



The Techno-Political Order of Smart Cities

An analysis through an Arendtian understanding of politics

Selen Eren

UNIVERSITY OF TWENTE.

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politics*

A Master Thesis
by Selen Eren

First supervisor:
Dr. Nolen Gertz

Second reader:
Dr. Michael Nagenborg

Msc. Philosophy of Science, Technology and Society (PSTS)

Faculty of Behavioral, Management, and Social Sciences
Enschede, the Netherlands

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To my hidden hero, who turned my overwhelming journey in Twente into a miracle...

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SUMMARY

For the proponents of business-led smart cities, smart urban projects are *non-ideological evidence-based* projects benefiting *everyone*. In their narrative, the concept of *politics* refers to the mere administration of urban issues like tax management, traffic control, and waste management that spur the private sector, entrepreneurialism, sustainable economic growth, and ultimately, social progress and citizens' quality of life. With the assistance of algorithms, politics seems to become about designing specific algorithms, fed with information concerning the abovementioned desired outcomes, to automatically regulate and quickly adapt to the flow of humans and things. Similarly, *citizens* are viewed as producers and consumers of data, ensuring that algorithms can function.

Urban scholars (e.g. Hollands, 2008, 2015; Vanolo, 2014, 2016; Gabrys, 2014; Sadowski 2015, 2016; Kitchin, 2014; Cardullo & Kitchin, 2017; Lombardi & Vanolo, 2015), however see these supposedly non-ideological projects tarnished by neoliberalism, which *subjects politics to the service of markets* and *creates passive citizens*. They propose to include citizens more in designing cities, even though the suppliers of these projects already face problems with engaging citizens. To address such a dilemma, this thesis asks: *How can an Arendtian understanding of politics contribute to analyses of politics and citizenship envisioned in smart city discussions?*

Such analyses require further deliberation because the source of the problems these urban scholars point to, I argue, is not in contemporary neoliberalism, but deeper in the roots of Western political thought: in liberalism itself. From an Arendtian perspective, if liberal assumptions concerning politics (as a means to reach the good life) and citizenship (self-interested good-life-seekers) are maintained and algorithms are perceived to outperform humans in determining how to reach the good life, then the willful abstention of humans from politics/citizenship would only exacerbate in smart cities and lead to a renouncing of *fully human life*.

To avoid such a future, we need to create public spaces where *people can become citizens again* through *active* participation in the matters that concern them; we need to discuss the socio-material and technical conditions needed to create such spaces; and finally, we need to find out whether scholars/political leaders have any responsibility to fill these spaces instead of only creating them, and if so, how.

INTRODUCTION

“According to Navigant Research, [the smart city] market will grow by 10 percent annually, from 40 billion dollars in 2017 to 98 billion in 2026”, states Siemens (2017), one of the supplier companies of smart city projects. Navigant Research’s most recent report (2018) shows that there are already 335 smart city projects in 221 cities around the world. These numbers suggest the phenomenon, known as the smart city, is increasingly growing. While it is difficult to find a singularly held definition in the literature (Vanolo, 2014), according to Kitchin (2014), the concept of *smart city*¹ refers to the cities that are increasingly composed of, monitored, managed and regulated in real time by pervasive and ubiquitous computing embedded into the urban fabric. Smart city technologies mainly consist of information and communication technologies (ICTs) such as Internet of Things infrastructure, sensors, cameras, algorithms, urban control rooms, city dashboards, and real-time information apps (Coletta & Kitchin, 2017). These technologies are said to provide city managers² and, in some cases, also citizens, with real-time data enabling real-time analysis of city life to enhance efficiency and sustainability in city governance (Kitchin, 2014). This is what supplier companies of smart city projects offer in nutshell.

More specifically, these suppliers promise to provide city managers with sophisticated data analytics and algorithms that enhance political leaders’ ability to make better decisions, and thus, help them to improve citizens’ lives. These decisions are claimed to be ‘better’³ because such technologies are able to analyze vast quantities of data to, supposedly, make sense of complex interactions between different elements of cities such as people, things and nature as well as give data-driven insights concerning these interactions by predicting the behavior of these elements in ways humans are not capable of. Part of the attractiveness of these projects comes from the way they promote

¹ Italics will be used throughout this thesis to emphasis on words or group of words, distinguishing them from the rest of the sentence or the paragraph.

² Throughout the thesis, *city managers* will be used interchangeably with *political leaders*.

³ This type of quotation mark is used to indicate that the word(s) in between is controversial in the context or has a contested meaning in general.

themselves as pragmatic, neutral, non-ideological, and equally beneficial for all citizens (Sadowski, 2016; Hollands, 2008, 2015). Hence, what political leaders like about these projects is their enhanced ability to make better decisions, but more importantly, with the greatest guarantee that their decisions will be the best one.

However, urban scholars, who work specifically on smart cities such as Hollands (2008, 2015), Vanolo (2014, 2016), Gabrys (2014), Sadowski (2015, 2016), Kitchin (2014), Cardullo & Kitchin (2017), and Lombardi & Vanolo (2015), criticize these projects by highlighting how they hide their ideological agendas behind the narratives of being non-ideological. Although supplier companies like IBM (Duggan, 2013) declare that their projects are citizen-centric and benefit all citizens by focusing on their needs instead of ideological quarrels in politics, the critical urban scholars claim that most of these projects, and their accompanying technologies, produce and reinforce *neoliberal logics*, that serve the interests of states and corporations more than those of citizens (Cardullo & Kitchin, 2017, p.4). To phrase differently, top suppliers are accused by urban scholars of imposing their own generic agenda of proposing high-tech, but costly, quick-fixes onto societies without thoroughly considering the needs of the various citizen groups within them. Moreover, in these projects, citizenship practices are claimed to be restricted “within the bounds of expected and acceptable behavior” rather than consisting of transgression or resistance to social and political norms; thus, these practices are labeled as *a form of neoliberal citizenship* (Cardullo & Kitchin, 2017, p.17-18). Therefore, what the urban scholars criticize in these business-led smart city projects can be summarized as follows: 1) *politics in the service of markets* and 2) *passive citizenship*. As an alternative to such projects, critical urban scholars (Hollands, 2008, 2015; Tenney and Sieber, 2016; Cardullo & Kitchin, 2017) often propose to deploy politics and smart city technologies in the service of urban dwellers by involving citizens more in the process of determining their own problems without imposing what the coupling of city managers and suppliers think to be urban problems. Accordingly, urban scholars opt to encourage solving urban problems through “more cooperative and participatory uses of new technology” (Hollands, 2008, p.62).

Although urban scholars mainly target neoliberalism – a relatively recent political ideology starting to influence governments after the 1980s – as the underlying reason for the aforementioned two problems, they are not as recent as neoliberalism is. The

assumption that societal progress automatically follows economic growth and the subsequent adapting of the roles of state accordingly are two major constitutive elements of *liberalism*, the underpinning ideology of traditional Western political thought. Moreover, the *liberal model of citizenship* is definitely not the one that defines citizens as political agents participating in public affairs (Leydet, 2017). By criticizing neoliberalism, urban scholars risk taking the liberal understanding of politics and citizenship for granted, and thus, overlooking how liberalism already capitulate to what they want to avoid.

As these urban scholars cannot exhaustively identify the source of the problems they have identified in these business-led smart city projects, their proposed solution cannot work either. They demand more citizen participation without discussing why, for instance, suppliers, like IBM, that are accused of having a limited understanding of citizen participation, already face problems with engaging citizens in their projects (Abbas, 2016). Furthermore, urban scholars demand more citizen participation without giving much consideration to one of the main problems the contemporary democracies deal with: low voter turnout (Flickinger & Studlar, 1992; Kostadinova, 2003, also see Institute for Democracy and Electoral Assistance (IDEA)). More importantly, the concept of *citizen participation*, in and of itself, is already problematic. It assumes that people are already citizens of a country right after they are born within the borders of that country, independent of their participation. Hence, demanding more citizen participation, within these circumstances, creates a dilemma. Moreover, the relationship between what these urban scholars criticize about the politics and the citizenship envisioned in smart city projects and liberalism has not received much attention in the literature so far.

To address this dilemma and to fill the literature gap, or to deepen the discussion about where these problems of *politics in the service of markets* and *passive citizenship* actually stem from, I will draw on political philosophy to first explain what liberalism is and then to reveal its traces in these smart urban projects. After having clarified why the target needs to be liberalism, I will explain why *politics in the service of markets* and *passive citizenship* are considered problems to begin with and to understand how to address them; here I will rely on Hannah Arendt and her genealogical approach. By showing how the established definitions of politics and citizenship in liberal democracies

are not given, but historically constructed, Arendt questions these definitions, and thus, the Western tradition of political philosophy starting with Plato. Arendtian understanding of politics is considerably relevant for contributing the analyses of the politics and citizenship envisioned in smart city discussions, not only because she provides a framework to understand why the liberal model of politics and citizenship are problematic, but also because her analysis of traditional Western political thought and *modern age* expose the reasons *why* such urban plans are so appealing and *how* humans will evolve with these plans. Moreover, scholars (Mattern, 2016; Calzada, 2017) have already started to use quotes⁴ and/or concepts (i.e. thoughtlessness, see for instance McQuillan, n.d.) from Arendt's works while addressing the problems they have spotted in smart urban projects. Through these quotes or concepts, they seem to warn their readers about the passive, automated performance of citizenship and to highlight "the democratic engagement through dialogue and debate" (Mattern, 2016). This thesis, however, aims to take such Arendtian analyses of smart cities further and expand on what they have already started.

As I demonstrated in the beginning with Navigant Research's statistics concerning the smart city market, the concept of smart city seems to have a decisive importance in shaping societies in the near future. Thus, apart from its theoretical relevance of offering a better methodology for criticizing (a genealogical approach) and contemplating alternatives, this thesis has a high societal relevance as well by analyzing how the future living space of humankind will look and what roles will be assigned to city dwellers, changing who they are.

To make the societal relevance of my thesis clearer, I make the following argument through an Arendtian understanding of politics: Smart city proponents think that if humans separate themselves from the troubles and annoyances that come with politics, with the contingencies of open-ended debates, by delegating political decision-making processes to some algorithms, they can still stay who they are, and moreover, can attain a much easier life. However, what they ultimately reach will not be an easier life, but an animalistic life deprived of the most human activity of politics – doing the

⁴ "The trouble with modern theories of behaviorism is not that they are wrong but that they could become true (...)" (Arendt, 1998, p.322, as cited in Mattern 2016 and in Calzada 2017).

unexpected, free from the necessities of nature and from pre-determined ends and goals (discussed in section 3.2.).

To expand upon what has been discussed so far, this thesis asks: *How can an Arendtian understanding of politics contribute to analyses of politics and citizenship envisioned in smart city discussions?* This main research question will be addressed by answering three sub-questions, each of which constitutes a chapter of the thesis:

1. *How are politics and citizenship envisioned in smart city plans and analyzed by critical urban scholars?*
2. *What are the underlying assumptions of these visions?*
3. *How would an Arendtian understanding of politics analyze these underlying assumptions and contribute to the analyses of politics and citizenship envisioned in the smart city discussions?*

The first chapter, in response to my first sub-question, will set the stage for my argument by first introducing both sides of the discussions: the main visions concerning politics and citizenship in smart cities from the perspective of leading proponents of them and the responses of urban scholars to these visions. In the second chapter, I will move to build my argument by claiming that the underlying assumptions of the smart city proponents' visions concerning politics and citizenship stem from liberalism, not neoliberalism, as the urban scholars assert. To answer the second sub-question, I will first examine the philosophical assumptions of liberalism and show how those assumptions not only can already be found in the smart city proponents' visions but also underpin the problems that urban scholars have associated with neoliberalism: politics in the service of markets and passive citizenship. After having revealed the relationship between liberalism and the visions concerning politics and citizenship in smart cities, I will analyze this relationship through my readings of Hannah Arendt and her understanding of politics in the third, final chapter. To be able to delve into how Arendt would analyze what is perceived as politics and citizenship in these discussions, I will first clarify what *politics* means for Arendt. To conclude, I will emphasize how an Arendtian perspective would differ from, and thus contribute to, other analyses of politics and citizenship in the smart city literature. Subsequently, based on Arendt's unorthodox thoughts on politics, I will explore how to contemplate about alternative visions concerning politics and citizenship that go beyond the liberal one.

Before continuing with the first chapter, now I would like to briefly touch upon the methodology I use to study the aforementioned research question. This thesis draws on a literature study of smart city/urban studies and political philosophy. In the first chapter, to introduce the visions of the leading proponents I study the written and visual media contents produced by them, such as media releases, websites, blogs, reports, videos, and lastly, the speeches of the chief executive officers (CEOs). To keep a focused scope, here, I confine myself to two supplier companies – IBM and Cisco – whose market size and other metrics put them on top of other suppliers (Navigant Research, 2016, cited in Sadowski, 2016, p.14-15) and one technology publisher and venture capitalist, Tim O'Reilly, who popularized the terms *open source* and *Web 2.0* (O'Reilly, 2004, 2009). To introduce the urban scholars' perspectives, I review the academic articles written with a critical stance in the last ten years starting from 2008, because among the most commonly cited articles in the literature, Robert Hollands' article dated 2008 appears to be the oldest one. In the second chapter, I delve into the classical works of political philosophy to unravel the relationship between the assumptions of liberalism and smart city projects. Lastly, I build my Arendtian analysis of politics and citizenship on my readings of *The Human Condition* (1958), *On Revolution* (1963) and *On Violence* (1970).

Finally, although in the first paragraph I have enlisted what smart city technologies consist of, throughout the thesis, I will direct my attention to algorithms. In the literature, they are defined as, “sets of defined steps structured to process instructions/data to produce and output” (Kitchin, 2017). I will mostly focus on algorithms because they are claimed to be able to provide political leaders with the capability to make better decisions based on data-driven insights. In other words, algorithms are the set of technologies upon which the political decisions of future cities deeply rely. However, I will not study algorithms in general, but algorithms as designed or envisioned by top suppliers of business-led smart city projects like IBM and Cisco.

CHAPTER I:

POLITICS AND CITIZENSHIP ENVISIONED IN SMART CITY DISCUSSIONS

This chapter will provide the basis for the overall argument of this thesis by introducing two sides of the smart city discussion concerning the future of politics and citizenship: the visions of the leading smart city proponents and the analyses of these visions by critical urban scholars. Each side will be presented in two subsequent sections (1.1.; 1.2.), and their visions concerning politics and citizenship will also be addressed in two separate subsections (1.1.1.; 1.1.2.). The main points of the chapter will be summarized in the third and final section (1.3.), as conclusive remarks.

1.1. The smart city proponents' perspective: Data-driven 'politics' in cooperation with 'citizens'

1.1.1. 'Non-ideological evidence-based' governance

In the past, we could understand that there was some mysterious unity to various dimensions of life; but we could not understand its dynamics. We could not observe and measure the interactions. We basically operated like a drunk, who looks under the street lights for his keys; because that is what he could see. So, it is not the world became a system of systems, it has always been a system of systems; now *we can see it* [emphasis added]. The fact that we can see it transforms our situation on the planet; and because now we have access to more real-time data of the way these different systems interacting with each other, we can make more intelligent decisions. (IBM, n.d. a)

So, states IBM, one of the leading supplier companies for smart city projects, in an official website video, in which the company introduces its *Smarter Planet* vision. Sophisticated analytics and algorithms, the company claims, can finally make sense of the world, which became a *sensored world* – due to the sensors, cameras, and meters embedded in things. The world has started to ‘talk’ or ‘express itself’ to the intelligent systems; these systems have, in turn, started to ‘think’ or ‘reason’ (IBM, 2016) by analyzing vast streams of data the world ‘communicates’ and recognizing recurrent patterns in how the world ‘behaves’. With the assistance of these intelligent systems that have the ability to ‘think’, humans now can amplify their decision-making capabilities more than ever. IBM (2016) has labeled its intelligent systems *cognitive computing*.

The pillars of IBM’s *Smarter Planet* vision are instrumentation, interconnection, and intelligence (Sadowski, 2016, p.31). Each pillar represents a layer of technologies and services that are constructed on top of each other to culminate in a smart city. The foundational layer, instrumentation, can be thought as the physical infrastructure of the smart city and is composed of sensors, actuators, and distributed intelligent sensors (Kehoe et al., 2011). Its purpose is to capture and control data. The middle layer, interconnection, “clusters and integrates the cities systems by embedding computational power into things and linking them into communication networks made of billions of (...) other things” (Sadowski, 2016, p.31). Thus, its purpose is to allow data and commands to flow in and between the systems. The top layer, intelligence, is comprised of the advanced and sophisticated software/algorithms that make sense of all data flowing in the networked systems (Sadowski, 2016, p.31). The cognitive computing, IBM offers to cities is the top layer of this integrated infrastructure.

According to a Cisco-sponsored white paper by the consulting firm IDC Government Insights, “smart city technologies integrate and analyze massive amounts of data to anticipate, mitigate and even prevent many problem” and the proclaimed offerings of them are “*sustainable economic development* (...) and key services to provide a *higher quality of life* for citizens” (Clark, 2013, [emphasis added]). To reach these goals, Sadowski (2016, p.39, [emphasis added]) claims that “mobilizing effective smart solutions will require orienting governance towards (...) collaborating with private sector partners and *becoming entrepreneurial – which leads to innovation [and] growth*”.

According to Julia Glidden, General Manager of Global Government Industry for IBM, cognitive computing is “the next *logical* step for government” (Maclsaac, 2016, [emphasis added]). As humans can finally gather the real-time data of what is happening and where, our cities become much more knowable and controllable in unprecedented ways. Thus, in a *sensored city*, any type of government agencies, Glidden continues, can benefit from data-driven insights given by the intelligent systems (i.e. IBM Watson) to better protect, serve, and engage citizens (Maclsaac, 2016). More importantly, it is claimed that decisions can now be made based on objective, comprehensive and rational evidence, as opposed to anecdotes, intuition, populist promises or partial, selective and ideological evidences. The tendency towards “evidence-informed policy” (Kitchin, 2014) built upon the so-called ‘neutral big data’ explicitly reveals itself in the speech of the former Chairman and CEO of IBM: “Building a smarter planet is realistic precisely because it is so refreshingly non-ideological” (Palmisano, 2010). In another talk Palmisano gave one year later, he again highlights how smart city projects *cannot* be ideological, but only *pragmatic*: “If you’re a mayor, or a police chief or the head of an urban school system, you don’t have the luxury of ideology. You have to be pragmatic” (Palmisano, 2011). That is to say, the city managers need to get things done. Correspondingly the non-ideological, evidence-informed policies facilitated by cognitive computing are said to automatically benefit everyone (Hollands, 2015), while improving public services and empowering citizens by enabling them to interact with a more transparent city (Kitchin, 2014).

Effectiveness and *efficiency* are the two words that epitomize “smarter thinking”, reads one of IBM’s official blog entries on *Government Industry* (Thurlow, 2016). In a governmental context, the value of effectiveness refers to *delivering the required outcomes* for the communities that governments serve. IBM already has an idea about these required outcomes and accordingly offers some smart solutions for governments: 1) “to facilitate and scale trade, travel and immigration”; 2) to build “stronger defense and intelligence to outthink the velocity of instability”; 3) to “deliver the right services to the right citizens at the right time”; 4) “to accelerate digital transformation to improve efficiency and stimulate innovation”; 5) to predict and reduce crime to ensure the public safety, and finally 6) “to optimize tax collections, improve financial management and fight fraud” (IBM, n.d. b). To unpack what Thurlow means by the value of *efficiency*,

he confidently states that: “[the future government] *will* deliver fewer services itself and *collaborate more with private sector* and not-for-profit sector organizations to deliver the best outcomes for the lowest cost” (Thurlow, 2016, [emphasis added]).

Another political vision encountered in the literature is found in an essay by Tim O’Reilly (2013), namely *algorithmic regulation*. What O’Reilly, a contemporary, influential technology publisher and venture capitalist, proposes with this term is reputed to be the political program of the Silicon Valley (Morozov, 2014). After again having confidently declared that “it is time for government to enter the age of big data” (O’Reilly, 2013, p.291), O’Reilly first discusses some of the most common usages of algorithmic regulation in general: cars’ electronics regulating the fuel-air mix to find an optimal balance, an airplane’s autopilot system regulating the numerous factors to keep the plane aloft, or ISPs and corporate mail systems ensuring the “proper” mails reach us while filtering out spams and malware. Subsequently, what these cases have in common are listed (O’Reilly, 2013, p.289-90):

- 1) A deep understanding of the desired outcome; 2) real-time measurement to determine if that outcome is being achieved; 3) algorithms (i.e. a set of rules) that make adjustments based on new data; 4) periodic, deeper analysis of whether the algorithms themselves are correct and performing as expected.

Contrary to this outcome-based model, the current governmental regulatory models, claims O’Reilly, focus mostly on the rules and lose sight of whether, or not, those rules are actually achieving the desired outcomes. Thus, O’Reilly also calls for an increased *effectiveness* of government.

To emphasize the problems current governments face in terms of effectiveness, O’Reilly compares the governmental regulatory model with how companies like Google and Amazon regulate their desired outcomes. The main difference is the ability to quickly change the framework of rules to limit the undesired consequences, or, to quickly adapt oneself to the changing contexts solving unforeseen problems in near real-time. Therefore, instead of developing procedures for governing every sort of contingency, O’Reilly champions the idea of creating algorithms that work with a real-time, immediately adaptive feedback-loop, as algorithms can do better job of adapting to new/unanticipated circumstances compared to inflexible laws that can easily be outdated. To exemplify such principles, O’Reilly gives the example of a self-adjusting

speed limit, which would automatically change depending on traffic, weather or other relevant conditions, as an effective way to adapt to contingencies that warrant different speed limits rather than a static one which is determined once and for all. Moreover, he also recommends a “lean startup” methodology “using data to constantly revise and *tune its approach to the market*” as a good example to be taken up by governments (O’Reilly, 2013, p.296, [emphasis added]).

O’Reilly defends a vision of government analogous to what IBM puts forward, namely minimal government, which is voiced as “that government governs best that governs least” (O’Reilly, 2013, p.292). The formula behind the success of such a government, he continues, is to determine key desired outcomes (i.e. safety, health, fairness, opportunity, sustainability) to imbue the laws with, and then most importantly, build a constantly evolving set of rules (algorithms) that keep the society on course towards “the desired outcomes”. A crucial pillar of such a system is open data, as algorithms need to be fed with constant feedback to adjust themselves to new circumstances in a rapid manner.

1.1.2. Citizens in business-led smart city projects

What role are citizens envisioned to have in these digitalized cities governed by politicians assisted by cognitive computers and sophisticated algorithms? In order to answer this question, I will now move on to discuss two smart city projects developed by IBM and Cisco. Another official blog entry of IBM, named *Building smart cities with the smart citizen approach*, grants a constitutive role to citizens in smart cities: “For smart cities to be successful, the participation of both parties [officials and citizens] is required” (Abbas, 2016). As the notion of *effectiveness* – or delivering a required/desired outcome – propels smart city visions and as millions of city dwellers have different priorities and needs, Abbas (2016) thinks that the more effective way to understand these various needs and to serve citizens accordingly requires citizen engagement, either physically in meetings, forums or discussions through online platforms or mobile apps. What they understand by *citizen participation* is engaging with city managers through *crowdsourcing* and *crowdsensing*, referring to “reporting on issues such as abandoned waste, roads in need of repair and faulty traffic lights” (Abbas, 2016).

However, Abbas (2016) acknowledges that creating a citizen engagement mobile app would not automatically guarantee citizens' participation. First of all, with effective publicity methods, citizens need to be properly informed of the existence of such engagement platforms. In fact, Abbas believes that the very reason why the previous mobile apps from other companies/initiatives have failed is that these apps "were unable to sustain popularity [and] usage" (Abbas, 2016). But most importantly, Abbas thinks that "people *want* an incentive to participate" in these initiatives, incentives in the form of payment in money or prize (2016, [emphasis added]). As another option to encourage people to participate in reporting the problems they encounter in public services and voicing their needs and/or solutions is to gamify such apps so that they would give "some form of status within the community" (Abbas, 2016).

To further understand the image of citizenship, I will now briefly look at another smart-city design proposal, the Connected Sustainable Cities (CTC) project, developed by MIT and Cisco within the Connected Urban Development initiative between 2007 and 2008. As the principal value embedded in this project is sustainability, it seems like the main role citizens have in this project is to make "informed responsible choices" (Mitchell & Casalegno, 2008, p.2). With the assistance of various tiny sensors and tags mounted on buildings and infrastructure, attached to vehicles and products and integrated with wireless mobile devices like smart phones, citizens will be able to sense and monitor their behaviors and consumption patterns which in turn would be expected to result in sound sustainable decisions. The authors talk about "a new dynamic of participatory citizenship" (Mitchell & Casalegno, 2008, p.102) as a new culture that citizens need to be educated about. What they understand by *participation* seems to be quite specific: participating in making and keeping cities as sustainable as possible by monitoring their behaviors and then changing them to have less carbon and water footprint.

1.2. The critical urban scholars' perspective: 'Politics' and 'citizenship' in the grip of neoliberalism

Scholars studying smart cities from various academic backgrounds (hereafter, (critical) urban scholars) have been voicing their concerns about the *business-led smart city models* for some time. One of the most common academic criticisms is the following:

beneath the emphases on the non-ideological, pragmatic and logical aspects of this business-led smart city movements, lies a political economic ideology, known as neoliberalism (Hollands, 2008, 2015; Vanolo 2014, 2016; Sadowski, 2015, 2016; Kitchin, 2014; Cardullo & Kitchin, 2017; Lombardi & Vanolo, 2015). Before moving on to these critical arguments, I first would like to clarify what *neoliberalism* refers to.

1.2.1. Opening the black-box⁵ of neoliberalism

Neoliberalism is a buzzword widely circulated in various types of conversations without a clear understanding of the concept. Similarly, as an analytical concept, it is generally observed to be taken for granted in various literatures; the urban study literature concerning smart cities does not seem to be immune to such a problem either. Hence, in all the works I have studied closely, apart from Sadowski's dissertation (2016), it is hard to find what the authors mean by this concept, as they deploy the term without explaining it.

First, it needs to be noted that, as Sadowski (2016) highlights, *neoliberalism* is a term that is mostly used by its critics, that is to say, by the critics of some particular economic policies deployed since the 1980s. In other words, it is rare that a person would call herself *neoliberal*. But more importantly, it still remains a controversial term since not all scholars critical of contemporary economic policies would attribute these policies' problems to *neoliberalism* (i.e. Michael Sandel, Amartya Sen) although they do make similar criticisms to the scholars categorizing these problems as part of the neoliberal ethos (Brown, 2015, p.29).

According to Smith (2018), neoliberalism is an ideology and policy model which believes in sustained economic growth as the means to achieve human progress, in free market competition as the most efficient allocation of resources, in a minimal state intervention in economic and social affairs, and in freedom of trade and capital. The following excerpt showcases some of the concrete policies representing these principles:

Deregulation of industries and capital flows, radical reduction in welfare state provisions and protections for the vulnerable, privatized and outsourced public goods ranging from

⁵ According to Meriam Webster, the concept of black-box ("black-box", 2018) is in general used to indicate anything that has mysterious or unknown internal functions or mechanisms. In this context, it points to the fact that what neo-liberalism actually refers to is mostly unknown despite its wide-scale use.

education, parks, postal services, roads to prisons and militaries, (...), the end of wealth redistribution as an economic or social political policy (Brown, 2015, p.28).

The reason why the concept of neoliberalism carries the epithet *neo*, Smith (2018) explains, is because it symbolizes the call to return to the *classical liberalism* of 18th century as a reaction against the political economy of mid-20th century, namely *modern liberalism* (Heywood, 2013; Ryan, 2007). The latter emerged in the 1940s as a result of J. M. Keynes' rejection of the idea of a natural economic order based on a self-regulating market (i.e. market fundamentalism), on the grounds of the instability and unemployment the Great Depression of the 1930s brought about. Hence, Keynesian policies are based on the following idea: Growth and prosperity could only be maintained through a regulated market by putting the key economic responsibilities in the hands of the state. In other words, these policies allowed the state intervention to deal with the societal problems that had been caused by “unfettered capitalism”, such as poverty, inequality, disease, and ignorance. Although Keynesianism is considered to be the key element for the long boom of the 1950s and 60s; its popularity was damaged by the unforeseen stagflation⁶ in the 1970s. The intellectual base for the attempt to restore the factory settings of liberalism is mainly established on Friedrich Hayek's and Milton Friedman's works (Smith, 2018).

Notwithstanding the similarities between neoliberalism and classical liberalism, Sadowski, one of the few urban scholars who does not take neoliberalism for granted but instead explains his use of the term, has based his account on Brown (2015), who emphasizes not the similarities but the differences between the two ideologies. For her, neoliberalism is more than “a set of economic” policies; it is a “normative order of reason” as opposed to the classical liberalism (Brown, 2015, p.9). It does not mediate only the relation between the state and its economy but also the relation between humans and every sort of domain of their everyday life (i.e. from romance to education). To put it differently, she claims that *all human conducts* are framed and measured by the market logic, or the economic terms and metrics (i.e. profit, cost-benefit analysis, investment) dominating the market (Brown, 2015, p.10). Thus, by being a ubiquitous reason in ordering statecraft, workplace, jurisprudence, education, culture etc., the neoliberal

⁶ According to Merriam-Webster (2018b), stagflation refers to “persistent inflation combined with stagnant consumer demand and relatively high unemployment”.

reason, Brown argues, strips every human domain off of its political character and reduces them into one ruling logic: the economical (Brown, 2015, p.17). One of the consequences of the economic policies I exemplified above is the ever-growing intimacy between corporations and the state, and most importantly, the corporate domination of political decisions and economic policy, as the market logic has triumphed over various socio-cultural and political ones. Accordingly, both persons and central/local governments are expected to act like firms, that is to say, to maximize their capital value and thus their competitive positioning through practices of entrepreneurialism, self-investment, or attracting investors (Brown, 2015, p.22).

Having established a clearer understanding of neoliberalism in general – as a revival of classical liberalism – , as well as in urban literature – not only referring to a set of economic policies regulating the relation between state and its economy (as to how classical liberalism is understood), but also to a normative order of reason regulating all human conducts according to the economic terms and metrics dominating the market – I will turn to the critics who point to neoliberalism as the underlying principle for the urban governance and the citizenship in these business-led smart city projects.

1.2.2. Neoliberal urban governance

According to Hollands (2015, p.67), smart city projects are “neo-liberal urban utopias” as Provoost (2012) calls them. Despite the *citizen-centric* appearance of their solutions, these business-led projects actually prioritize business interests over the most urgent and serious societal problems (i.e. class inequalities, poverty, discrimination, social injustice) (Hollands, 2008). Vanolo (2014, p.886) also makes a similar point for the projects that take place in Italy, stating that “there are many links between neoliberal urban development policies and smart city imaginary” and “it is quite clear that the smart city discourse never touches on ‘hot’ issues such as the crisis of the welfare system” (2014, p.893). Instead, there seems to be a deterministic causal relation between ‘economic prosperity’ derived from the high competitiveness of the city and the citizens’ quality of life. To reach economic prosperity, Hollands (2008, p.311) asserts that cities actually serve global IT businesses, rather than its ordinary citizens, by creating desirable market conditions. Cities serve IT businesses because the first ingredient of this magic recipe for economic prosperity is technological determinism: It is firmly believed that furnishing

the city with all sort of ITs would automatically bring economic prosperity and subsequently improve quality of life. Kitchin also labels the prioritization of market-led solutions to city governance as “the underlying neoliberal ethos” (Kitchin, 2014, p.2) and adds that “the strongest advocates for smart development”, that is big business such as IBM, Cisco, Oracle, Siemens, “are seeking deregulation, privatization and more open economies that enable more efficient capital accumulation” (Kitchin, 2014, p.2). To summarize, it can be said that business-led smart city projects are designed to naturalize and justify what is needed for the circulation of capital and its rationalities within cities (Vanolo, 2014, p.884).

However, it is important to note that such a shift from public service to private service in urban governance is not a current trend, only arising with smart city projects’ idea of public-private partnership. Instead, it first arrived at the end of the 1980s, when the urban geographer Harvey (1989) pointed out a significant global shift in urban governance from managerial welfare to urban entrepreneurialism. In need of cash, by marketing and branding themselves in various ways, cities began to pit themselves against each other to attract global capital. Consequently, Hollands (2015, p.15) considers these smart city projects as just another “self-imposed label, a marketing device for city branding and an excuse for the domination of corporate urban entrepreneurialism models”.

1.2.3. Docile citizens

Critical urban scholars also study the image of citizenship in such business-led projects driven by profit mentality (Vanolo, 2014, 2016; Gabrys, 2014; Cardullo & Kitchin, 2017). One can observe the reoccurring theme of criticism towards the idea of a self-responsible and self-governing citizen who is expected to be *a cooperative data prosumer*⁷. To phrase differently, these projects consider citizens responsible for adapting to the on-going changes in their environment (i.e. digitalization of everyday life) (Vanolo, 2014, 2016) and willing to cooperate with authorities (private or public) on data production and consumption for whichever aspect of their life that can be

⁷ This term is coined by Toffler (1981) to point out the merge of consumers’/users’ and producers’ interests; and thus, to show how the conventional dichotomy of producer-user becomes redundant.

datafied⁸. According to Vanolo, this *responsibilisation of citizens* is the key feature of neoliberalism (Vanolo, 2016, p.33). In Gabrys' words, monitoring and managing data (or *consuming data*, for instance to balance the domestic energy use) along with feeding information back into urban systems (or *producing data*, for instance to provide energy companies and government with details about everyday usage and living patterns) are the constitutive practices of being citizens in such cities. Gabrys (2014) coins this new type of citizenship as the *sensing citizen*. In order for a smart city to work smoothly and maybe most importantly legitimately⁹, it needs citizens to *participate in the visions of city life that a particular business-led project promotes*.

However, by participating in such city life, Gabrys claims, citizens normalize and justify the limited understanding of democracy and citizen participation of these models. *Sensing citizens* are not expected and thus not encouraged to challenge the meta “rules of the game” of the smart city, which are already channeled toward “enhancing existing economic processes” (Garbys, 2014, p.45) rather than common good for a particular society. To phrase differently, the concept of citizen participation seems to be stripped of its democratic meaning that would evoke participation in dialogue and debate concerning the rationales of the underpinning rules of the system and environment they live in. Instead, citizen participation, in these projects, is reduced to ensuring the smooth operation of the smart city (Gabrys, 2014, p.38).

According to Cardullo and Kitchin (2017, p.1, [emphasis added]), this is a neoliberal conception of citizenship as it prioritizes individual autonomy and consumption choice “*within a framework of state and corporate defined constraints* that prioritize market-led solutions to urban issues, rather than being grounded in civil, social and political rights and the common good”. Citizenship practices in this conception are claimed to be restricted “within the bounds of expected and acceptable behavior” rather than consisting of transgression or resistance to social and political norms (Cardullo & Kitchin, 2017, p.17-18). Yet, in their article, Cardullo and Kitchin try to account for

⁸ According to Mayer-Schoenberger and Cukier (2013, as cited in Van Dijck, 2014, p.198) the term datafication refers to “the transformation of social action into online quantified data”. As part of the human actions mediated through ICTs leave trace behind in the form of data, people's behavior become something that can be tracked, monitored and understood through data representing their actions.

⁹ In case of a possible failure or limitation of human responsiveness, that is, a lack of interest from citizens part in participating in maintaining smart cities by aligning their behavior along with the desired outcomes the projects put forward, according to Gabrys (2014), smart cities are already designed to operate on its own, without the active participation/awareness of the citizens.

some nuances in such a conception of citizenship. The crucial conclusion of their work is that although some smart city projects have already responded to the criticisms stated above by reshaping their initiatives into more *citizen-focused* forms (i.e. IBM's third solution given in the first subsection (1.1.1.)) instead of being profit-driven, not much has ultimately changed in the abovementioned status of citizenship (Cardullo and Kitchin, 2017, p.17-18).

As can be seen in their table called *Scaffold of Smart City Participation* (2017, p.6), Cardullo and Kitchin zero in on various smart city practices by dividing them according to the *roles* that citizens play (e.g. user, consumer, recipient, co-creator) and to the *types of citizen involvement* in these practices (e.g. being nudged, consuming, giving feedback, suggesting or creating), and then, by categorizing these roles and types of involvement under four *forms of participation*: Non-participation, Consumerism, Tokenism and Citizen Power. As can be inferred from the titles of the categories, the degree of participation, and thus the intensity of the democratic values attached to it, increases from “Non-participation” to “Citizen Power”. Apart from the highly limited examples that fall under “Citizen Power” (e.g. civic hacking and living labs), which according to Cardullo and Kitchin (2017, p.18) can be “rooted in notions of social and political citizenship, rights, (...), and deliberative democracy”, all other forms of participation still consist of neoliberal citizenship practices, representing “personal autonomy, consumer choice, individuals (...) taking responsibility for their own life chances, the marketization and privatization of services (...)”. Consequently, citizen participation forms, apparently even in the most bottom-up smart city initiatives, do not seem to go beyond what the authors call as neoliberal forms of citizenship, such as providing feedback, negotiating, and *participating within an instrumental rather than normative or political frame*. Finally, their conclusion does not differ from Gabrys' aforementioned concerns: citizens are only welcomed to help provide solutions to practical issues, but certainly not to challenge and reshape the fundamental political rationalities underpinning an issue or plan (2017, p.18).

1.2.4. A proposed solution: Citizen-centric smart cities through a better citizen participation

After having spotted such problems in these smart urban plans, urban scholars (Hollands 2015; Tenney and Sieber 2016; Cardullo & Kitchin, 2017) point to a common solution to prevent the future of cities from being in the service of markets and accommodating passive citizens. This solution involves the promotion of the re-politicization of the smart city and the shift in its creation and control away from private interests and the state toward grassroots, civic movements (Cardullo & Kitchin, 2017, p.19) by “using technology to realize progressive ideas rather than see the technology as progressive in and of itself” (de Lange & de Waal, 2013, cited in Hollands, 2008, p.63). More simply, increasing citizen involvement in smart cities through “more cooperative and participatory uses of new technology” (Hollands, 2008, p. 62). These smart urban plans need to start “with the city itself and its attendant social problems rather looking immediately to smart technology for answers” (Hoornweg, 2011), or, rather implementing what the coupling of city managers and companies think to be the immediate urban problems.

In order to have such a citizen-centric shift, Cardullo and Kitchin (2017, p.18) highlight the “social and political citizenship” which can “challenge or replace the fundamental political rationalities shaping an issue of plan”. Such citizenship can resist the existing social and political norms following the common good. Whereas, Tenney and Sieber (2016, p.109) advocate for the importance of the active deliberative methods “that seek to empower citizens and influence government decision-making” as opposed to “data-driven participation” forms which “diminish the role of civic participation (...) as they increasingly supplant more active forms of participation”. The requirement of active participation, for Tenney and Sieber (2016, p.102), mostly refers to “direct interaction at public hearings or citizen panels”, as opposed to becoming walking sensors of some sort, who voluntarily produce data about infrastructure problems or provide feedback “without the need of “distracting” [themselves] from their daily lives in order to actively engage with political activities” (Cardone et al., 2013, 2014, cited in Tenney and Sieber, 2016, p.102).

The challenge for such a citizen-centric shift, again according to Cardullo & Kitchin (2017, p.20), seemingly requires “to re-imagine the role citizens are to play in

their conception, development and governance”, nothing else. Tenney and Sieber (2016, p.102) however, citing Clifford (2013) and Putnam (2015), acknowledge the increasing unwillingness of people to engage with politics on a municipal level, apart from the challenge of “re-imagination of citizen roles”; yet, they discuss neither the reasons of this unwillingness nor how to address it.

1.3. Conclusive Remarks

In the first section of this chapter, I have tried to capture the various visions concerning politics and citizenship in smart cities of both leading investors in technological (IBM & Cisco) and ideological infrastructures (Tim O’Reilly) of smart cities. To summarize the first section, their visions consist of the following points:

- What *politics* means, at least in the narratives of IBM and Cisco, is the *mere governance* of urban issues such as tax management, traffic control, waste management, public safety, defense, infrastructure, that encourage the culture of innovation, private sector (through partnership with state), entrepreneurialism, the sustainable economic growth and ultimately the social progress/citizens’ quality of life. ‘Politics’ does not supposedly need to be embedded in ‘ideological debates’ anymore, as ‘political’ decisions do not have to be grounded on some partial information, misleading populist promises or intuitions. With the assistance of sophisticated algorithms/cognitive computing, policymakers are promised to be provided with ‘non-ideological evidences’ concerning how the various components of cities interact with each other.
- It seems that for O’Reilly (2013) the desired outcomes concerning our cities do not necessarily require open-debates. Everyone would seek for a city free of the aforementioned urban issues while aiming for economic growth and ultimately social progress; however, *how* to deal with these issues and to reach the ultimate aims of smart cities had not been as clear as the listing of desired outcomes before the emergence of smart city technologies. Now that algorithms can provide solutions for the long-standing questions of how, politics seems to become about designing specific algorithms that are fed with information concerning these desired outcomes (i.e. a specific way of regulating traffic or waste management)

to automatically regulate the flow of humans and things to quickly respond to contingencies of everyday life.

- Citizens are the constitutive element of smart cities participating both in reporting the problems they encounter in public services and reporting their needs to officials, and in producing, gathering and monitoring data to align their behavior along with the desired outcomes the smart city projects promote for their dwellers.

In the second section, however, I have presented a brief overview of how some critical urban scholars analyze the smart city proponents' visions concerning politics and citizenship. They are concerned about cities/citizens becoming less of a political agent in general and the two following points in particular:

- The neoliberal logic subjects politics to corporations and markets instead of citizens. Urban scholars criticize the coupling of supplier companies and the political leaders for assuming that the high-tech urban infrastructures will solve the problems that cities encounter and automatically enhance citizens' quality of life (i.e. technological determinism). By imposing these high-tech solutions, the public-private partnership merely focuses on administrative problems that can be promised to be solved with the help of such technologies – casting a cloud on the most urgent problems of the citizens that do not necessarily entail high-tech infrastructures to deal with, such as class inequalities, poverty, social injustice, and discrimination.
- The neoliberal citizenship is defined through citizens' cooperation with city managers/smart city plans in aligning themselves with the desired outcomes of these projects (i.e. efficiency and sustainability) and in participating in the smart city 'game' according to its state and corporate defined rules that prioritize market values, instead of the common good. Citizen participation in these projects becomes participation in public affairs in a way that is already designed, and thus acceptable, by the coupling of suppliers and the political leaders.

The third and final section has touched upon the solution critical urban scholars propose in response to the problems they have spotted:

- Putting urban plans and technologies, if necessary, in the service of citizens through encouraging better citizen participation, which does not reduce citizens into sensing nodes who only reveal the bugs of the business-led system to strengthen it further. Instead, critical urban scholars argue that citizens should be considered as participators in shaping the system following their common good.
- However, while proposing such an alternative, these scholars *do not* discuss further, if at all, which sort of challenges such an understanding of participation would entail and why.

CHAPTER II:

THE ELEPHANT IN THE ROOM: LIBERALISM

After having briefly reviewed both camps of the discussion concerning politics and citizenship in smart cities, in this chapter, I will now move on to my own analysis of these leading smart city proponents' visions and argue for the following: Although critics point to the neoliberal politics hidden in the smart city projects as the reason why these projects end up serving big corporations/the markets and why citizens become increasingly passive gamers, the underlying assumptions of these visions actually indicate something different. By assigning the blame to neoliberalism these critics actually risk not exhaustively addressing the source of the problems they have spotted: Liberalism, the underpinning ideology of the contemporary Western democratic paradigm. Liberalism, established during the 17th and 18th centuries, already subjects politics to economic growth, markets and its big players, while framing the concept of citizenship as a legal status that warrants the protection of the natural/private rights of the citizens by some professional rulers in exchange for their political/public rights to participate in public affairs.

Before delving into my argument, a shift in my unit of analysis in this chapter should be noted. Although the focus of the first chapter and the thesis in general is on politics and citizenship in (smart) *cities*, while unpacking what politics and citizenship mean in the liberal tradition, the concept of *city* is replaced by the concept of *state*. This

shift reflects the change concerning both the main form of political organization of society in different historical periods (e.g. city-states, states, nation-states) and how political theorists define such forms of organization in each period. In ancient Greece the political organization of most relevance was the *city-state* and was defined as the political space primarily identified with its citizens (e.g. “we are the polis”) (Hansen, 1998, 117). The modern political organization of similar relevance is *state*. Although this concept of state had first appeared in 16th century with Machiavelli’s works, it has gained its modern sense in the 18th century (Hansen, 1998, p.107) – similar to liberalism. As opposed to city-state, the modern state is defined as a territory and the government which are not embodied in citizens themselves, but rather something external to them (Hansen, 1998, p.117). Therefore, a lesser emphasis on cities/citizens as political agents is not a recent phenomenon related to neoliberalism but has deep roots in Western political history, as the terminology I will use in the following section to explain liberal political theories from the 17th and 18th centuries onwards will exemplify.

Accordingly, the techno-political order of smart cities only appears to be a continuation of a modern liberal understanding of city, revealing it not as a political space embodied in its citizens as the Ancient Greek cities were, but rather an agglomeration of private spaces where citizens enjoy their personal, not communal, rights and freedoms. Although cities are again gaining importance as a form of political organization and thus the unit of political analysis due to the advent of globalization (e.g. smart cities or the global city cf. Saskia Sassen), the liberal understanding of cities as non-political units appears to be more resistant to change, at least in the narratives of business-led smart city proponents

Now, I will first clarify what *classical liberalism* (hereafter, *liberalism*) is and subsequently show how the underlying assumptions of the leading smart city proponents’ visions concerning politics and citizenship are actually based on the key premises of this ideology. To conclude this chapter, I will also discuss why the similarities, not the controversial differences, between neoliberalism and liberalism need to be highlighted especially in the context of politics in smart cities.

2.1. Opening the black-box of Liberalism

The main foundations of liberalism, as a political and economic ideology, are grounded in the works of John Locke (1689), Adam Smith (1776), John Stuart Mill (1859), Immanuel Kant (1781) (Ryan, 2007; Dewey, 1963; Heywood, 2013). The name liberalism refers to early liberals' (most importantly Locke's) advocacy for the emancipation or *liberty* of individuals from the arbitrary power of monarchs or political institutions (Dewey, 1963). In the following subsection (2.1.1.), I will first examine the historical roots of liberalism. Subsequently, based on the historically rooted assumptions, I will discuss the characteristics of politics and citizenship in contemporary liberal states.

2.1.1. Historically rooted philosophical assumptions of liberalism

2.1.1.1. *Liberation from coercion in exchange for political power*

According to Locke, in their pre-political state of nature, human beings were enjoying a "state of perfect freedom to order their actions and dispose of their possessions and persons (...) within the bounds of the law of nature" (Locke, 1996, p.13). According to this law, no one, "being all equal and independent", "ought to harm another in his life, health, liberty or possessions" (Locke, 1996, p.14). However, in such a state, "the enjoyment of [these rights] is very uncertain and constantly exposed to the invasion of others" (Locke, 1996, p.31). This is the very reason why human beings have agreed upon creating political institutions *by lending their political power (public rights) to a ruler in exchange for a guarantee that the ruler would protect their (private) rights* against each other and more importantly against the ruler itself. Accordingly, the political institutions are actually constituted to protect the *rights of the individuals*; if institutions fail in that task, it is legitimate for individuals to disobey and overthrow the ruler by taking back the political power they initially lent to the ruler. For Locke, these rights to life, liberty and property are *natural rights*, meaning that they belong to individuals prior to and thus independent of any political/public institutions (Dewey, 1963). Hence, *individualism* is one of the main tenets of this ideology, in the sense that it holds the primacy of (the rights of the) individuals over the social groups/organizations (e.g. state). Moreover, the importance Locke attaches to the right of property and liberty is

considered to be the original influence in the contemporary economic formulations of liberalism (Dewey, 1963).

John Stuart Mill's *On Liberty* is considered to be among the works laying the ground for liberalism. Although Mill's status as one of the cornerstones of the liberalism is controversial¹⁰, *the harm principle* is still perceived to be the only legitimate criterion for state to intervene with individuals' freedom. For Mill (1996, p.100), "the only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others". The good, either physical or moral, cannot warrant for an exercise of power over others. Berlin (1969) classifies this type of liberty as *negative liberty* or *freedom from* something.

The harm principle, interpreted differently, can still be used by more recent liberals, like Friedrich Hayek (1960). For him, it is the *intentional* restriction of someone's individual freedom that counts as harm and thus warrant an intervention. Hence, impersonal and unintentionally formed economic forces are not deemed as restrictions on people's freedom, even if they result in circumstances like poverty. According to this interpretation, people in poverty are still considered to be *free from* any direct coercion, although they are unable to do many things in practice. Thus no one's (economic) freedom can be restricted due to causing poverty, as long as that person does not intentionally prevent the impoverished from doing what he/she could do otherwise.

2.1.1.2. *Subordination of politics to economic growth to ensure the plurality of the good life*

According to Dewey, another crucial step paving the road to liberalism as a political and economic ideology was taken by Adam Smith during the Industrial Revolution when productivity rates had begun to increase unprecedentedly. Smith's belief that the cumulative but unplanned effect of a multitude of individual efforts for personal gains would lead social progress and welfare in effect "*subordinate[d] political to economic*

¹⁰ For Mill, "the utility in the largest sense", or the general well-being is the "ultimate appeal on all ethical questions" (Mill, 1996, p.111), meaning that "maximizing the general well-being" should be the ethical guidance. Accordingly, with such a primacy given to general utility, the individuals' will/freedom can often be intervened with for the sake of the general well-being (cf. Utilitarianism).

activity” (Dewey, 1963, p.621, [emphasis added]). In other words, the seeds of a liberal belief in sustained economic growth as the means to achieve human progress had been sown with Smith. Hence, any attempt from the state to intervene in economic and social affairs of individuals would not only be an assault on individual liberty or property, but also a threat to the catalysts of social progress.

More recently, John Rawls has contributed further to the formulation and institutionalization of liberalism as it is currently known. According to Rawls, a major challenge liberalism faces is to form a ‘neutral political system’ that would allow the coexistence of diverse or even conflicting conceptions of the good life, while protecting each person’s ‘natural rights to life, liberty and property. His *Theory of Justice* (1971) is known to be one of the most systematic answers to that challenge. Rawls turns to Kant to provide himself with the ‘neutral political system’ in question. The answer is separating the *right* from the *good* and prioritize the former to the latter, since *right* represents the universal rationality whereas *good* invokes socio-cultural or temporal and spatial relativity. That is to say, individual rights cannot be outweighed by the sake of the general good nor can the justification for these rights be premised on any particular understanding of the good life. Accordingly, a just social system for Rawls is one that “defines the scope within which individuals develop their aims, and (...) provides a framework of rights and opportunities and the means of satisfaction within and by the use of which these ends may be equitably pursued” (Rawls, 1999, p.28). Nevertheless, there is little agreement on what specific rights and political arrangements these natural rights to life, liberty and property would entail in practice. Thus, a unitary conception of liberalism should be questioned in favor of a multiplicity of *liberalisms*.

Despite such a lack of consensus, there is one common denominator for all liberalisms: their Kantian understanding of the self as autonomous, rational and capable of choosing her own values and ends while also staying independent of them. Being independent from one’s own values and ends entails a self who is not defined by them, but one that can always step back into a standpoint from which to assess them and to decide whether to keep or revise them. Consequently, if the self is prior to its ends, then it follows that the right must be prior to the good: If humans are essentially independent of the desires and ends and can choose between them, then we need *a neutral framework of rights* “that refuses to choose among competing purposes and ends” (Sandel, 1984,

p.5). With the assistance of such reasoning, liberals justify the possibility to create a political system that would not favor any sort of good life over others while guaranteeing the fundamental rights for each individual so that they can come up with their own visions of the good life (Sandel, 1984, p.1-12). To phrase differently, a liberal state can protect the natural rights but cannot display any attachment to claims of moral and cultural progress.

2.1.2. Politics and citizenship in liberal states

When liberals define politics, the dividing line between political and non-political typically coincides with the distinction between public and private sphere. However, this distinction between public and private is not geographical, but rather functional. In other words, although cafés, parks and universities would be considered as public spaces in the sense that they are open to the public, they do not constitute the public sphere to which political activities are ascribed. Instead the public sphere includes the institutions of state (e.g. the apparatus of government, the courts, the police, the military, the social security system) that are funded through taxation. The reason behind calling this sphere *public* is its function of being “responsible for the collective organization of the community life” (Heywood, 2013, p.5). The above institutions are the core ones that ensure the minimal or night watchman state can operate its primary function: 1) maintenance of the domestic order; 2) assurance for contracts or voluntary agreements made between private citizens are enforced; 3) protection against external attack. (Heywood, 2013, p.67).

On the other hand, the private sphere refers to the civil society that is comprised of family and kinship groups, private business, trade unions, clubs, community groups, and it is private in the sense that the activities of these groups are organized by private interests and (mostly) funded by these groups themselves. Given the rugged emphasis on the individualism and liberty as mentioned earlier, liberals favor the civil society over the state because the private sphere is where individuals can enjoy their private rights/freedoms. This is why, according to Heywood (2013, p.5-7), liberals have the tendency of narrowing the realm of the political.

Moreover, the right-based liberal perspective frames citizenship primarily as a legal status defined by civil, political and social rights. That is to say, the citizen is first

and foremost “the legal person free to act according to the law and having the right to claim the law’s protection” (Leydet, 2017). In other words, it is warranted to the individuals by their citizenship status that their individual freedoms will be protected from interference by other individuals or the authorities themselves. However, citizens are mostly expected to exercise these freedoms in the private realm, rather than in the public/political domain. As the liberal tradition does not consider citizens as political agents or members in a political community, they are not particularly encouraged to actively participate in the formulation and execution of laws. However, it should be noted that acknowledgment of being a member in a political community and a political agent in that community are considered to be other two constitutive elements of being a citizen, along with the legal status (Leydet, 2017).

Nevertheless, it is crucial to ask a question to unveil the partiality of liberalism with regards to the conceptions of the good life: Is it even possible to affirm certain rights over others (i.e. primacy given to the right to property) and to claim that economic growth would bring forth the social progress, without embracing some visions of the good life? Despite liberalism’s claim to being a neutral political system by abstaining from any visions of the good life, it actually commits to a particular one: Being towards the profit, the material gains to have the good life. In other words, values like profitability and efficiency (i.e. achieving more with less money and time) are the implicit guidance for both individuals and state to create the economic wealth and thus the good life.

In the next section, I will move on to highlight some narratives or ‘solutions’ put forward by the aforementioned smart city proponents that already manifest the assumptions and the ideas of the liberalism outlined in this section.

2.2. Hidden liberal flavor in politics and citizenship envisioned for smart cities

After having discussed what liberalism refers to, it is now easier to observe the continuity between the liberalism and the politics and citizenship envisioned in smart city discussions. In both IBM’s and O’Reilly’s visions, there is no doubt about the status of the state: It “*will* deliver fewer services and collaborate more with private sector and not-for-profit sector organization” (Thurlow, 2016), because “government governs best that governs least” (O’Reilly, 2013, p.292). Even while providing few services, this

undoubtedly minimal state needs to operate according to a business model (cf. Silicon Valley type of start-ups, O'Reilly 2013), which entails giving primacy on some market-driven values like *efficiency* and *profit*. As Dewey (1963) brings forward, the political domain (which is for liberals already limited to state institutions) that is subordinated to economic logic and activities is not a phenomenon that can be limited to the period associated with neoliberalism after the 1980s, but rather can be traced back to the 18th century. With its collaboration with private sector, the state would already be encouraging the economic growth the companies can bring about.

As mentioned earlier, one of the main tenets of liberalism is that the state cannot defend any particular vision of good life and thus cannot design society accordingly, other than by having faith in material gains as a means to the good life and thus designing society in a way that would reduce obstacles for profit and economic growth. Correspondingly, it can be said that liberal state does not exist for the sake of *good*, but for the sake of *life*. To phrase differently, what the liberal state does and hence what politics is all about, is the *mere governance of the public affairs* that are widely agreed upon to be regulated in accordance with the already mentioned market values. Accordingly, both IBM's solutions¹¹ and O'Reilly's examples reduce politics into a mere governance of domains such as tax management, traffic control, waste management, and public safety. Moreover, the way IBM and O'Reilly depict these public issues that can be datafied and thus supposedly 'solved' or regulated by algorithms resonates well with Rawls' ideal of the 'neutral political system'. As IBM and O'Reilly highlight *everyone* would like to live in cities free from the abovementioned issues, because these issues are believed to be the non-ideological matters that political leaders need to tackle.

The manifestation of liberal individualism, can be found in the logic of IBM's solutions. From the individualist perspective, human beings are conceived as autonomous self-interested individuals who can make rational choices calculating their own costs and benefits, and thus be held responsible for their own circumstances. Accordingly, what governments prefer is to *govern the effects, not the causes* of different

¹¹ 1) "to facilitate and scale trade, travel and immigration"; 2) to build "stronger defense and intelligence to outthink the velocity of instability"; 3) to "deliver the right services to the right citizens at the right time"; 4) "to accelerate digital transformation to improve efficiency and stimulate innovation"; 5) to predict and reduce crime to ensure the public safety, and finally 7) "to optimize tax collections, improve financial management and fight fraud" (IBM, n.d. b).

phenomena. As individuals are believed to be capable of taking a position beyond their own values and ends to assess them (i.e. rational thinking), unless they violate the law, there is no reason for the government to try to understand reasons behind their behavior and then to change it. Otherwise the government would also be acting as a moral guide of some sort, thus contradicting the minimal state principle. Trying to understand the underlying motivations for the violations of laws and to change those motivations to reduce such violations would be governing the causes (i.e. reasons behind the decisions), instead of effects (behaviors themselves). According to Agamben (as cited in Morozov, 2014), this shift from the former to the latter is already emblematic of modernity and algorithmic regulation is just “an enactment” of this modern political program in a technological form.

According to Leydet (2017), the conception of citizenship in the liberal tradition is narrow, as it mostly concerns first one of three elements/dimensions that constitute the concept: legal status, political agent and membership of a political community. Once citizens designate the representatives of their political power/public rights, they are conventionally not expected to actively participate in the formulation and/or in the execution of laws. Instead of being defined as a political agent (an active participator in political institutions) and/or a member in a political community (“which furnishes a distinct source of identity” (Leydet, 2017)), citizens in a liberal sense are defined as the ones who enjoy a legal status. This status provides citizens with rights to be protected from external infringements while seeking their private interests in the civil society, insofar as they do not harm each other. Therefore, IBM’s concern regarding the level of citizen participation in smart city practices appears to be very much the consequence of such a liberal understanding of citizenship embedded in society. Furthermore, the ‘solutions’ the company puts forward (e.g. incentivizing citizens with money or some form of status within the community to participate in its project) represent in practice how citizens are perceived as self-interested profit- and reputation-seeking individuals.

2.3. Conclusive Remarks

Below, I will summarize the first section where I open the black-box of liberalism:

- The firm belief in both the sanctity of private property and liberty is the foundation for the liberal idea of minimal state. The accumulation of the material

wealth by free economic activities of individuals is the key factor for having societal progress and wealth.

- The state should not be involved with the reallocation of wealth following a particular image of the good life for all (e.g. through taxation and free public services, the distribution of (a part of) the total wealth to the impoverished). Doing so would be intervening with natural rights of some to do good to others, and this would be the violation of the harm principle.
- Free market competition is the way to reallocate the surpluses resulting from economic growth. Thus, state should encourage and clear the way for economic growth and the ‘free market’, which in turn means an understanding of a public sphere subordinated to economics and its values: Limited but profit or market-driven politics.
- An individualist understanding of self which is primarily defined by its rights explains how humans are perceived in the liberal tradition. Accordingly, citizens are characterized as right-bearers to be protected from external infringements while seeking their private interests in the civil society, not as political agents participating in public affairs.

Together, the four aspects above amount to how Smith (2018) defines *neoliberalism*¹². The other definition mentioned in the previous chapter is by Brown (2015), whose main concern with this supposedly new ideology seems to be the following: As opposed to classical liberalism, neoliberalism does not only refer to the relation between state and its economy which is mediated by some particular economic policies, but also to all other domains of human beings that are channeled into the domain of the market logic. However, the very reason why liberalism is known as an ideology, rather than a set of particular economic policies is because it is already “a normative order of reason”, in Brown’s (2015, p.9) words. Liberalism, as an ideology, is a system of assumptions, ideas, beliefs, values and aims providing not only an economical but also a socio-cultural and

¹² “[N]eoliberalism is an ideology and policy model which believes in sustained economic growth as the means to achieve human progress, in free market competition as the most efficient allocation of resources, in a minimal state intervention in economic and social affairs and in freedom of trade and capital” (see page 11).

political framework for humans to make sense of the world around them. Accordingly, in this section I have unveiled some of the fundamental assumptions, premises and ideas of liberalism that can easily be taken for granted by scholars who merely focus their criticism on the rather recent ideology of neoliberalism and thus have deepened the discussion concerning the source of the problems associated with smart cities.

Even if the level of economization of everyday life has dramatically increased during the last century and required a change in our analytical framework from the concept of liberalism to neoliberalism, the economization of everyday life (the seeds of which have already been sewn in liberalism) already capitulates to one of the problems urban scholars have pointed out: politics in the service of markets. Moreover, urban scholars, mostly based on Brown's type of neoliberalism¹³, highlight the fact that citizens are increasingly defined as customers and expected to take more responsibilities for themselves. As a result of these two relatively new developments, what these scholars are ultimately concerned about proves to be passive citizenship. As I showed in this chapter, to criticize passive citizenship, one does not need to assign blame to the increased consumerism or delegation of responsibilities to citizens themselves. The established liberal political system is built on 'citizens' who already have lent their political power/public rights to some professional rulers in exchange for the guarantee that these rulers would at least protect their private rights does already expect citizens to behave in the framework professional rulers have determined for them. This already leads to a passive citizenship.

I will now move on to summarize the second section in which I have revealed the continuity between liberalism and smart city projects:

- Resembling depictions of the liberal state, both IBM's and O'Reilly's visions only attribute minimal functions/objectives to the form of political organization relevant to them: Cities need to be organized according to market values like efficiency and profit and in cooperation with companies to encourage economic growth.

¹³ As a rather new ideology of 1980s which does not only refer to a set of economic policies regulating the relation between state and its economy (which is how classical liberalism is understood), but to a normative order of reason regulating all human conduct according to the economic terms and metrics dominating the market.

- From IBM's solutions and O'Reilly's example, it can be understood that the function of politics is the mere governance of the public affairs that are widely agreed upon to be regulated for the sake of life so that the basic amenities for everyone would be covered and that everyone could reach their own understanding of the good life, similarly as in Rawls' ideal of the 'neutral political system'.
- Based on the liberal belief in autonomous rational individuals who can detach themselves from their ends, evaluate and choose among them, IBM solutions are not interested in governing the causes of individuals behaviors but only their effects (e.g. fraud), even though the company claims to *see* how the complex relations between phenomena have been formed (i.e. how some people end up doing X and not others).
- According to IBM, citizens are perceived as self-interested profit- and reputation-seeking individuals, not political agents. Thereby, it is understandable why IBM thinks it 'needs to' incentivize and gamify its participation processes to attract the attention of citizens after having faced problems with engaging them in different projects.

CHAPTER III:

THE TECHNO-POLITICAL ORDER OF SMART CITIES THROUGH HANNAH ARENDT

In the first chapter, I have introduced the leading smart city proponents' visions concerning the future of urban politics and citizenship and subsequently revealed what contemporary critical urban scholars see beneath these visions: neoliberalism understood as a rather recent *raison d'être* that started to dominate everyday life after the 1980s (Brown, 2105). In the second chapter, by deepening the urban scholars' analyses, I have showed that the underpinning ideology of smart city visions is actually liberalism, the political and economic ideology established during the 17th and 18th centuries. Upon uncovering the source of the problems urban scholars pointed out – *politics in the service of markets* and *passive citizenship* – in these smart city visions, this third and final chapter will now look more closely into *why* such understandings of politics and citizenship are considered to be problematic to begin with and *how* these problems evolve in the smart city context through the eyes of Hannah Arendt.

The Arendtian perspective is highly relevant in the context of this thesis, because her understanding of politics is so critical of conventionality, providing the required tools to question liberalism and its characteristics that are taken for granted the most. Furthermore, her analysis of traditional Western political thought and the *modern age* can clearly illustrate *why* we end up with such smart urban projects and *how* the future

dwellers will be shaped by these smart cities. Before offering my Arendtian analysis of politics and citizenship envisioned in these smart urban projects, I will first give an overview of her concepts that are crucial to understanding her notion of *politics*.

3.1. An unorthodox understanding of politics

Hannah Arendt's vision of politics is an unorthodox one. According to various scholars, including herself, her outlook does not fit any conventional academic or political labels such as liberalism, conservatism, socialism, or communitarianism (d'Entreves, 2016; Bernstein, 2011).¹⁴ In this section, while introducing Arendt's concept of *politics* step-by-step in relation to her other concepts, I will also explain her understanding of *active citizenship* since, for Arendt, politics and active citizenship constitute two sides of the same coin. That is why, in contrast to the structure I have followed in the previous two chapters, the issues related to politics and citizenship in Arendt's work will not be addressed in two separate sub-sections.

3.1.1. Politics not as a means to the good life but as an end in itself

First, I consider *The Human Condition* (1958) and its phenomenological investigation of *labor, work and action* – three types of human activities and the modes of existence related to the actualization of these activities (i.e. respectively *animal laborans*, *homo faber* and *zoon politikon*). The last of this trinity, *action*, actually refers to *politics*, which is why she calls the mode of existence related to action *zoon politikon* (political animal). In everyday language, labor and work can easily be understood as types of action. Thus, although such classification might not make sense at first glance, it becomes clearer once the reader realizes that Arendt might ascribe different meanings to these mundane concepts.

By distinguishing these interdependent activities, Arendt emphasizes how in the modern age – in her terminology starting from the 17th century (1998 [1958], p.6) – we conflate what is political with what is not. While distinguishing these activities, she

¹⁴ As a response to political theorist Hans Morgenthau's question about where her position is within contemporary possibilities, Arendt states: "I don't know. I really don't know and I have never known. And I suppose I never had any position. You know the left think I am conservative, and the conservatives sometimes think I am left or I am a maverick or God knows what. And, I must say I couldn't care less. I don't think that the real questions of this century will get any kind of illumination by this kind of thing" (Hill, 1979, p.333).

arranges them in an ascending hierarchy of importance based on the most distinctive, and thus, the most essential, characteristic of human beings which separates them from animals: *Freedom from necessity and from the pre-determined ends and goals*. As action possesses the ultimate freedom among the three activities, it is, for Arendt, the most essential human activity. As Baş puts it, “being human is being political”, for Arendt (Baş, 2013).

Labor and work both correspond to the Aristotelian concept of *poesis* (fabrication); however, the products of each differ considerably. Arendt calls the activities that “obey the order of immediate bodily needs” (1998, p.100), that is, that are *performed out of necessity* for the maintenance of life, *labor*. Since “the movement of the living organism, the human body not excluded” (Arendt, 1998, p.96) is cyclical in the form of constant process of growth and decay, laboring also occurs in accordance with this ever-recurrent cyclical movement of nature to cope with the body’s immediate needs. Hence, labor refers to monotonous and endlessly repetitive activities. Most importantly, its products are ephemeral, as they are “meant to be fed into human life process almost immediately” (Arendt, 1998, p.99) so that humans survive. Labor is merely bound to the demands of biology and nature, therefore the mode of existence performing labor, *animal laborans*, is the closest one to animals, containing no freedom from nature. The significance of this mode of existence per se is not something that Arendt denies. However, practicing solely this mode would reduce individuals to their common animality, as a member of the same species.

Arendt’s definition of *work* refers to the activities that “correspond to the unnaturalness of human existence” (Yar, n.d.). Its products can actually violate the realm of nature, not only by transforming nature while imbuing it with its creators’ ends and goals but also by breaking its cyclical movement and guaranteeing “the permanence and durability without which a world would not be possible at all” (Arendt, 1998, p.94). Therefore, unlike animal laborans, the mode of existence ascribed to work, *homo faber*, exhibits a certain quality of freedom gained from nature and animality. Nevertheless, work needs to be performed out of a degree of necessity since it is *dictated by ends and goals formed outside of itself*. Hence, it has an instrumental character – no meaning in and of itself but rather is a means to achieve what is eventually sought after.

In *action*, referring to *politics*, Arendt finds the aspect of freedom, which also means “the spontaneous beginning of something new” (Arendt, 1998, p.234) or “the capacity (...) to do the unexpected” (d’Entreves, 2016). More precisely, according to Kateb (1977), *politics* and *the exercise of freedom-as-action* are the same in Arendt’s thinking. However, humans first need to be liberated from the necessities imposed by nature and become equals, to actualize their essence, their potentiality of freedom or their capacity to do the unexpected through politics. Arendt stresses that, “the realm of freedom [thus politics] begins only where (...) the rule of immediate physical needs ends” (Arendt, 1998, p.104). The subject matter of politics is, however, about creating situations where humans encounter one another to unfold the mutual subjectivity or the common social world from the plural perspective of equals and to discover oneself in relation to others (Schaap, 2010; Honneth & Ash, 1982). Consequently, the uniqueness of each individual can only come into light when they are engaged with action, and thus, are in relation to others. During labor, by contrast, only their sameness unfolds because their needs are imposed by nature in similar ways: Everyone needs to do similar activities repetitively to survive as species. Moreover, given the ‘obvious’ goal of this activity (i.e. satisfaction of bodily needs), labor is perceived as an isolating activity, providing no basis for a common world to be shared with others (Schaap, 2010). Work, however, is positioned in the middle of the hierarchy because it allows more space for individuality compared to labor (i.e. artefacts shaped by *Homo fabers*’ own goals), while revealing fewer aspects of the unexpected and unbounded individuality of the maker (i.e. makers cannot communicate who they really are through the artefacts they make) (d’Entreves, 2016).

Therefore, politics is neither a means for the good life nor “for the sake of life” (Arendt, 1998, p.37) rather, *it is an end in itself. Through politics human beings realize their individual potential and distinguish themselves from animals*. Labor is actually for the sake of the good life and without mastering the necessities of life, politics is not possible.

3.1.2. Politics as acting together with peers

In *On Revolution* (1963), where Arendt voices most of her thoughts about the contemporary liberal democracy, namely representative democracy, one can find another

crucial distinction to better make sense of what she means by politics: the distinction between *liberation*, as the *removal of the unjustified restraint* and *freedom*, as the *exercise of capacities to participate in public affairs* (Arendt, 1963, p.32). This distinction is meant to elucidate that *politics is not about governing/ruling*, and thus is not meant to create the distinction between the ruled, who need to be liberated from oppression, and the ruler, who needs to be the protector of such liberation; but rather, politics is about *acting together* under a no-rule condition (Arendt 1963, p.30). This acting together involves debates and deliberations and persuasion revealing their individuality. Therefore, in Arendt's conception, concepts like *persuasion, plurality and individuality* correspond to the nature of politics.

Freedom as the exercise of capacities to participate in public affairs is, according to Arendt, a "lost treasure" of the Greek city-states (polis) as much as of the American Revolution. It is "lost" because the fruits of the majority of the revolutions in the 19th and 20th century were limited to *civil rights*, that are the means to obtain and enjoy the "real and substantial", or, *natural rights* to life, liberty and property (Arendt, 1963, p.32). These merely represent the rights to be *liberated from* the unjustified oppression. According to Leydet (2017), the liberal model of citizenship which conceives *citizenship as a legal status* emphasizes citizens' right to claim the law's protection against any infringements of their natural rights, as long as they act according to the law. Thus, this idea of *liberation*, exemplified in the liberal model of citizenship, according to Arendt, overshadows the idea of *freedom* that could be found in Ancient Greeks and the founders of the American republic.

Liberation is indeed a necessary condition for freedom. First, one needs to be liberated from the impediments to action in order to participate in public affairs; however, insufficient to achieve freedom. It is reasonable, as Arendt (1963, p.33) mentions, to think of a rulership by a good-hearted monarch under which the ruled ones would be liberated from oppression and enjoy their primary rights to life, liberty and property. Yet, *freedom* can only be reached by the participation in collective self-government. In contrast with how the notion of liberation emphasizes legal status when defining citizenship, Arendt's concept of freedom emphasizes the second dimension of citizenship which I have presented in the previous chapter (Leydet, 2017): *citizens as*

political agents, actively participating in political deliberations and decision-making processes.

In practice, Arendt's view of citizenship requires a different model of regime than the representative democracy that we understand today. That is why, Arendt avers, the notion of *rule*, which manifests itself in the suffix of *-archy* in *monarchy*, *oligarchy* and even *democracy*, was absent in the city-states. In her own words (Arendt, 1998, p.33), "to be free meant to be free from the inequality present in rulership and to move in a sphere where neither rule nor being ruled existed". Hence "the polis was supposed to be an isonomy not a democracy" (1963, p.30). As isonomy refers to the equality of political rights, it requires citizens to equally participate in self-government. For Arendt (1963, p.30), while isonomy represents the notion of the "no-rule", the word *democracy* – as the rule of many – was apparently how critics labeled *isonomy*, pointing to the fact that it would be just another kind of rulership, the one by the demos, by the mass society. While Arendt would agree with the fact that rulership by the *mass society* is a danger to what she conceives as *political*, there are some crucial nuances in her thinking that distinguish her from simply being an elitist, as some of her critics label her (Isaac, 1994). I will return to this point later on when I clarify her much-criticized distinction between the *political* and the *social*.

Isonomy requires equal peers. However, this equality is not something given to all human beings by nature, as opposed to what many modern humanists would defend. Polis, or the public sphere, is where humans, who are not equal by nature, *become* equal by participating in public affairs, by contemplating and discussing the common concerns they have. Being a *citizen* equalizes humans in the public sphere; that is why "neither equality nor freedom was understood as a quality inherent in human nature, (...) they were (...) conventional and artificial, the products of human efforts" (Arendt, 1963, p.31).

3.1.3. Politics as the open-ended realm of spontaneity

In order to clarify Arendt's concept of politics, I will finally discuss another crucial distinction she asserts by relying upon the Ancient Greeks' definitions of the *private sphere* and the *public sphere*. As mentioned earlier, polis or the public sphere enables humans to *become* equal by participating in public affairs and by contemplating and

discussing the common concerns they have. Again, as politics means *acting together on common concerns*, the public sphere, where humans meet each other to act, is where politics unfolds. The public sphere is where humans can practice their freedom, meaning their capacity to begin something new and spontaneous, insofar as they are liberated from the necessities of life by fulfilling their immediate physical needs. Hence, it is the realm for activities related to the common world.

Arendt (1998, p.50, 52) argues that the term *public* has two meanings. Firstly, as everything that happens in public can be seen and heard by everyone, this appearance to others, or the public, *constitutes what is called reality*. Secondly, the very existence of the public as a common world creating our inter-subjective reality depends on permanence. In practice, the *public as the permanent world* means that a commonality shared by different generations requires that the public sphere actually exists longer than the lifetime of just one generation. “Without this transcendence into a potential earthly immortality” claims Arendt (1998, p.55), “no politics, strictly speaking, no common world and no public realm is possible”. Although it has lost its meaning in the modern age, for citizens, entering the public sphere used to mean doing and having something in common with others *to be more permanent than their earthly lives* (Arendt, 1998, p.55). Therefore, acting together, which includes debating and deliberating on common issues concerning various generations, would mean participating in something bigger than oneself, something beyond one’s own interests.

Activities related to the maintenance of life, or to the necessities of nature, however, constitute what Ancient Greeks understood by private sphere. In contrast to the prevalent understanding of politics, which is mainly about *ruling*, Arendt (1998, p.32) declares “the whole concept of rule and being ruled” as pre-political, meaning that, a concept that belonged to the private, rather than the public, sphere. Humans, driven by their common wants and needs, as opposed to citizens defined by their individuality, are the members of the private household sphere, namely, the *family*. As mentioned earlier, while action appears to be the activity of the public sphere, labor is the activity in the private sphere. For Arendt, labor is subjected to the satisfaction of immediate identical needs (Arendt, 1998, p.176), implying that the nature of needs is obdurate and thus, unable to be altered by any (political) debate. To reformulate, the fulfillment of needs is *not a matter of discussion, the exchange of opinion and persuasion* but rather

“matters of administration, to be put into the hands of experts” (Arendt, 1963, p.91). As the nature of household matters is rather obvious (e.g. nourishment, reproduction, taking care of the new born and the dead), there is not much room for humans to reveal their individuality. Thus, individuals in the private sphere are reduced to their common animality. Humans are not expected to *act* or spontaneously begin something new in private, but rather *behave*, that is to say, to do what is required or expected (Arendt, 1998). In the logic of the private sphere humans are deprived of the opportunity of revealing their unique distinctiveness in the company of others. The latter is merely possible during an open-ended discussion when one needs to persuade others, when *what needs to be done is not pre-defined by the necessities of nature but remains open to discussion and spontaneous unfolding*.

3.2. Animalistic life under the watch of algorithmic ‘philosopher’¹⁵ kings

After having explained Arendt’s core concepts to clarify her understanding of politics in the previous section, in this section I will analyze politics and citizenship as envisioned by leading investors in technological (IBM & Cisco) and ideological infrastructure (O’Reilly) of smart cities, through an Arendtian framework. Correspondingly, in the first subsection (3.2.1.), I will investigate what politics and citizenship becomes in the context of smart cities; then I will proceed to reveal how future city dwellers would be shaped by politics and citizenship these investors have envisioned for the future cities.

3.2.1. Algorithmic city-wide administration of housekeeping¹⁶

As I have already pointed out in the second chapter, politics in a liberal democratic context is restricted to state institutions’ practices and refers to governance of public affairs that are widely agreed upon to be regulated in order to ensure everyone the access to basic services and thus enable the pursuit of their own understanding of the good life (i.e. administrative functions). Moreover, the state (politics) should also encourage and remove obstacles for economic growth so that everyone can have material basis to reach their own good life (i.e. economic functions). Thus, enhancing the quality of life seems

¹⁵ The reason why the word *philosopher* is contested in this title will be explained in footnote 20.

¹⁶ Here, I introduce my own terminology which is a derivation from Arendt’s own terminology, “nation-wide administration of housekeeping” (Arendt, 1998, p.28).

to be the ultimate aim of liberal politics. In such a context, while state's administrative and economic functions can be perceived as the *sufficient conditions* for citizens to shape their own good life, its protective function (i.e. protection of citizens' natural/private right to life, property and liberty) can be viewed as the *necessary conditions* for the ultimate aim of good life.

Based on what I have discussed in the previous section (3.1.), political action in a liberal context should not be conceived as an end in itself having an intrinsic value, but instead a means to an end of protecting national defense, liberty, and private property, encouraging economic growth and thus enhancing quality of life. In other words, *political action is valuable insofar as it serves for the maintenance of life*, laying the groundwork for everyone to achieve their version of the good life.

Through an Arendtian perspective, it would be a great mistake to identify *the governance of public affairs in the service of life* as politics. *Politics*, for Arendt, *is neither about life nor governing/ruling for the sake of life*. Instead, through her lens, the type of politics envisioned in smart city discussions (explained in first chapter, especially in section 1.1.), amounts to an *algorithmic city-wide administration of housekeeping* where *the political* is substituted by *the social*. Before elaborating further on the reasons why I interpret politics in smart city discussions as such, I will now clarify what Arendt means by *the social* and its widely-criticized separation from *the political*.

Many authors have criticized Arendt for emptying the political of all significance (Isaac, 1992, p.159, see for instance Schaap, 2010) while simultaneously ripping the social issues apart from their political dimensions. However, one of the first things readers should keep in mind while reading Arendt is that, as Macpherson pointed out (as cited in Isaac, 1992, p.162), like many philosophers, she takes common terms and essentially redefines them for her own purposes. Both *the political* and *the social* are among such concepts. In the previous section my aim was to unpack her understanding of politics/the political; now I shall turn to the social.

3.2.1.1. *The social in Arendt: Mass society*

Until the rise of the social, which, according to Arendt, coincides with the emergence of the modern age and nation-states starting from the 17th century (1998, p.28), the distinction between private and public sphere, family affairs and the political realm was

clear. As mentioned above, the private sphere was the locus of household affairs *ruled* by an authority (the father) for *the sake of life*, the survival of the species. The economical belonged to the household affairs in the service of survival (Arendt, 1998, p.29). In the family, there was no room for action, that is, the revealing of the uniqueness of each individual while doing the unexpected, as the matters dominating the household affairs were predetermined by the needs and the wants of the humans as a species (Arendt, 1998, p.30). But with the rise of the exchange and the accumulation of capital marking the beginning of the modern age, the productivity and labor, in other words the economical, became a collective concern. The modern state appears to be a gigantic family, identified with one nation and its common needs: economic prosperity (Arendt, 1998, p.28).

The social, in Arendt's terms, represents the migration of the concerns, activities and means of housekeeping from the interior of the house into the outside world, the public sphere. The emergence of social has changed the original meanings of the private sphere and politics as well as their significance for citizens (Arendt, 1998, p.38). As politics and citizenship are the main concerns of this thesis, here I will confine myself to explain the significance of this change in the meaning of politics for citizens.

But first, I would like to clarify one important point in my own reading of Arendt. One does not necessarily need to interpret the characteristics of *the household/family* as ontologically essential for its definition. That is, Arendt does not need to be read as giving a normative description of what a family should look like or how it should function. Instead, she grounds her analysis concerning the rise of the social on a *historical account of the concept of family*. To thoroughly understand what the social and the political are, it is crucial to focus on what concepts like the family/household represent for Arendt, in lieu of relying on common meanings of these concepts.

With the rise of the social, the public realm – the realm of common concerns that entail open-ended debates and contingency – has been absorbed by the ‘obvious concerns’ that do not necessarily trigger the process of thought to do the unexpected. For citizens, the significance of such a transformation of the public realm inundated by the collective concerns for the sake of life entails the *loss of active citizenship* and *the rise of mass behavior*. In other words, with the rise of nation-states in the *modern age*, societies have increasingly demanded their members to act as if they were “members of

one enormous family which has only one opinion and one interest” (Arendt, 1998, p.39). The patriarchal authority *ruling* the household is transformed into a *no-man rule* or a bureaucracy in a mass society.

In order to explain the last sentence, it is first crucial to clarify how Arendt defines the term *authority*. For her, it evokes “unquestioning recognition by those who are asked to obey”, hence it requires neither coercion nor persuasion (Arendt, 1970, p.45). The relationship between a parent and a child exemplifies what she means by this term. If a society is *ruled* by masses, then, in Arendt’s eyes, that society becomes a gigantic family where *authority* (different than the patriarchal one) *rules*. Masses tend to be anonymous: They consist of individuals unified in being driven by similar, especially economic concerns (in the form of maximizing profit) and in participating in public affairs only by voting based on such concerns. Hence, in such a context, the authority of state institutions/bureaucracy whose logic also solidifies the primacy of economic concerns would be accepted without question. As this *ruling logic oriented by economic concerns* is not embodied in one person/ruler but rather diffused into state institutions, Arendt calls this modern authority the *no-man rule*.

As mentioned in section 3.1.2., this rulership of mass society is a danger to what Arendt conceives as the political, because the impersonality and the routine characteristic of obeying the ruler without questioning, or *behaving*, is the exact opposite of what politics requires: freedom from predetermination, the capacity to reveal the uniqueness of individuals and to do the unexpected, that is, *acting*. Accordingly, another reading of the concept *no-man rule* can be made as follows: For Arendt, there is a significant difference between *people/masses* and *humans/men*. A society ruled by people/masses does not imply that that society is actually ruled by human/men. What separates people from animals and thus what makes people fully *human*, as I already mentioned, is their capacity to act, to do the unexpected. As masses are the anonymous individual identified by their uniform concerns and behaviors, the rulership of mass society can only appear to be a no-man rule, instead of a fully human rule.

3.2.1.2. *The algorithmic administration of the ‘obvious’ through conformism*

In the second chapter, I have already showed how IBM’s solutions and O’Reilly’s examples for governments typify the *mere governance of the public affairs* that are

widely agreed upon to be regulated in terms of market values. Furthermore, as I stated in the beginning of this sub-section 3.2.1., the type of politics IBM's solutions and O'Reilly examples typify is not an end in itself, but a means to an end of protecting and governing the conditions for *the sake of life*.

However, in addition to this version of politics as a means to an end, reduced to administration and subordinated by economic concerns, I have found two other aspects in smart city discussions that strengthen my Arendtian claim that business-led smart cities promote an algorithmic city-wide administration of housekeeping : 1) *The shift in the content of public concerns from open-endedly debatable issues to a supposedly obvious one* and 2) *the expected conformism of citizens with the established rules*. I will now elaborate more on these two aspects.

I will first focus on *the shift in the content of public concerns*. As I have explained in the first chapter, the smart urban plans and narratives circulated by IBM, Cisco, and opinion leaders like O'Reilly, purport that public concerns are composed of health and welfare policies, tax management, traffic control, waste management, public safety, defense, and infrastructure. There is no need for open debates about why citizens need those concerns met particularly. However, crucially, as I have discussed at the end of the second chapter, it also seems like the question of *how to reach* these aims does not entail open-ended debates either, as if there was always one 'objectively efficient' way of providing these services waiting to be discovered, as depicted in O'Reilly's essay (2013). There is no time for the 'idleness of action' (as animal laborans and homo faber would think (Arendt, 1998, p.208)) or to deal with the uncertainty that comes with open-ended debates over issues. The 'political', or as IBM's former CEO puts it, 'ideological' debates are a "luxury"; instead, city managers need to "get things done" (Palmisano, 2011).

When asked what she means by the political differing from the social, according to Isaac (1992, p.163), Arendt had claimed that all societal problems have both administrative (social) and political dimensions. Questions of *whether people deserve public housing* or *how many square feet every human being needs in order to live a decent life* can be answered with certainty "from above" (Isaac, 1992, p.163). Thus, such questions constitute the administrative (social) dimension. However, questions of *how public housing should be provided* and *where it should be located* require a debate to be concluded by *persuasion*, and thus constitute the political dimension.

In the narratives of the smart city proponents presented in the first chapter, the content of ‘politics’ is shifted to administrative issues reduced to ‘non-ideological’ matters that supposedly do not entail open debates. On the other hand, the political questions of *how*, which were originally open to debate, are delegated to the algorithms to reach ‘the most efficient and thus logical and non-ideological’ (Palmisano, 2001; MacIsaac, 2016) ways of providing the services people need. However, this shift in methods to approach public concerns *from open-ended debate and persuasion to imposing from above with certainty* is not something new or limited to smart city visions. It is rather, according to Arendt (1998, p.220-230), a characteristic of the public sphere ever since Plato. I will turn to the question of why humans tend to search for such ‘the most efficient and thus logical and non-ideological’ ways to address public concerns later in this chapter (3.2.2.).

Now, I will continue with the second aspect I have found in smart city discussions to strengthen my Arendtian analysis of smart cities as an algorithmic city-wide administration of housekeeping: *the expected conformism of citizens with the established rules*. If IBM’s algorithms can “see” the complex relationships between phenomena and, by predicting how these relationships will unfold, can provide policymakers with insights about what to do about them (IBM n.d. a); then following Arendt, I claim that these algorithms can “see” because of the conformism of their subjects who *behave* but do not *act*. While Arendt did not live long enough to witness what IBM and O’Reilly view as the ‘success of algorithms’ in predicting behavior, in *The Human Condition* (1998), she already makes a similar point with the rise of the modern science of economics along with its main tool, statistics, and behavioral sciences.

“Economics (...) could achieve a scientific character only when men had become social beings¹⁷ and unanimously followed certain patterns of behavior”, states Arendt (1998, p.42) and continues to explain the pattern as *acting exclusively in one’s own self-interests driven by only one desire, the desire of acquisition*. This assumption lies at the root of classical economics which dates from the works of Adam Smith (Arendt, 1998, p.42). Although the foundation of classical economics was grounded on the supposed “harmony of interests” regulated by “an invisible hand”, or on the sameness of human

¹⁷ Here, “social being” does not refer to the common meaning of the word, but to the experience of being an anonymous part of the mass society, as opposed to being fully human.

beings; through an Arentian perspective, what separates humans from animals is their plurality, stemming from the uniqueness of each human being. Thus, the reason why economics survived, despite its false conception of human nature, is the “the uniform behavior that lends itself to statistical determination, and therefore to scientifically correct prediction” (Arendt, 1998, p.43). Humans have made the assumptions and predictions of economics sound plausible because of *behaving* and becoming anonymous members of the mass society. However, economics has transformed the historical aspect of the anticipated conformist behaviors into a norm of being human. This trend of naturalizing conformist behaviors becomes even clearer with behavioral sciences, as the latter aims to reduce humans “to the level of conditioned and behaving animal(s)” (Arendt, 1998, p.45) in all of their activities.

Apart from humans’ supposed ‘natural’ inclination to conform, which stems from “the one-ness of man-kind” (Arendt, 1998, p.46), determining what is normal and abnormal with its rules, mass society also expects certain behaviors from its members (Arendt, 1998, p.39). Moreover, through its power of exclusion mass society *makes* members behave. To draw a parallel between Arendt’s analysis of the rise of *the conformism of the social* swallowing *the contingencies of the political* and the politics envisioned in smart cities, smart city projects are based on the active cooperation of citizens with city managers as critical urban scholars point out in their analyses (Vanolo 2014, 2016; Gabrys 2014; Cardullo & Kitchin, 2017). While citizens are expected to participate in providing solutions to certain practical issues constrained by the market logic, they are not welcomed to challenge and reshape the logic itself. After all, in a society *sensored* by IBM where citizens resist producing and consuming data to adjust their behavior to ‘the normal’, ‘desired outcomes’ of the smart urban plans, algorithms would not have enough data to be fed and trained by in order to predict as accurately as they could in the ideal image of smart cities.

After my previous discussion, it becomes plausible to argue that ‘politics’ as conceived by the proponents of smart cities like IBM, Cisco and O’Reilly is far removed from what Arendt means by that term. More specifically, in the proponents’ narrative, politics becomes *an algorithmic city-wide administration of housekeeping*. ‘Politics’ in smart cities is not politics in an Arendtian sense, because it is not an end in itself but rather *administration/governance* of life to ultimately reach the good life. It is

administration of housekeeping because its subjects already are anonymous members of a gigantic family obeying the rulers as they would obey their father and because it concerns issues that are perceived to be non-ideological and ‘obvious’ like the issues of housekeeping/the family. The administration is *city-wide* due to its form of political organization of relevance. Lastly, it is *algorithmic* because algorithmic philosopher kings have taken the place of the father of the family, the king of the pre-modern age and the no-one/bureaucracy of the modern age.

3.2.2. *Homo-machina-faber making ‘politics’, shaping humans into animal laborans*

Although Arendt attributes the historical origins of the concept of *rule* to “the household and family realm” (1998, p.224), the activities of political leaders/statesmen have been on par with the activities of craftsmen or homo faber instead of animal laborans. This specification stems from the main difference between the products of animal laborans and homo faber which, as I stated in section 3.1.1., is their duration (respectively, ephemeral and immediately consumed; durable and enabling the stability of the world).

The mass society, in the eyes of Arendt, is actually a society of laborers and jobholders, meaning that “all members consider whatever they do primarily as a way to sustain their own lives and those of their families” (1998, p.46). Whatever these jobholders, the ruled, do in the public is not to become more permanent than their earthly lives (Arendt, 1998, p.55). In other words, what they do does not lay beyond their private interests but is instead caught in the repetitive cycle of production and consumption of what they have produced (e.g. money, recognition, reputation). However, with the help of laws, statesmen *make* the city, make something durable, “as the sculptor makes a statue” (Arendt, 1998, p.227). That is to say, what the rulers do is not something to be immediately consumed by citizens. Rather, it lasts as the rule of the society.

For Arendt, it is Plato who first substitutes *making politics* for *acting as politics*. To phrase differently, he substitutes *shaping citizens (as passive subjects) and the surroundings with an end in mind* (i.e. making politics) for *dealing with contingencies of open-ended debates* among peers (i.e. acting as politics). As Plato lays the groundwork for his successors in Western political theory, such a trend of searching for the ‘most

right principles' (or 'the most logical and non-ideological principles') to rule is similar to how a sculptor would search for the rights measurements to shape her statue accurately, thus constituting one of the main pillars of the traditional Western political thought (Arendt, 1998, p.222, 225).

Although Arendt praises *action* as the only activity through which humans can perform their plurality, or what makes them different from mere animals, she is also aware of a threefold challenge of this argument: the unpredictability of the outcome of action, the irreversibility of the (acting) process, and the anonymity of its authors:

It has always been a great temptation, for men of action no less than for men of thought, to find a substitute for action in the hope that the realm of human affairs may escape the haphazardness and moral irresponsibility inherent in a plurality of agents (Arendt, 1998, p.220).

Accordingly, throughout history monarchies (in its many varieties) and certain forms of democracy (i.e. the rulership of mass society) appear to be the salvation from the dangers of plurality. For Arendt (1998, p.221), Plato's ideal of philosopher king¹⁸ depicts this historical search for salvation well. The philosopher's wisdom was perceived to be a good enough alternative to action in dealing with the common concerns without creating indeterminacies and letting responsibility fade away into the masses, although the existence of such a king would banish the citizens from the public realm and confine them to their private business.

Furthermore, to prepare the theoretical foundations of *the escape from action into rule*, Plato for the first time, separates two originally unified aspects of *action* from each other: *beginning* (archein) and *achieving* (prattein) (Arendt, 1998, p.223). Although, *action* in Ancient Greek means both at the same time, Plato ascribes only *the beginning* to the master/ruler; because in order to be a master, one does not need to go through all of the steps required to achieve a task. It is enough only to know how to perform a task and to initiate it. The steps to achieve the task can be very well taken by anyone who can simply follow and execute orders. The executors/achievers do not need to know what they are actually doing to achieve the

¹⁸ The *philosopher king* for Plato is the best form of government ever possible because the philosophers are the only people who can be trusted to rule well. "It is in their nature to love truth and learning so much that they are free from the greed and lust that tempts others to abuse power" and moreover "they alone can gain full knowledge of reality" (Lane, 2018).

task as a whole. Correspondingly, in Plato's terminology, *the beginner* appears to be *the ruler* who does not need to *achieve* (prattein) but rules (archein) over those who are capable of *achieving* or executing. "Under these circumstances," states Arendt, "action as such is entirely eliminated and has become the mere 'execution of order', as the essence of politics becomes 'to know how to begin and to rule'" (Arendt, 1998, p.223). In this way, Western history of political thought results in the famous distinction between thought and 'action' (not in an Arendtian sense), or those *who know and do not act* and *those who 'act' but do not know*.

Keeping this historical account in mind, I will now again turn to smart cities. According to critical urban scholars (Hollands, 2008, 2015; Vanolo, 2014, 2016; Sadowski, 2015, 2016; Kitchin, 2014; Cardullo & Kitchin, 2017; Lombardi & Vanolo, 2015), city managers have partnered with big technology companies who use smart city technologies mainly to protect and enhance their own interests in the market because in the liberal tradition, it is believed that in this way general prosperity will eventually benefit from this partnership, as I have already explained in chapter two in more detail. From the urban scholars' perspective, while this coupling of political leaders and suppliers can be interpreted as the modern homo faber/beginners *making* the rules, shaping the cities with specific ends in mind and ruling towards those ends, the rest of the society can be viewed as animal laborans, executing the orders of the former.

On the contrary, through an Arendtian perspective I would analyze the roles ascribed to the smart city actors (i.e. the coupling of political leaders and suppliers, the rest of the society and smart city technologies, mainly algorithms) differently. The beginners are not political leaders or suppliers, but algorithms that are believed to gain insights on the complex relationships between phenomena (IBM, n.d.a). IBM's algorithms appear to be *homo-machina faber*¹⁹ in the smart city proponents' narrative. To phrase differently, Plato's dream about a rulership by a philosopher king would come true in an algorithmic form: IBM's algorithms become the 'most

¹⁹ Calling algorithms *machina-faber* (as derived from homo-faber), instead of *homo-machina faber*, would not correspond to the assemblage of humans and nonhumans that algorithms require to work. To represent at least the dependency between humans and algorithms, naming these ruling algorithms in politics as *homo-machina-faber* will be more accurate to what algorithms actually are (Neylan & Möller, 2017, p.47).

right’ ‘philosopher’ kings²⁰, as they initiate decision-making processes with their supposedly ‘non-ideological and logical’ insights.

Algorithms might be made by humans and, thus be shaped by already existing values, frameworks and aims of humans to work in the ways humans desire but today it is already known that not only policymakers or citizens but even the programmers of many algorithms (especially the ones trained by the neural networks) cannot anticipate and make sense of the outcomes of algorithms they have created themselves (Lafrance, 2015). Therefore, in governmental contexts, where the outcomes of these algorithms are taken to be the most reasonable insights in policymaking to assist city officials who are unable to question them, it is not possible anymore to present this coupling of political leaders and suppliers as *homo faber*.

As Western societies have already degraded politics into a *means to an end* or *making*, in this age of digitalization where innumerable processes of everyday life are delegated to technologies due to their perceived ‘success’ in being the most efficient means, a seemingly inevitable next step is for algorithms to take the place of humans in *making the rule* or ‘politics’. Humans, however, while increasingly delegating the thought/know-how to technologies, end up creating vast societies of animal laborans condemned to execute orders and to be solely focused in maintaining their private lives, without having a chance to discover their and others’ individuality in the public sphere.

What critical scholars propose as an alternative to what they criticize in smart city plans is to deploy politics and technologies in the service of citizens through better citizen participation (Hollands, 2015; Tenney & Sieber, 2016; Cardullo & Kitchin, 2017). In other words, while the ultimate end of politics for these scholars remains to be enhancing the quality of life, the way to reach this end differs. Instead of putting state (politics) in the service of markets and believing in the economic growth as the key for enhancing the quality of life, these scholars situate *common*

²⁰ I have introduced this terminology not because I think algorithms do philosophy or they ‘love’ truth ‘free from the greed and lust, but because of the ultimate function Plato sees in the philosopher king. Algorithms are believed, at least by companies like IBM, to *see* how phenomena interact with each other or how reality unfolds in a way that humans cannot even understand. Furthermore, algorithms are also believed to be morally neutral, as in if the data they are fed with is not biased, then they would not be biased either or abuse their ‘power’ favoring some over others.

good in lieu of *economic growth* as the indirect aim of politics to ultimately enhance the quality of life. In so doing, they assume that citizens would automatically be required in deliberating between different policy choices so that the *common* aspect of the ‘good’ could be reached.

However, through an Arendtian perspective, I argue that demanding more citizen participation and even designing the cities in a way that would enable more citizen participation would not necessarily warrant *citizens interests* in participating in public affairs. As long as citizen participation has an *instrumental value*, that is, it has value insofar as it leads society to make more accurate decisions than city managers would make by themselves concerning *the common good*, and as long as algorithms are perceived as providers of ‘non-ideological evidences’ of how the complex relations between phenomena occur and thus provider of ‘the most logical insights’ for political decisions, algorithms can easily replace the function of the citizen participation.

To put it differently, as long as

- 1) politics is understood as a means to an end (more specifically, to enhance the quality of life), as it has been in the Western tradition of political thought ever since Plato;
- 2) humans believe that to reach this end there are objectively logical ways waiting to be discovered and mastered, as Plato does;
- 3) algorithms are believed to outperform humans in discovering and mastering these objective logical ways, as IBM does;

The willful abstention of people from politics, and thus citizenship, can only exacerbate in the smart city context.

Before concluding, it is also crucial to highlight one final point: Even the citizen participation model the urban scholars propose is meant to determine the proper needs of citizens without being steered or obscured by the corporate agendas, these needs can ultimately be governed by supposedly ‘the most accurate’ policies made by algorithms. To phrase differently, although these scholars demand more citizen participation, political leaders after all can keep increasingly consult algorithmic ‘philosopher’ kings to reach the dream urban images of smart cities. Hence through an Arendtian perspective, the way politics and citizenship envisioned

in smart cities shows that smart city proponents want to eliminate the annoyances and troubles that come with an understanding of politics that celebrates contingencies of the open-ended debates. Smart city proponents want smooth, comforting, and rational closures or consensuses in the public sphere, not unsettling uncertainty of open-endedness. They think that the more humans eliminate these annoyances the more they will have easier and more desirable lives in actualizing themselves freely. With a liberal understanding of the self in mind, they assume that the identities of the city dwellers are a sealed black-box, independent of their desires and surroundings, as if city dwellers are the ones who shape these desires and their surroundings not the other way around. But I disagree.

Once humans design their cities in such a way that they would delegate their political power once again, but this time not to their imperfect peers, statemen but to algorithms believing that they will be more effective than humans in *making* politics, they would not be living an easier and pleasant life, but what Arendt views *an animalistic life*. By getting rid of politics, the possibility of acting free from predetermination and the capability of creating hope out of contingencies, they would be losing their most human aspects, their uniqueness, and become anonymous members of a herd behaving within the contours of what is expected to sustain smart cities.

3.3. Conclusive Remarks

The first section of this chapter has clarified the main concepts of Hannah Arendt to better grasp her understanding of politics; she distinguishes three types of human activities and modes of existence that are ascribed to each of these activities: Humans labor as animal laborans, work (or make) as homo faber, and act as *zoon politikon*. Ideally, while labor occurs in private sphere, that is, within the family; work and action (politics) occur in the public sphere. The criteria she uses to distinguish and hierarchize them is freedom from necessity and predetermination from ends and goals. The level of freedom rises as humans act, not labor.

- Humans *labor* to maintain life, to survive. Thereby, the conditions of this activity are shaped by humans' biological needs (i.e. nutrition, protection from cold). Accordingly, labor reveals the sameness of human beings. It

produces ephemeral products to be consumed immediately (i.e. food, clothes). Its organization is managed by a rulership of an authority that is embodied in the figure of the father.

- Humans *work* to make the common world durable and permanent by producing artifacts. A typical example of homo faber is the craftsman. The conditions of work are shaped by homo faber's aims and goals (not by the necessities of nature), and the products are long-lasting (i.e. buildings).
- Humans *act* to reveal the uniqueness of their individuality, hence the plurality of human beings, to discover themselves as well as others. Action/politics is an end in itself, not a means to enhance the quality of life: The value of politics does not come from outside (i.e. necessities of nature or ends and goals that are determined by/with others) of the activity, but from merely realizing the activity itself. Thus, politics is acting together with peers in the public sphere, not a rulership of some over others. It is the realm of open-ended debates, unexpectedness and persuasion. Most importantly, it is the most fully human activity because the level of freedom from necessities and predetermination is the greatest when compared to labor and work.

In the second section, I have built my Arendtian analysis of politics and citizenship envisioned in smart city discussions presented in the first chapter. Arendt's own analysis of the *modern age*, which starts around the 17th century (like liberalism) and gives rise to what she calls *the social*, along with her analysis of traditional Western political thought starting with Plato explain first *why we have ended up with such smart urban projects* where politics is in the service of markets and citizens are just passive members of the community:

- Ever since Plato, humans have long been searching for *the beginners* (the rulers) who know how to initiate and rule the ones who are needed to execute/achieve what the beginners initiate. Thus, 'politics' has already been torn apart and reduced into *ruling*, or *making the rules to be executed*. Moreover, to avoid the troubles that come with the contingency and open-endedness of "acting together", humans, as Plato has done, have already been seeking for the ones who know how to make the 'most right' rules to be

executed. Throughout history, it was either the king or a group of elected professional rulers.

- With the rise of the social, the public sphere has already been subjugated by the concerns and means of the private sphere: economic concerns and the rulership by an authority, respectively. Nation has been transformed into a gigantic family, thus politics into a “nation-wide administration of housekeeping” (Arendt, 1998, p. 28, 29, 39). Citizens have already become anonymous members that are unified in having similar types of concerns (i.e. maximizing the profit) and thus behave in anticipated manners, like homo-economicus as economics assumes. The rulership by an authority has already become a no-man rule, as this time the authority is not embodied in the figure of father like in the family, or in a king like during the pre-modern age, but diffused into state institutions, or bureaucracy. In other words, the modern age has already been under a rulership of bureaucracy.
- Following the above two historical phenomena, smart city proponents have worked hard to get rid of the most error-prone part of the bureaucracy: the bureaucrats/statemen, or the human component of the rulership. They are prone to believe that algorithms are capable of assuming the place of the ‘philosopher’ king Plato first dreamed of. This would place all humans, including the statesmen who previously had the role of initiators/the homo faber, finally under the same rubric in Arendtian terminology: animal laborans.
- Therefore, politics in smart cities is nothing but a city-wide administration of housekeeping and citizens are animal laborans ruled by homo-machina-faber.

Finally, to answer the question *how future city-dwellers will be shaped by these smart cities* through an Arendtian perspective I claim:

- Urban scholars demand more citizen participation as an alternative to the current state of smart city projects in order to design future cities to serve everyone, not merely to corporations, but such solution, as I argued in the second chapter, would not work. These scholars demand more citizen participation without discussing why companies like IBM, even in their

limited understanding of participation, are already facing problems with engaging citizens in their projects.

- As long as 1) politics remains to be a means to an end (more specifically, to enhance citizens' quality of life), as in Western tradition of political thought ever since Plato; 2) humans believe that to reach this end there are objectively logical ways waiting to be discovered and mastered, as Plato did, and 3) algorithms are believed to outperform humans in discovering and mastering these objective logical ways, as they are by IBM, the willful abstention of people from politics, and thus citizenship, can only exacerbate in the smart city context.
- As opposed to what smart city proponents think, the abstention from politics and thus citizenship would not lead them into an easier and thus more pleasant life but instead an animalistic life. Politics, acting free from necessities and predetermination, discovering and revealing the uniqueness of who individuals are in the face of the other, and the ability of creating hope out of the contingencies of open-endedness are at very core of being human. If humans willfully renounce from politics, they would also renounce what actually makes people's life a fully human one.

CONCLUSION

This thesis has answered the following research question: *How can an Arendtian understanding of politics contribute to analyses of politics and citizenship envisioned in smart city discussions?* It has been answered in three steps, each of which corresponds to a chapter.

First, a literature review concerning both the leading smart city proponents' visions of politics and citizenship and the analyses of these visions by the critical urban scholars has been provided to set the stage for the argument. In other words, the first chapter has offered a basis to understand what has been discussed in smart city projects and urban studies concerning the politics and citizenship so far.

Subsequently, to first justify *the need for a contribution* to the discussion, the second chapter has revealed what the critical urban scholars overlook in their analyses. By only criticizing neoliberalism, understood as a rather recent ideology that started to dominate everyday life after the 1980s, these scholars actually risk taking the liberal understanding of politics and citizenship for granted and thus overlook the source of the problematic issues they have spotted in these projects: liberalism, the underlying ideology of the contemporary democracies since the 17th century. As these scholars do not exhaustively identify the source of their problems, their analyses are condemned to fall short when analyzing politics and citizenship in smart cities and more specifically, when explaining why these issues they have spotted are actually problematic and what should be done to address them.

Finally, the third chapter has accounted for how an Arendtian understanding of politics, which provides an unorthodox framework going against the traditional Western political thought, can be highly useful to understand what the combination of liberalism and algorithms operating in smart cities can bring about.

Now, I will first summarize my Arendtian analysis of smart cities envisioned by major smart city proponents, and then discuss my results to show how such an Arendtian analysis can contribute to the discussion in the literature.

What urban scholars propose as an alternative to the current state of smart cities is to *put politics, and the smart city technologies if necessary, in the service of citizens*

through a better citizen participation (Hollands 2015; Tenney and Sieber 2016; Cardullo & Kitchin, 2017). However, this solution would not necessarily lead to the avoidance of what they are ultimately concerned of – *politics in the service of markets* and *passive citizenship*. First of all, politics in the liberal tradition has been subjected to markets/economic growth because it has already been assumed that this practice would ensure that the state (politics) would ultimately be in the service of citizens. For, it is believed that, by preparing the material conditions for everyone to pursue their own understanding of the good life instead of imposing one understanding of it to everyone, the state would indeed enhance its citizens' quality of life. Urban scholars follow up by proposing increased citizen participation to better determine those conditions so that quality of life rises for everyone, instead of assuming that economic growth would magically do the work by itself. But, the intention to include more citizens in public affairs does not unfortunately guarantee high rates of participation, as IBM's experiences explained in the first chapter or even the voter turnouts in Europe already indicate (Flickinger & Studlar, 1992; Kostadinova, 2003, also see Institute for Democracy and Electoral Assistance (IDEA)).

To address this dilemma, attributing the source of these problems to liberalism is crucial. In this way, one can show how deeply they are rooted in political history and how impossible it is to deal with these problems without questioning the long tradition of liberalism, which has been conditioning not only the roles of states but also citizens since the 17th century. To contrast critical urban scholars' propositions, I have argued in this thesis through an Arendtian lens that insofar as the assumptions of Western political tradition in general, and liberalism in particular, are taken to be true, *passive citizenship* is inevitable in smart city projects created according to the ideas that IBM, Cisco, and O'Reilly propagate.

Consequently, insofar as 1) politics is understood to be a rulership of some over others to enhance the quality of life (i.e. liberal understanding) as opposed to acting together to discover and reveal who humans are as unique individuals (i.e. Arendtian understanding), 2) humans believe that there are objectively logical ways waiting to be discovered to reach this ultimate aim of the good life, 3) citizen participation has value only because it helps society to make more accurate decisions than city managers would make by themselves to enhance their citizens' quality of life, and 4) algorithms are

perceived as providers of ‘non-ideological evidences’ concerning how to reach the ultimate aim (by supposedly revealing some patterns in complex relations between numerous components of cities that citizens cannot even grasp) (IBM, n.d. a), then algorithms can easily replace not only the function of the citizens but also political leaders. That is why, I claim, the abstention of people (including political leaders) from politics can only exacerbate in the smart city contexts I focused on in this thesis. Accordingly, humans would end up having an animalistic life in a society of *executers* (*prattein/achieving* divorced from *archein/beginning*), or animal laborans (including the political leaders, the homo faber of the past) due to willfully renouncing the core of their human experience: the ability to do the unexpected and create hope.

Before moving on to discuss the results of this thesis and suggest foci for follow-up research based on what will be discussed, I want to briefly touch upon the limitations of these results. Firstly, I have not conducted interviews or ethnography in a city that is being transformed by business-led projects. I have relied solely on textual and visual sources from companies, media, academic research and consultants. As a consequence of this methodological choice, my analysis provides a theoretical macro-level perspective, rather than an empirical micro-level one. While the latter could have provided more specific and concrete analyses of politics and citizenship envisioned in such projects, by choosing the former perspective I did not risk losing sight of the big picture by delving into singular examples. Furthermore, choosing an empirical micro-level methodology might have risked inducing a general analysis from sporadic singular cases in a limited amount of time.

Secondly, I am well aware of the fact that not all smart city projects are top-down business-led projects and that there are also bottom-up ones where the citizens’ voices drown out the corporate ones more successfully while shaping the city. However, these bottom-up initiatives are certainly far from being the dominant global trend. According to Hollands (2015, p. 70), “there exist no large-scale alternative smart city models, partly because most cities have generally embraced a pro-business and entrepreneurial governance model of urban development”. Furthermore, as I have explained in section 1.2.3, even the bottom-up projects are criticized for having a limited understanding of citizen participation (Cardullo & Kitchin, 2017).

After having deliberated the limitations of this study, I will finally turn to discuss the results. To avoid a trajectory towards an animalistic life, I claim that a new meaning of politics/citizenship beyond the liberal one should be explored. There are ways and reasons to go against all of the four premises enlisted above which lead us to that specific trajectory. I will start with the last premise. Smart city proponents' assumptions about algorithms and the data (as the input of the latter) should be closely investigated. Literature (McQuillan, 2017; Lake, 2017) that questions and criticizes the claims about algorithms and big data being able to "x-ray the reality" and provide objective, non-ideological evidence concerning phenomena is increasingly growing. Scholars are already discussing how algorithms create, maintain or cement norms and notions of normality or abnormality, instead of 'seeing the reality' (Crandall, 2017; Beer, 2017; Lepri et al. 2017).

Before dealing with the remaining premises at once, I will first remind the reader of one important point: As I have briefly touched upon in section 1.2.4., urban scholars have already started a search for a new meaning of politics/citizenship beyond the liberal one. Scholars like Kitchin (2016) and Sassen (2016) have been discussing alternative visions and given some concrete suggestions in terms of what should be done for the future of our cities so that future-dwellers would live better lives all together, as opposed to the mainly profit-driven and thus partial corporate visions which benefit only a small portion of the society. They agree that city managers with the cooperation of various citizen groups should *first determine which kind of a city with respect to socio-political issues like fairness, equity, justice, citizenship, democracy and political economy (instead of technical issues) they would like to live in* and then take the lead while designing it with companies. Otherwise, as Sassen (2016) puts it, "the tech companies come and impress the municipal government people" with their high tech-solutions and then city managers find themselves in a situation where they need to approach their own problems through the perspective of what parts of these problems can be addressed by these technologies they have bought (the right to use). Hence, as Kitchin (2016, p.7) nicely concludes, "the means is post-justified by ends, rather than the ends shaping the means."

This call for "grabbling with more normative questions" to "set the wider framework within which smart city agendas and initiatives are formulated, deployed and run" (Kitchin, 2016, p.7) is actually not a recent one. In 1968, with his book *Le Droit à*

la Ville (The Right to the City), Lefebvre has already called his readers to think about such normative questions, because, according to Harvey (2008) “the question of what kind of city we want cannot be divorced from” the normative questions about what kind of social ties, relationship to nature, lifestyles, technologies and aesthetic values citizens desire to have rights to in their city.

First, determining the common good in every unique societal context and then deploying technologies in the service of this common good also sounds what communitarian political theorists would advocate for. Communitarianism, a secular ethical and political thought, arose in the 1980s as a critique of liberalism, in general and its individualist and atomistic understanding of self, in particular. Its most known scholars (Michael Sandel, Alasdair MacIntyre, Charles Taylor and Michael Walzer) argued for the importance of belonging to a community for individual flourishing (Buchanan, 1998) and the common good in contrast to liberals who highlight the personal autonomy and the good for individuals (e.g. individual rights) (Etzioni, 2013). According to Sandel (1984, p.5), people cannot comprehend their personhood without reference to their role as citizens and as participants in a common life. Hence, what is good for individuals has to be good for the ones who inhabit the same role with those individuals. Determining the common good includes coming up with common answers to the abovementioned normative questions concerning which kind of city we would like to live in and is required to justify political decisions.

However, there are at least two problems with such attempts. Firstly, as mentioned above and in the introduction, given the liberal status of citizenship and thus the liberal civic disposition, citizens do not always seem to be enthusiastic about participating the public affairs, discussing the common issues, and determining the *common good*. Secondly, as mentioned in section 3.2.2., even if citizens are interested in these things and participate to determine what their proper needs and the common good are – without being steered or obscured by the corporate agendas – this would not be enough to avoid the trajectory I have depicted in the third chapter. Such attempts of urban scholars and communitarians imply a static and oversimplifying understanding of the common good – as if it could be determined once for all (or at least for a while) with the greatest participation of various citizen groups and political leaders and then subjected to some professionals (e.g. political leaders and/or algorithms) to be operated.

This is where Hannah Arendt's works can deepen, and thus contribute to, the discussion in order to address this problem (and the remaining premises I mentioned above which lead to the undesired future) with her unorthodox understanding of politics.

For Arendt, politics is neither a means for the satisfaction of individual preferences nor a means to reach a single or transcendent conception of the common good. Politics is not valued because it leads to agreement or a shared conception of the good. It is a never-ending process of deliberation about matters of collective concern. It is valued because "it enables each citizen to exercise their powers of agency, to develop the capacities for judgement" (d'Entrèves, 2001). From an Arendtian perspective, what the urban scholars propose above would instead serve to reproduce the distinction between professionals in politics and the rest (supposed citizens), while depriving the latter of their capability to exercise their agency thus to realize themselves after the designing process of their cities. Becoming citizen, in an Arendtian sense, entails a continuous process of discovering and becoming ourselves in the face of others in the public space. Moreover, human plurality and capability to start something new (i.e. acting/politics) are always set against what is settled/established as some sort of a law (Arendt, 1998, p.178) and thus, I argue that these two reflect how citizens' agreements regarding the common good cannot be static. Recognizing human plurality and capability to do the unpredictable requires acknowledging that there was not, and will never be, one best way of living our lives in any time of the history. It should always be subject to continuous discussions, to open-ended debates.

Consequently, in the current stage we are in, what we need is more research on the following questions:

1. How can we create public space *where people can become citizens again* through active participation in the matters that concern them?
2. What are the socio-material and technical conditions needed to create such spaces?

And maybe more importantly:

1. Is it enough to create these spaces and then hope that people take their roles in them?
2. Or should we also be concerned with how to fill those spaces, that is, how to encourage people to take responsibility in realizing themselves?

3. If so, should we even instill people with the value of discovering and performing their uniqueness and commonality through civic encounters and responsibilities in such places at an early age?

Answering the last question affirmatively would not entail that *everyone* should need to be a part of these spaces; but as Arendt would agree (i.e. her ideas on political elites who chose themselves to participate, 1963, p.275-80), we need to be able to include at least the ones willing to actively participate in the arrangements of the matters that shape them, after having ensured that through basic education, everyone is introduced to what active participation offers and entails in practice, not only through text books.

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