, while virtual". Therefore, despite its immateriality, it realizes itself and forms a rhizome that increasingly belongs to and is inseparable from the real-

material environment, assuming the position of conditioner and conditioned. Taking this to the question of the dynamics and the 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 (FERREIRA, 2019; HOLLANDS, 2008, 2015; GROSSI; PIANEZZI, 2017; PIRES; MAGEE; HOLDEN, 2017; WIIG 2015a, 2015b).

With the emergence or deepening of understanding about smart cities, a new form of investment and urban value generation emerges. A virtual, mostly immaterial form, but one that deepens the logic of capital (FERREIRA, 2019; WIIG 2015a, 2015b). Instead of investing in a new physical development or area, it is enough to reinvest in an old one, either by the owner of the devalued property, trying to make it more attractive, or by the government, in the creation of a new digital infrastructural mesh (FERREIRA, 2019). This digital capital is global and in constant motion, almost impossible to be tracked or to actually have a single source, it is multidimensional and transcends an idea of State sovereignty. It is, in all respects, a much more complex and entangling rhizome than non-digital capital.

4.5 Criticism and Considerations

Development strategies mirror the commodification of the term "smart cities", treated as a label that is often empty but has added value (FERREIRA, 2019; HOLLANDS, 2008, 2015; WIIG 2015a, 2015b). There are cities where "smart" translates into technological advancement, not always available or at the service of the population as a whole. When there is a service, it boils down to high-speed internet, free wi-fi spots, or apps for urban mobility that are not *per se* bad, but do not make a city smarter in their exclusivity (GROSSI; PIANEZZZI, 2017; LYONS, 2018, 2020; WIIG 2015a, 2015b). The mere possibility of being connected, after all, does not translate into smartness, let alone actual connectivity. There is, however, a pessimistic analysis where there is the creation and dominance of a new urbanity, leaving aside the industrial/real estate capital of the past, to give way to immaterial technological and informational capital (HOLLANDS, 2008, 2015).

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 rely on the importation of human capital. And this capital, adds to the already segregated socio-political dynamics, increasing it (HOLLANDS, 2008). This is not the only reason smart cities may become small connectivity clusters in prime areas of 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 increased polarization between empowered citizens and the poorer population, often illiterate regarding ICT's (HOLLANDS, 2015). It is faster to import ready-made human capital, requiring little or no investment, than to create new capital. The latter demands time and high investments (ANTHOPOULOS, 2017).

This example also serves to understand a little better the development strategies of smart cities. There is only co-creation if the collectivity of that city is empowered to create, otherwise the movement will be top-down with companies or the State importing Human Capital (FERREIRA, 2019). However, a policy of social inclusion through education and training, a possible solution to such problems, will result in an environment of desirable innovative

potential and high quality of life, further raising the immigration rate. The difference now, is that the environment, with more equity, will be able to incorporate this external human capital in a more distributive, less segregationist way (ANTHOPOULOS, 2017; BIBRI, 2017; HOLLANDS, 2008, 2015).

Making an analysis through Walter Benjamin's writings, we can point out that digital capital and the corporate and neoliberal form of the smart city, by cherishing an accelerated progress of high reproducibility, makes the process of fading or loss of aura extremely accelerated, establishing a new aegis to the post-panoptic, an instrument of perpetuation of inequalities and defense of the dominant classes, of the rulers whose history full of the most varied forms of barbarism is still being told.

4.6 Ramifications

The following are some questions to be looked at in future studies and research:

- What does the shift, or rather migration of influence over urban spaces and infrastructures to the immateriality of new technologies mean? How to control and practice urban politics, historically material and real, in an era where the great capital that controls urban life is not found in buildings and classic infrastructure, but in data volume, in the ability to manage it and the infrastructure for this is of a diverse and constantly expanding nature.
- If the investment is made in something immaterial, where does this investment go? What is the physical guarantee in case of breakage or failure of the development plans adopted?
- How to deal, in the so-called smart cities already established and in those still under construction, with social, income, education and opportunity inequalities?
- Is it possible to create a development strategy in smart cities that is non-predatory and socio-politically fair and inclusive? If so, how can this strategy be implemented in an existing community with an adverse culture?
- Can the instruments foreseen for urban policy by the city statute law help in this process, forcing or controlling the development to the desired path?
- What is the role of the Democratic State of Law in this reality, how should it manage something non-tangible, and even guarantee that this immaterial object promotes and is in accordance with its fundamental principles and rights?
- How considerable is the influence of Digital Capital in urban politics?
- In a reality where the post-panoptic is already a norm, can control over liquid surveillance be regained?
- Can the already lost or destroyed "aura" be regained?

5. CONCLUSIONS

This work carried out a wide and profound bibliographic review about the writings of: (i) Walter Benjamin, regarding aura and his understanding and vision of progress; (ii) Michel Foucault and Zygmunt Bauman concerning the panopticon and post-panopticon; (iii) Pierre Lévy, about the virtual and Gilles Deleuze and Féliz Guattari, regarding the rhizome; and (iv) an extensive list of articles and books about smart cities and surveillance technologies. The main thread of the analysis was Benjamin's writtings.

The loss of the urban aura, a consequence of the high reproducibility of development strategies guided by smart city technologies, exists in a process of symbiosis with the post-panoptic condition of liquid surveillance. For example, the mode of existence of smart cities with the greatest impact is that of platform urbanism, which promotes a massive production of data linked to the urbanity and its citizens. In this sense, broader approaches are imperative.

The subject of smart cities is usually restricted to a more technical analysis, as if such initiatives did not have profound social and economic consequences, as well as instruments for intervention in the urban environment. It is essential and urgent to analyze other aspects intrinsic to the theme, and as a suggestion of research directions this work pointed out the need to address the smart cities modes of existence, its impacts on the urban aura, the loss of subjectivity, the digital capital, among others.

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