# FROM TECHNOCRATIC SMART CITIES TOWARDS DEMOCRATIC URBAN FUTURES: RECLAIMING THE RIGHT TO THE CITY

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## ABSTRACT

### FROM TECHNOCRATIC SMART CITIES TOWARDS DEMOCRATIC URBAN FUTURES: RECLAIMING THE RIGHT TO THE CITY

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Climate change, population growth, migration, and rapid urbanization have been radically transforming cities at a rapid pace on a global scale. Confronted with environmental, spatial, and social justice challenges deepened by anthropocentric belief systems and neoliberal policies, cities have turned to seek new and alternative solutions. Smart city initiatives have emerged in this context, promising more efficient, productive, faster, and more performant cities. In this evolving landscape, however, the smart city paradigm has introduced new complexities to the understanding and realization of the "right to the city." The thesis is built upon the argument that citizens' right to the city and the questions of environmental, spatial, and social justice in relation to that are being critically undermined by the technocratic understanding of the smart city. It claims that the major underlying factor that threatens social justice stems from the technology-driven discourses and practices that translate into mechanisms of depoliticization through urban governance and spatial practices. In this context, the thesis explores the potential in the affordances of smart city technologies to empower citizens, increase their participation, reclaim their right to the city, and achieve democratic urban futures. Accordingly, the thesis examines the power dynamics of the smart city under the

framework of governance, and the ever-changing interpretations of publicness in relation with urban space in different cases. Finally, it provides insight into policy and practice, stressing the potential of a greater extent of citizen participation in shaping smart city initiatives.

Keywords: Right to the City, Social-Spatial-Environmental Justice, Smart City, Sustainable Development, Citizen Participation

# ÖZ

## TEKNOKRATİK AKILLI KENTLERDEN DEMOKRATİK BİR KENTSEL GELECEĞE DOĞRU: KENT HAKKINI YENİDEN KAZANMAK

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İklim değişikliği, nüfus artışı, göç ve hızlı kentleşme küresel ölçekte kentleri büyük bir hızla, kökten dönüştürmektedir. İnsan merkezli inanç sistemleri ve neoliberal politikaların derinleştirdiği çevresel, mekânsal ve sosyal adalet sorunlarıyla karşı karşıya kalan kentler yeni ve alternatif çözümler aramaya yönelmiştir. Bu bağlamda ortaya çıkan akıllı kent girişimleri, daha verimli, üretken, daha hızlı ve performansı daha yüksek kentler vaat etmektedir. Ancak değişim içerisindeki bu ortamda, akıllı kent paradigması "kent hakkı" anlayışına ve bunun uygulamasına karmaşık yeni boyutlar getirmiştir. Tez, vatandaşların kent hakkı ve bununla bağlantılı olarak çevresel, mekânsal ve sosyal adalet sorularının akıllı kentin teknokratik uygulamaları tümüyle göz ardı edildiği eleştirisinden yola çıkmaktadır. Toplumsal adaleti tehdit eden temel faktörün, kentsel yönetişim ve mekânsal pratikler aracılığıyla depolitizasyon mekanizmalarına dönüşen teknoloji odaklı söylem ve uygulamalardan kaynaklandığını savunmaktadır. Bu bağlamda tez, akıllı kent teknolojilerinin vatandaşları ve kentlileri güçlendirme, katılımı artırma, kent üzerindeki haklarını yeniden kazanma ve demokratik bir kentsel geleceğe ulaşmasının potansiyelini araştırmaktadır. Bu doğrultuda, yönetişim ile ilişkili olarak

akıllı kentin güç dinamikleri çerçevesinde, kentsel mekân ile ilişkili olarak sürekli değişen ve dönüşen kamusallık kavramı farklı örnekler üzerinden incelenmektedir. Tez, akıllı kent girişimlerinin şekillendirilmesinde daha geniş bir vatandaş katılımının potansiyelini vurgulayan politika ve uygulamalara ışık tutmaktadır.

Anahtar Kelimeler: Kent Hakkı, Toplumsal-Mekânsal-Çevresel Adalet, Akıllı Kent, Sürdürülebilir Kalkınma, Kentlilerin Katılımı

To my dearest father

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## TABLE OF CONTENTS

## LIST OF TABLES

TABLES

## LIST OF FIGURES

FIGURES

## LIST OF ABBREVIATIONS

ICT:  Information and Communication Technologies

IoT: Internet of Things

MDGs: Millennium Development Goals

SDGs: Sustainable Development Goals

UDHR: The Universal Declaration of Human Rights

UN: United Nations

# CHAPTER 1

## INTRODUCTION

Cities have always been the *loci* of the interplay between power dynamics, economic activity, cultural production, technological experiments, and socio-political transformation. As Jane Jacobs states, cities function as dynamic laboratories of trial and error in urban design, driven by the need for a complex, closely interwoven diversity of uses that provide mutual economic and social support, with components that vary widely yet must complement each other in specific, tangible ways.[1] Henri Lefebvre makes an analysis of the evolution of cities from the political city to the urban society by examining the transformative dynamics of cities through history, emphasizing shifts in power, economy, and spatial relations. As he describes, the political city was constructed on the grounds of power and control, from a perspective dominated by the rulers, priests, and administrators, who controlled large territories and agricultural projects with the monarchy's ownership of land as a central signifier of order.[2] Over time, the mercantile city emerged, challenging the political city's authority by establishing markets, urban spaces for trade, and symbols of liberty, eventually giving way to the industrial city, which fragmented and expanded urban reality through the rise of industry, dispersing traditional urban cohesion into a sprawling, repressive, and highly signified urban fabric.[3] Industrial capitalism, Manuel Castells argues, precipitated the dissolution of the city as an autonomous social system. The rise of commodification, social division of labor, spatial expansion, and institutional homogenization undermined the city's particular

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[1] Jane Jacobs, *The Death and Life of Great American Cities* (New York, NY: Vintage Books, 1993), 6-14.
[2] Henri Lefebvre, *The Urban Revolution*, trans. Robert Bononno (Minneapolis: University of Minnesota Press, 2003), 8-9.
[3] Ibid, 10-14.

ecological and cultural identity, subordinating it to the interests of the bourgeoisie and entrenching social domination by a specific class.[4]

The impact of technology is exerted through the introduction of new production and consumption of activities, as well as the almost complete removal of the barrier space, which is made possible by the tremendous advancement of communication tools.[5] The growing concentration of political power and the development of a technocracy that protects the system's long-term interests gradually eradicate local particularisms.[6] While the emergence of the smart city as a dominant urban paradigm opens up opportunities for innovation and efficiency, it also entails certain risks of deepening existing inequalities and depoliticizing critical urban processes. The rise of information industries and the global economy has created a new geography of centrality and marginality, perpetuating existing inequalities while reflecting the dynamics of contemporary economic growth.[7] In line with this view, Jacobs approaches cities as problems of organized complexity characterized by numerous interrelated variables that vary simultaneously and subtly, forming an organic whole where no single issue explains the entirety but instead consists of interconnected segments that must be analyzed collectively.[8]

The motivation of the thesis to explore the right to the city in smart cities is driven by the multifaceted nature of cities and a deep concern for the growing socio-spatial inequalities that characterize urban life in this era. Although the thesis employs the established terminology of "smart city" and "sustainable city," the context in which the argument and subsequent research are situated pertains to the urban phenomenon

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[4] Manuel Castells, *The Urban Question: A Marxist Approach*, trans. Alan Sheridan (London: Edward Arnold, 1977), 14.
[5] Ibid, 21.
[6] Ibid, 23.
[7] Saskia Sassen, "The Global City: Strategic Site, New Frontier," in *Moving Cities – Contested Views on Urban Life*, ed. Lara Ferro, Marta Smagacz-Poziemska, Magdalena Gómez, Sebastian Kurtenbach, Paula Pereira, and Jorge Villalón (Wiesbaden: Springer VS, 2018), 79-95, https://doi.org/10.1007/978-3-658-18462-9_2, 82.
[8] Jacobs, *The Death and Life of Great American Cities,* 433.

that Lefebvre refers to as the "critical zone." The thesis emerges from a desire to critically investigate such risks while exploring alternative models of governance and spatial practices that give primacy to justice, inclusiveness, and democratic engagement. Accordingly, it represents a journey of evolution from initial interests in the smart city and its potential to support social justice and the right to the city to a growing realization of its profound social, political, and spatial implications. Early explorations into the frameworks of smart cities revealed questions as to their underlying assumptions, particularly their tendency to prioritize efficiency and technological determinism over social justice and democratic participation. This led to the realization and a consequent shift of focus to the right to the city against exclusionary practices and commodification.

The research revealed that depoliticization is the central challenge to realizing the right to the city in the smart city. This argument forms the thesis' dual focus: an inquiry into the governance mechanisms underlying technocratic solutions unfolding through the role of the public and private sectors and the spatial practices, with a particular emphasis on the public space, exploring how it can be a tool and backdrop for mechanisms of depoliticization with the growing infiltration of digital technologies, virtualization, privatization, and commodification. The chapters of the thesis are organized to examine the socio-political and socio-spatial dynamics of the city emerging as instruments of depoliticization in the context of the smart city. The chapters proceed in a sequence parallel to the emergence and exploration of the argument. Accordingly, the research unfolds by first critically examining the concept of the smart city as the context in question, situating the concepts of urban rights and justice in this context, and then addressing the tools of depoliticization under two main headings. Each chapter is designed to unpack these interwoven themes systematically, closing with reflections on alternative frameworks that can re-politicize urban processes and reclaim the city as a space of collective agency. The reason for conducting this research is not only to present an analysis but also to give an insight into an urban life that benefits from the affordances of smart cities and digital technologies by anticipating the transformation of the mechanisms that hinder

the right to the city and social justice emerged from the debates arising from the context in question.

## 1.1 Technocratic Cities, Democratic Aspirations: The Justice Dilemma in Urban Transformation

Climate change, rapid urbanization, population growth, and migration have been radically transforming our cities at a rapid pace. Exacerbated by anthropocentric belief systems and neoliberal policies, especially in recent years, the problems caused by the climate crisis have reached a point where they can no longer be ignored. We can observe the direct and indirect effects of these problems in both rural and urban environments. Moreover, this situation accelerated the migration of millions of people to urban areas, creating challenges for income inequality and inequitable environmental risks. As the cities struggle to cope with these challenges, they look for new and alternative solutions.

Smart city understanding has emerged in this context, promising more efficient, productive, faster, and more profitable cities. These approaches represent an emergent urban paradigm powered by the integration of digital technologies, data analytics, and networked infrastructures for efficiency, sustainability, and quality of life. Enabled through the development of ICT in smart cities, one sees the convergence of technologies like IoT, big data, and artificial intelligence come into play to optimize all things urban in nature: transportation, energy, governance, and public services. Smart cities have been offering their ideals as the ultimate solution to save the planet and provide equitable and livable environments. While the abundance of smart technologies profoundly changes how we experience cities, our understanding of space, the public realm, urban experiences, urban commons, and collective existence has drastically altered. Beneath the promises of innovation and progress, this vision brings new complexities to the understanding and realization of the “right to the city.” Originally introduced by Henri Lefebvre, it was a call for inclusive participation, spatial justice, and the right to shape the urban space—

something being considerably challenged in the smart city frameworks. The cities that are being promoted as "smart" have mostly focused on infrastructural improvements while overlooking the issues with current power structures, urban policy problems, and issues that have arisen as a result of these new advancements. This limited conception of the rising smart city has been struggling to cope with environmental, social, and spatial justice and has contributed to income inequality, unequal threats to the environment, and other issues.

The thesis argues that the right to the city and the issue of justice in relation to that is being critically undermined in the smart city model. It claims that two major underlying factors threaten justice and unfold the discussion through these interrelated issues. Firstly, the question of justice requires political commitment.[9] The depoliticization of the smart city approach makes urban governance solely a technocratic exercise that moves democratic engagement and participation by all to the side. As urban decision-making becomes more driven by data, algorithms, and corporate interests, the essential political debates about equity, justice, and inclusion are moved to the background. As a result, the citizens are alienated from the decision-making processes concerning the city and urban spaces.

Secondly, the physical space of the city, which has been the locus of social interaction, protest, and public life, is moving towards virtual space under the pressure of technological development and spatial reconfigurations. The displacement of citizens from these physical spaces of the city for public meetings and protests, in particular, occurs gradually, while urban life increasingly migrates into virtual environments through digital platforms or smart infrastructure systems. Yet, these virtual spaces alone cannot create the necessary conditions for a re-politicization through the engagement of citizens in urban life. While physical space

[9] "It is not sufficient … to explore the metaphysical groundings, the foundational beliefs, that might be applied to understanding abstract terms as well as the concrete politics of space, time, place, and environment (nature) in isolation. Such explorations should simultaneously pursue a political commitment to feed, nourish, clothe and sustain the hungry, the poor, and the weak." David Harvey, *Justice, Nature & the Geography of Difference* (Malden, MA: Blackwell, 1996), 5.

has always had the capacity to accommodate political activism and public protest, virtual spaces carry the challenge of becoming increasingly privatized, surveilled for presumed security reasons, and shaped by commercial interests. However, there is a potential in the affordances of these technologies and the alternative public space they create to empower citizens, increase participation, and reclaim their right to the city. By revealing the various depoliticization mechanisms and the structural forces behind them, the thesis aims to explore alternative approaches for more equitable urban living that can make use of the "smart" city.

## 1.2 Toward Democratic Urban Futures

The thesis aspires to challenge the mainstream discourse regarding the smart city, addressing how smart city approaches often prioritize large-scale, top-down, mostly infrastructure-based solutions in the hands of corporations and states. It argues that to achieve equitable urban living, the ways in which smart city approaches are being applied to cities need to be redefined. As urban areas worldwide progressively embrace data-driven technologies and deploy intelligent infrastructure to tackle issues like sustainability, efficiency, and governance, this transition brings about intricate socio-political consequences that directly influence the urban space. Relating the understanding of "smartness" to the questions of how livable our city is, whether it is equitable, serves its members without discrimination, offers a range of opportunities, is lively, walkable, and makes the people happy becomes the primary concern. Therefore, the problem evolves in such a way that the answer to each urban question is not only searched for in technologies, planning, and building but also in the web of services, how people organize, mobilize, and communicate via the new tools.

First of all, the thesis aims to examine how global approaches to smart cities have evolved in response to the challenges urban environments face today. It seeks to understand how the issues of environmental, spatial, and social justice are being reconceptualized in the smart city. The thesis departs from the observation that smart

city policies pose the danger of obscuring issues regarding social justice together with public engagement and political discourse by emphasizing efficiency and sustainability as mainly technical objectives. Thus, it explores the ways in which the depoliticization of urban space affects the efforts of justice and the right to the city within smart cities. It questions how the rise of smart city policy is reshaping the political dimensions of urban life and, conversely, what it portends for the abilities of citizens to claim rights to participate in and shape urban spaces. The thesis aims to explore the ways to achieve a smart city through citizen empowerment while questioning the role of the public and private stakeholders in addressing the community and advocating for collective interest. In light of these discussions, the thesis seeks to explore how the understanding of "smartness" can be reconceptualized to address the challenges the cities are facing today, in what ways the seemingly depoliticized smart city policies transform the conception of the right to the city, how cities can benefit from digital technological tools in order to foster design and policy innovations to achieve livable and more equitable urban environments, how the public and private actors collaborate to establish smart city policies, to what extent virtual spaces in smart cities provide opportunities for public discourse, collective action, and political engagement, how a system in which we, as citizens, have more power in creating, deciding upon, and changing the environment they live in, can be achieved.

The overarching purpose of the thesis is to contribute to the greater discussion on urban justice mediated through the smart city to present insights into how the understanding of a smart city shapes the realization of the right to the city. The thesis acknowledges that while the literature on smart cities frequently highlights dimensions such as sustainability, innovation, efficiency, and justice, the exploration of these themes in relation to urban space awaits to be further explored. Therefore, it aims to address this gap by focusing on the right to the city and the dimensions of justice, emphasizing the depoliticization of smart city policies while exploring the ways in which to re-politicize and examine the urban space as a tool to claim the right to the city. Ultimately, the research seeks to propose perspectives for reclaiming

urban political agency in smart cities, calling for approaches that foreground inclusiveness, equity, and active participation of all urban inhabitants toward shaping the futures of their cities.

The thesis encountered various limitations. First, the topic in question—the smart city—is a trending topic, and therefore, new literature, policies, and case studies continuously emerge, potentially affecting the arguments presented here. Since smart city developments are driven by rapidly evolving technologies, making a critical assessment of their social, spatial, and environmental impacts becomes a challenge. Moreover, while the very notion of the right to the city is intrinsically complex and contested, attempting to evaluate it is a challenging task. The political, economic, and cultural contexts of urban transformation add further complexity since these are in constant need of reinterpretation. Unlike evaluation methods based on numerical data, such as KPIs and indexes, which are common in smart city approaches, the evaluation of the social dimension, which the thesis focuses on, requires a different epistemological approach. This indicates further critical work, interdisciplinarity, and adaptive methodologies for grasping the underexplored territories in the intersection of justice, technology, governance, and urban space.

## 1.3 From Urban Revolutions to Smart Cities: Changing Discourses from the 1960s to 2020s[10]

The research on the theory of the right to the city, initially formulated by Henri Lefebvre during the 1960s, emerged from discussions on urban democracy, justice, and the power of citizens to transform their urban environment. The late 1960s witnessed radical social and political movements with the student revolutions, creating a libertarian humanist understanding in all fields. Thus, one can observe

[10] This chapter builds upon and expands the literature research that started in the ARCH 615 Architectural Research Methods and Ethics course at METU as part of the thesis.

social and humanist concerns such as urban reform and social justice becoming dominant in the discourse. Highly engineered, systematic, and logical concerns of early modernist architecture and urbanism shifted towards the impact of design on the social structure. The problem of the citizen as a builder and user started to be discussed widely. What was commonly underpinned in the 1970s discourse is the concept of an urban designer as a social leader who must have adequate technical knowledge and theory but be more than a scientist.[11] [12] There is a search for an ideal city that strives for social and spatial justice. Influenced by the revolutionist atmosphere of the time, researchers were bothered by rapid urbanization and addressed urbanism as a tool to achieve the ultimate public good.

In order to characterize and theorize the continuous deconstruction and attempted reconstitution of urban social space, scholars in the 1980s and early 1990s put forward different notions, such as deindustrialization, industrialization, post-Fordism, internationalization, global city formation, urban entrepreneurialism, informalization, gentrification, and sociospatial polarization.[13] While under the influence of neoliberal dynamics, the 1980s also introduced major new perspectives on cities and urbanization, notably feminist and social analyses examining gender, race, ethnicity, and class in urban spaces; research on the impact of globalization impact on urban structures; and a renewed focus on urban politics and governance.[14] In the 1990s, a discursive shift occured toward sustainability whereby urban planners and policymakers became more aware of the inevitable environmental and social

[11] Edward Balassanian, "Planning-Social Leadership: A Conceptual Study on Le Corbusier" (PhD diss., University of Pennsylvania, 1975), 2.
[12] During the 1970s, France experienced the far-reaching integration of social sciences in the framework of architectural education. By establishing courses in urban sociology in the schools of architecture, it was aimed to train future designers to understand the dynamics of urban life. For instance, the influence of Henri Lefebvre, Paul Davidoff, Jane Jacobs, Christopher Alexander, Team X, and Catherine Bauer Wurster was transformative.
[13] Neil Brenner and Nik Theodore, "Neoliberalism and the Urban Condition," *City* 9, no. 1 (2005): 101–7, https://doi.org/10.1080/13604810500092106, 101.
[14] Allen J. Scott and Michael Storper, "The Nature of Cities: The Scope and Limits of Urban Theory," *International Journal of Urban and Regional Research* 39, no. 1 (2014): 1-15, https://doi.org/10.1111/1468-2427.12134, 2.

challenges brought by rapid urbanization and economic restructuring. The notions of "smart, sustainable, resilient cities" have influenced urban development all around the world.[15]

Socio-economical and socio-cultural concerns kept growing in the 2000s in a rather different manner. Accelerated improvements in technologies, as well as rapid urbanization and globalization, started to bring a unique perspective to conventional discussions, while the emphasis on the importance of community and locality, implying a bottom-up understanding of city-making and urban governance, continued to grow.[16] Although the arguments still mostly revolve around the concepts of policy, governance, citizen involvement, and physical structure of the cities, in this decade, one starts to see the impact of smart city technologies on the core arguments, language, and methodologies used to realize the investigation. Thus, the definition of the problem starts to shift from "ideal city" to "future city."

Current data-driven methods that are using the abundance of smart technologies profoundly change the way we experience cities. Social debates regarding architectural and urban issues are powered by smart city technologies in order to observe, collect data, determine problems and potentials, and offer innovative solutions. The problem has evolved over decades such that solutions to urban challenges—such as transportation efficiency, housing shortages, public space management, and resource distribution—are increasingly sought not through traditional planning and construction but through the web of services and how people use new tools to organize, mobilize, and communicate, reflecting the growing reliance on technology-driven approaches to address urban challenges. From the

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[15] Haochen Qian, Fan Zhang, and Bing Qiu, "Deciphering the Evolution, Frontier, and Knowledge Clustering in Sustainable City Planning: A 60-Year Interdisciplinary Review," *Sustainability* 15, no. 24 (2023): 1–27, https://doi.org/10.3390/su152416854, 18.

[16] Ash Amin and Nigel J. Thrift, *Cities: Reimagining the Urban* (Cambridge: Polity, 2002); Leonie Sandercock, *Cosmopolis II: Mongrel Cities in the 21st Century* (London: Continuum, 2003); Janine Shinoki Clifford, "Transcending Locality-Driven Lifestyles: The Potential of the Internet to Redefine Neighborhood Patterns" (PhD diss., Harvard University, 2002).

arguments of the 2010s' academic research, it can be deduced that without necessarily altering the physical built fabric of the cities, the citizens can, in fact, affect and change how the city performs and claim right on what it can offer. It is seen that while in the earlier periods, technology's active involvement in architecture and urbanism was mostly concerned with the technical aspects of the innovations, in the 21st century, it has started to be used as a civic service undertaking a responsibility to achieve inclusive public good. The reason behind this is that, especially with the growing construction technologies during the Industrial Revolution, cities were heavily transformed by large-scale construction technologies through physical infrastructure projects such as roads, buildings, and utilities. Most of those interventions are top-down, driven by centralized authority figures or large corporations. With the development and growth of digital and communication technologies, it is clear that the role of informatics—specifically reference to data management and communication networks—has irrevocably altered the urban environment. Technologies like Geographic Information Systems (GIS), the Internet of Things (IoT), and big data analytics enable a more decentralized, participatory approach to city planning and governance, where citizens, local governments, and private stakeholders can interact dynamically and share information in real time.[17] These digital tools facilitated collaborative governance and planning, whereby residents within the urban context are increasingly enabled to act in decision-making capacities, share local knowledge, and engage in more direct forms of participation. Parallel to the changing ideologies, the terminology has also expanded beyond the boundaries of the specific fields, denoting a shift towards interdisciplinary research. In other words, smart cities are viewed as a hybridization of informatics and

[17] Marcus Foth, ed., *Handbook of Research on Urban Informatics: The Practice and Promise of the Real-Time City* (Hershey, PA: Information Science Reference, 2009); Anthony Townsend, *Smart Cities: Big Data, Civic Hackers, and the Quest for a New Utopia* (New York: W.W. Norton and Company, 2013).

urbanism, concerned with the idea of integrating digital into the physical reality of future cities.

With the available technological tools at hand, there has emerged a transformation in theoretical and methodological approaches. Digital technologies, data analysis, and the Internet of Things gained significance in observing, determining, documenting, and proposing socio-urban issues in urban and social research. Quantitative-based research methods started to come to the forefront. On the one hand, a particular focus is given to this new paradigm prioritizing quantitative information, objectivity, and digital evolution and the outcomes that are born out of it, such as the contradiction between the principles of privacy and transparency of data, citizen participation, sharing economy, etc. But when it comes to using technical and quantitative procedures, the impression of objectivity is a widespread misconception.[18] "Quantification is a way of making decisions without seeming to decide,"[19] mentions the historian Theodore Porter. Many technologies, such as those that increase efficiency, are intended to address social problems, yet this does not render them value-neutral. Efficiency is a normative objective because it favors some principles and outcomes over others, often changing how status and resources are allocated throughout society.[20] Therefore, the significance of well-functioning policies has been emphasized consistently in the discourse. On the other hand, there is a concern for the future of urban space. Discussions have increasingly revolved around a way of reclaiming the right to the city in the age of smart cities. As opposed to top-down, imposed cities and, consequently, lifestyles and urban cultures, an emphasis has been given to human-centered approaches. "Tactical urbanism" and "urban acupuncture" are some of the terms that have been used widely, providing an understanding of the possibility of the citizens to impact and change the urban

[18] Ben Green, *The Smart Enough City: Putting Technology in Its Place to Reclaim Our Urban Future* (Cambridge, MA: MIT Press, 2019), 7.
[19] Theodore M. Porter, *Trust in Numbers: The Pursuit of Objectivity in Science and Public Life* (Princeton, NJ: Princeton University Press, 1995).
[20] Ben Green, *The Smart Enough City*, 7.

environment. However, their examples suggest an almost opposite methodology and perception of urban living, prioritizing sensorial experiences, face-to-face interaction, and collaboration. In-between approaches have started to emerge lately. Even though the concern for a bigger scale impact is relevant, it opens up three-faceted thinking: technological improvements, qualities and affordances of urban space, and a governmental structure that can allow for a degree of independence and flexibility.

Finally, we can observe that the contemporary research on the right to the city has evolved significantly, with a clearer emphasis on the growing justice-related concerns in the context of the smart city. As smart city initiatives are aimed at integrating technological solutions for urban challenges, the literature increasingly debates such developments along the lines of social justice, questioning their ability to deliver on promises pertaining to sustainability and inclusivity. This shift has been pronounced, particularly in the wake of the inevitability and urgent need to address the climate crisis—the fact that reshaped the priorities of researchers in urban studies and policymakers alike. That is a signal for a growing focus on justice—a wider recognition that technological progress is not enough unless it is combined with equitable and ethical outcomes to ensure the rights of the city.

## 1.4 Conceptual and Methodological Framework

The thesis adopts a qualitative research method, relying on extensive theoretical analysis, literature review, and case examples that will address the research questions. By building upon and extending to the existing literature, the thesis addresses the existing gap between theories of urban justice and the paradigm of the smart city. It critically investigates the reconceptualization of the right to the city in the context of smart cities, exploring how questions of environmental, spatial, and social justice are addressed and exploring the key factors that threaten them. Through a critical engagement with discourses around smartness, governance models, and the transformation of urban space, the research will contribute toward an understanding

of urban justice. The findings also will contribute to broad debates on smart cities, providing a critical counterpart to the challenges and opportunities for the empowerment of citizens and their ability to participate within urban governance and the reclaiming of rights to the city in the digital era. A key component of the methodology involves comparative analysis between different smart city definitions as well as different smart city versions—smart city 1.0, 2.0, and 3.0—in order to reveal different understandings, governance approaches, and their implications for justice. To contextualize these theoretical debates within an empirical reality, the thesis examines case studies—the use of smart city technologies in the municipal governance in Barcelona, in building a city from tabula rasa in Quayside Toronto and Masdar City, and in a participatory urban design competition process in the Taksim Urban Design Competition—that all exemplify specific models of governance, participatory dimensions, and spatial transformations related to smart city discourses. In addition, the thesis refines methodological approaches by embedding established theoretical frameworks into the research, such as adapting Castree's conceptualization of commodification to achieve a framework of depoliticization mechanisms in smart cities and Arnstein's ladder of citizen participation to create an extended set of participatory dimensions, which is later used to analyze Barcelona’s participatory governance platform Decidim. By doing so, the thesis systematically unravels the tensions between technocratic urbanism and democratic participation and provides a critical framework through which to rethink justice, governance, and urban space in the age of smart cities.

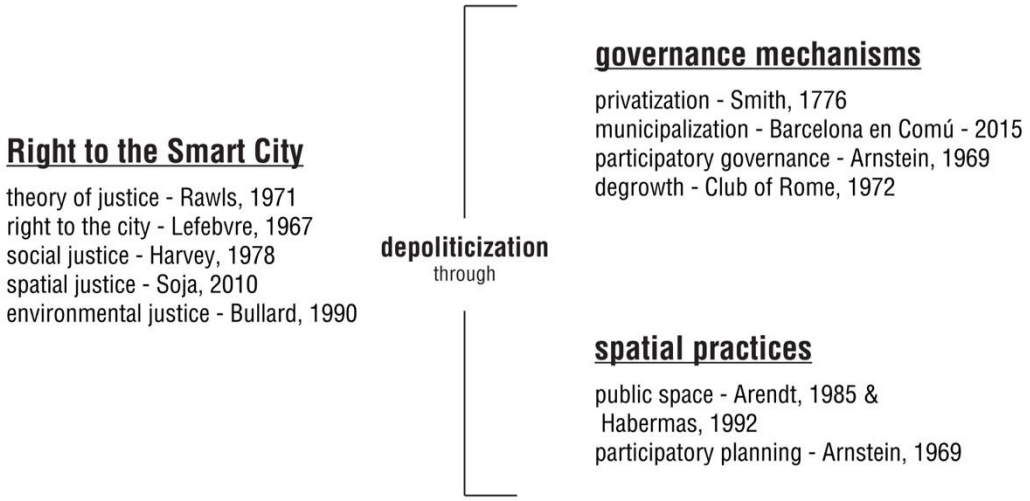


Figure 1 Framework Diagram of the Thesis

The research is structured into five core thematic chapters, each addressing a dimension of the relationship between smart cities, the right to the city, urban governance, and urban space. In Chapter 2, the research begins by investigating the foundational concepts of the smart city, marking sustainability and sustainable development as the foundational framework for the idea of smart city and establishing a theoretical groundwork to understand how these concepts have been defined by different scholars and how they have evolved over time. The focus is firstly to examine the historical background and changing definitions and motivations and, secondly, to extensively analyze how they address the challenges the citizen is facing currently. This chapter specifically examines the promises of livability and efficiency embedded in the rhetorics of the smart city, set against criticisms that such strategies often overlook the concerns of justice. Different understandings and approaches to sustainability are questioned through the dichotomy of sustainability versus sustainable development, as well as the

understanding of top-down, engineered smartness versus local, civic, and bottom-up smartness.

Chapter 3 aims to explore and unfold the concept of the right to the city, starting from its historical origins and seeking to find its relevance in the new paradigm in which technology dominates. Key to this discussion is the exploration of how environmental, spatial, and social justice relate to the foundations of the understanding of "rights" and the right to the city. The paradigm shift that emerged with the technological advancements does not only occur in the material world but also causes a transformation in understanding and value judgments. The chapter addresses this transformation by considering information technology, the phenomena of "data," and the inter-scalar nature of the contemporary world. As a pioneer in the smart city approach and as the first-ever European capital of democracy,[21] Barcelona is included as a case example to illustrate a real-world implementation of smart city policies, which is built on discourses of urban democracy, participation, inclusivity, etc. The dichotomy of the "smart city Barcelona" and the "democratic city Barcelona" is examined to address the challenges of the real-world manifestations of the city's ideals. This chapter lays out the key problems regarding the right to the city in the context of smart cities as a rhetoric of depoliticized governance strategies and the dissolution of urban space and seeks to discuss them in the following chapters.

Chapter 4 focuses on the governance strategies that underpin smart city initiatives. It investigates how the growing influence of private capital often leads to seemingly depoliticized rhetoric and environments, discarding citizen-level concerns and reinforcing neoliberal influences. Quayside Toronto and Masdar City are analyzed as experimental projects in which the public sector prepares the stage for the private sector to freely realize its visions. The chapter contrasts privately driven projects

[21] European Capital of Democracy, "Barcelona is the first-ever European Capital of Democracy," accessed September 19, 2024, https://capitalofdemocracy.eu/barcelona/.

with public sector initiatives, particularly the diverse municipalization efforts in Barcelona, where the local government seeks to restructure urban governance through democratic means. It explores the broader implications of these governance models for urban justice and the right to the city by examining how cities can be re-politicized to serve the interests of all. The chapter finishes by exploring more radical views, such as degrowth, that question the impact of the efforts of cities and countries to achieve more equitable living environments.

Chapter 5 examines the transformation of urban space in the context of smart cities, where physical space is increasingly supplanted by digital space. Here, the thesis argues that the "dissolution" of the urban space poses significant challenges to the right to the city, as public spaces have always functioned as sites for political involvement and social interaction. The chapter questions whether the virtual space could replace the physical space as a hub for political activity and public life. Finally, participatory practices in urban planning and design are investigated as an integral part of the right to the city, which corresponds to the right to participate in the decision-making to change and transform the urban space. The Taksim Urban Design Competition is selected as a case study due to two key factors: Taksim's importance as a significant public space and political arena, and the use of a different participatory model applied in the framework of an urban design competition for the first time in Türkiye.

# CHAPTER 2

## SUSTAINABLE AND SMART CITIES: PROBLEMS OF JUSTICE

Investigating the right to the city in the smart city, and examining the problem of social, spatial, and environmental justice in relation to it requires a scrutiny of the integral concepts of the smart city. Although the concept of sustainability emerged before the smart city technologies developed independently, it can be regarded as the foundational framework for the contemporary smart city concept, which has evolved into an understanding that cannot be considered independent of the concept of sustainability. Therefore, the interplay of sustainability, smart technologies, justice, and urban development serves as the basis for exploring the challenges faced by modern cities regarding social, spatial, and environmental inequalities. This chapter outlines the theoretical and historical framework needed for a critical evaluation of how sustainable development and smart city concepts intertwine and relate to justice and urban rights. Therefore, it is structured to explore the evolution of concepts, particularly their relationship with justice, while critiquing the paradigms developed over time. It begins by examining the foundations of sustainable development, tracing its conceptual trajectory, and unpacking its ambitions and shortcomings, notably how mainstream interpretations frequently fail to effectively confront systemic inequalities and structural issues. It then evaluates smart cities, highlighting both their potential advantages and drawbacks in the context of urban justice and governance. Throughout, the chapter investigates how well the sustainable development and smart city frameworks address or neglect justice-related matters, as well as the challenges in promoting equity within urban settings. It lays the groundwork for subsequent chapters by questioning the often technocratic and depoliticized approaches that underpin sustainability and smart city initiatives,

advocating for a perspective that is integrated and justice-focused. Finally, the chapter places these discussions in a current context, offering insight into a post-anthropocene approach and the values it encapsulates.

## 2.1 Sustainable Development and Cities

The concept of sustainable development has long been a center of discussion for urban growth, especially as the repercussions of the climate crisis are increasingly felt in everyday life. Emerging as a response to increasing concerns about environmental degradation and exploitation of natural resources, the idea initially focused on economic prosperity and environmental care and has evolved to expand its concerns to address broader social aspects, including equity and livability. It is critical to begin the research on smart cities by studying the concept of sustainable development for different reasons: as they converge on common goals, the objectives require scrutiny to reveal whether they address the current challenges, are just and inclusive, and their actions are consistent with discourse and objectives. The chapter traces the origins of sustainable development, analyzing the evolution of definitions, motivations, and objectives over time.

### 2.1.1 Origins of Sustainable Development

Environmental issues such as deforestation, soil salinization, and decreased soil fertility were concerns of ancient Egyptian, Mesopotamian, Greek, and Roman civilizations, and many scholars discussed various forms of environmental degradation stemming from human activities such as farming, forestry, and mining.[22] These civilizations that have developed throughout history relying on natural

[22] The issue of environmental deterioration was explored by Plato in the 5th century BC, Strabo and Columella in the 1st century BC, and Pliny the Elder in the 1st century AD. Jacobus A. Du Pisani, "Sustainable Development: Historical Roots of the Concept," *Environmental Sciences* 3, no. 2 (2006): 83-96, https://doi.org/10.1080/15693430600688831, 85.

resources were also concerned about the finitude of these resources. By the 18th century, the concern for wood, by the 19th century, the concern for coal, and with the advent of oil as the predominant energy source, concerns over the potential depletion of oil reserves motivated an alternative way of thinking, advocating for the responsible consumption of natural resources for the benefit of current and future generations, akin to contemporary sustainable development ideas.[23] However, this first anxiety was less about the damage to nature and its various short and long-term negative consequences and more about the lack of resources for human consumption. Illustrating that, William Stanley Jevons' *The Coal Question* raised concerns about the depletion of coal reserves, arguing that the irresponsible use of coal will lead to economic difficulties and threaten Britain's industrial power in international markets.[24] Especially with the enormous growth rates of the Industrial Revolution, the focus was on progress and getting ahead in the race for growth, which gained momentum with the technological advancements in the 20th century.

By the 1970s, the previously idealized notion of continuous progress had started to be widely discredited, revealing itself as an illusion that had legitimized free-market dominance, colonial exploitation of non-Western nations, and environmental degradation.[25] Several individuals and initiatives pioneered a sort of green movement; The Club of Rome (1968), Friends of the Earth (1969), Greenpeace (1971), Rachel Carson's *Silent Spring* (1962)[26], Barry Commoner's *The Closing Circle* (1971)[27], E.F. Schumacher's *Small is Beautiful* (1973)[28] all contributed to the flourishing of this ideal. The United Nations Conference on the Human Environment

[23] Ibid.
[24] William Stanley Jevons, *The Coal Question* (London: Macmillan and Co., 1865), also mentioned in Jacobus A. Du Pisani, "Sustainable Development."
[25] Jacobus A. Du Pisani, "Sustainable Development," 89.
[26] Rachel Carson, *Silent Spring* (Boston: Houghton Mifflin, 2002), also mentioned in Jacobus A. Du Pisani, "Sustainable Development."
[27] Barry Commoner, *The Closing Circle: Nature, Man, and Technology* (New York: Alfred A. Knopf, 1971).
[28] Ernst Friedrich Schumacher, *Small Is Beautiful: Economics as If People Mattered* (New York: Harper & Row, 1973).

in 1972, which was held in Stockholm, is considered a milestone for sustainable development efforts as it symbolizes a political recognition aiming for a systemic change. With the participation of 113 member states, the conference was also significant for presenting the perspectives of both developed and developing nations and advocating for fairness among countries rather than a one-size-fits-all approach. The conceptual foundations for the concept of sustainable development were established during this period. Goldsmith et al. advocated for a "stable society" that could be "sustained indefinitely while giving optimum satisfaction to its members."[29] *Limits to Growth*, one of the pioneers of an alternative perspective on unlimited growth, called for "a condition of ecological and economic stability that is sustainable far into the future."[30]

As another milestone, The World Commission on Environment and Development (WCED), established in 1983, released a report titled "Our Common Future" in 1987. After the Commission's chairwoman, Gro Harlem Brundtland, the paper became known as the "Brundtland Report." It established the driving principles for sustainable development as we know it today. The Brundtland Report addresses the inequity between the North and the South as a result of critical global environmental issues, with the South struggling with immense poverty and the North engaging in unsustainable consumption and development practices.[31] It demanded a policy that brought growth and the world together – what is now known as "sustainable development." Sustainable development is described as "development that meets current needs without jeopardizing future generations' capacity to fulfill their own needs."[32] The plan for sustainable growth, in its broadest sense, aims to foster peace among human beings and between society and nature.[33] To conclude, the concept

[29] Edward Goldsmith et al., A Blueprint for Survival (Harmondsworth: Penguin, 1972).
[30] Donella H. Meadows et al., *The Limits to Growth* (New York: Universe Books, 1972).
[31] World Commission on Environment and Development, *Our Common Future* (Oxford: Oxford University Press, 1987).
[32] Ibid.
[33] Ibid, 20.

emerged as a compromise between growth and conservation, favoring growth and modernization over a zero-growth approach, reflecting the dominance of anthropocentric views while incorporating environmental concerns into development discourses.[34]

### 2.1.2 Changing Definitions and Motivations

Until humans came to an understanding of sustainability, what they failed to realize is that the open economic system operates within a finite ecosystem, focusing heavily on resource limitations, which are more amenable to substitution and technological innovation, and overlooking issues such as getting rid of trash from wealthy, differentiating between "development" and "growth," the fact that, regardless of the political or economic system, progress does not always equate to equality and justice both inside and between nations, and critically evaluating our reliance on the market system to address issues of public welfare, particularly ecological sustainability, and justice.[35] According to Viederman, the sustainability understanding is the one to realize the right scale, corresponding to the place and locality, sufficiency, diversity, and community that is reliant on equity and justice.[36]

The ecological philosophy of the pre-1970 period placed the material needs of humans as the primary basis for determining what should be done with the planet.[37] The understanding of sustainability has now become correlated with the issue of justice. In September 2000, the United Nations Millennium Summit resulted in the adoption of the "United Nations Millennium Declaration" by 189 countries, establishing the Millennium Development Goals (MDGs) focused on eradicating extreme poverty, empowering women, advancing gender equality, and attaining

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[34] Du Pisani, "Sustainable Development," 94.
[35] Stephen Viederman, "A Sustainable Society: What Is It? How Do We Get There?" *The George Wright Forum* 10, no. 4 (1993): 34-47, https://www.jstor.org/stable/43597318.
[36] Ibid, 37.
[37] Du Pisani, "Sustainable Development," 93.

universal primary education which outlined eight key areas and 21 targets, serving as a global framework for national development and international cooperation over the next 15 years.[38] Later, the 2012 Rio de Janeiro United Nations Conference on Sustainable Development gave rise to the Sustainable Development Goals (SDGs), which were officially adopted in 2015 by the United Nations General Assembly as part of the 2030 Agenda for Sustainable Development.[39] The purpose was to create a set of universal objectives that address the pressing political, economic, and environmental issues that our globe is currently confronting. SDGs (Figure 2) promise an ideal scenario of the future that is environmentally, spatially, and socially just and inclusive for all. They are more universal, comprehensive, and specific than the MDGs, expanding their focus beyond developing countries to include nations of all income levels.[40] The objectives defined under SDGs, such as reduced inequalities, sustainable cities and communities, peace, justice, and strong institutions, particularly emphasize that a sustainable future cannot be imagined without social well-being. A more comprehensive set of goals was set as a target framework to be achieved by each country. From the very basic human rights (right to eat, access to clean water and sanitation, education) to the rights on a larger scale (industry, innovation, and infrastructure), the concept acknowledges the interrelatedness of these issues and how they are all essential for the integrity of a sustainable society.

[38] Longyu Shi, Linwei Han, Fengmei Yang, and Lijie Gao, "The Evolution of Sustainable Development Theory: Types, Goals, and Research Prospects," *Sustainability* 11, no. 24 (2019): 7158, https://doi.org/10.3390/su11247158, 6.
[39] United Nations Development Programme, "Background on the Goals," *SDG Accelerator*, https://www.undp.org/sdg-accelerator/background-goals, Accessed November 16, 2024
[40] Longyu Shi, Linwei Han, Fengmei Yang, and Lijie Gao, "The Evolution of Sustainable Development Theory: Types, Goals, and Research Prospects," 9.


Figure 2 Sustainable Development Goals. Retrieved from https://sdgs.un.org/goals#icons

On the other side of the coin, the concept deserves the attention to be questioned and challenged. As its name suggests, sustainable development implies the preservation and futureproofing of certain environmental, social, cultural, and institutional values. For the sake of intra- and intergenerational justice, these values are determined as the essential components of the rights and well-being of human and non-human beings by the members of our current generation. However, this understanding is problematic in two ways. First, sustaining denotes that all existing values and conditions are worth preserving and passing on to the future. The concept aims to achieve the ideal state of the existing world order and perpetuate it for future generations. It does not imagine a new order by claiming that the existing order can no longer be sustained in the current conditions of environmental and social crisis. The focus is on betterment through governance and technologies rather than a radical shift in intellectual, institutional, and infrastructural levels.

This view parallels the Marxist point of view. [41] From the Marxist perspective, the concept of sustainability is viewed as deeply intertwined with critiques of capitalism, inequality, and environmental degradation. Valeria Vegh Weis and Rob White critique the 2030 Agenda for Sustainable Development from such a perspective, and they argue that the agenda offers an optimistic vision aimed at eradicating poverty and violence while promoting global equality, but its abstract and ahistorical framework conceals the root causes of these issues risks enabling superficial solutions and rhetorical commitments, rather than fostering the transformative actions needed to address inequality at its core.[42] Given the inadequate impacts of current initiatives,[43] the thesis aligns with the critique of incrementalism, advocates for systemic change, and emphasizes the need for a profound restructuring of institutions and a redefinition of strategies to address sustainability, climate crisis, and social and environmental justice. This position seeks transformative change within a framework that is both pragmatic and forward-thinking, acknowledging the need for intellectual and institutional evolution in response to current global challenges.

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[41] Karl Marx and Friedrich Engels, *The Communist Manifesto* (1848), in *Marx/Engels Selected Works*, vol. 1 (Moscow: Progress Publishers, 1969), 98–137, trans. Samuel Moore in cooperation with Frederick Engels, 1888.

[42] Valeria Vegh Weis and Rob White, "A Marxist Perspective on the 2030 Agenda for Sustainable Development," in *The Emerald Handbook of Crime, Justice and Sustainable Development* (2020), 63–83, https://doi.org/10.1108/978-1-78769-355-520201007, 67.

[43] Governments worldwide promised to move away from burning fossil fuels a year ago, but there is "no sign" of that happening, and 2024 is expected to break yet another record for carbon emissions worldwide. Damian Carrington, "No Sign of Promised Fossil Fuel Transition as Emissions Hit New High," *The Guardian*, November 13, 2024, https://www.theguardian.com/environment/2024/nov/13/no-sign-of-promised-fossil-fuel-transition-as-emissions-hit-new-high, Accessed November 18, 2024.
Papua New Guinea said it would "no longer tolerate empty promises and inaction" as it suffers the devastating consequences of climate change, and that the last three COP meetings "have gone in circles and produced no tangible results for small island states," which is why it sent a small delegation of government officials to the conference, but no ministers attended to take part in high-level discussions. Euronews Green, "Hangi Liderler Bakü'deki COP29'a Katılmama Kararı Aldı?" *Euronews*, November 9, 2024, https://tr.euronews.com/green/2024/11/09/hangi-liderler-bakudeki-cop29a-katilmama-karari-aldi, Accessed November 18, 2024.

Secondly, determining a set of criteria for an equitable and just society for future generations means imposing what is good and what is right for a future we do not know what to look like. As Barry conceptualizes it, sustainability's primary principle is the preservation of what matters for future generations; hence, one's understanding of sustainability is inextricably linked to one's personal view of what matters.[44] He even goes so far as to say that "it would be presumptuous—and unfair—of us to pre-empt their choices in the future."[45] While the uncertainty of the future world order that will be formed as a result of ecological balance, technological developments, economic systems, power dynamics, socio-political and socio-spatial perception of the urban and society, etc., underscores the importance of adaptability, it risks overlooking the urgent need for tangible and actionable guidelines to address pressing challenges today, which is already a critical problem. Lacking a more defined accountability framework renders sustainability a rather contested concept, which can readily be manipulated by powerful agents whose "views of what matters" may not take into consideration collective or just goals.

Another problem stems from the developmental approach. One of the main criticisms is that it supports neo-liberal interests by failing to sufficiently confront the consumer culture and challenging the concept of economic growth.[46] Intended as an alternative approach between zero-growth understanding and a growth mindset, sustainable development offers rather conscious growth, assuming developed countries will take responsibility for green and just transition while developing countries continue growing with the help of the wealthy to achieve the ideal threshold. Although through the report *Our Common Future,* the concept acknowledges that there are limits to growth, it claims that these limits can be transformed by technology and

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[44] Brian Barry, "Sustainability and Intergenerational Justice," in *Fairness and Futurity: Essays on Environmental Sustainability and Social Justice*, ed. Andrew Dobson (Oxford: Oxford University Press, 1999), 103.
[45] Ibid, 104.
[46] Du Pisani, "Sustainable Development," 93, quoting Euractiv, "Sustainable Development," 2002, http://www.euractiv.com/cgibin/cgint.exe/84776-510?714&1015¼9&1014¼ld_sdintro&-tt¼SSIN&-s2¼y, Accessed April 13, 2004

social organization.[47] The growth mindset is justified as a developmental approach this way. As stated in the report—"What is needed now is a new era of economic growth—growth that is forceful and at the same time socially and environmentally sustainable"[48] —it can be argued that this perspective fails to challenge the viability of endless growth on a finite planet. In relation to this, some critics claim that sustainability is not enough. According to Mitcham, for instance, as slower and more deliberate development, sustainable development is not sustainable in and of itself since population growth and overall consumer demand will eventually outpace it.[49] In other words, conscious growth or slow growth is inadequate to deal with current challenges.

Although the concept of sustainable development is rooted in promising and well-intentioned ideals, its approach often leans toward neutrality, leaving significant potential for deeper political engagement and transformative action. First, it has the potential to further explore and question systemic power structures, such as those inherent in the capitalist system. Second, while it focuses on concepts such as equity, social justice, and inclusivity, it has the potential to explore more deeply the power dynamics between nations, which some now frame as "green neocolonialism."[50] Environmental actions and policies of the wealthy end up disproportionately impacting vulnerable communities and thus reproduce colonial power dynamics

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[47] Oluf Langhelle, "Sustainable Development and Social Justice: Expanding the Rawlsian Framework of Global Justice," Environmental Values 9, no. 3 (2000): 295-323, https://doi.org/10.3197/096327100129342074, 309.
[48] World Commission on Environment and Development, *Our Common Future*, 7.
[49] Carl Mitcham, "The Concept of Sustainable Development: Its Origins and Ambivalence," *Technology in Society* 17, no. 3 (1995): 311-326, 321.
[50] Many of the carbon-intensive industries in Europe have moved outside the EU, yet they continue to supply products to European consumers. The EU has successfully cut emissions by adopting sustainable energy technologies, such as solar and wind power. Nevertheless, these renewable technologies require essential minerals, many sourced from the Global South. For example, a considerable amount of cobalt used in wind turbine magnets is extracted from Congo, while a significant share of the lithium utilized in lithium-ion batteries is mined in Argentina, Bolivia, and Chile. Nnimmo Bassey et al., "Beware Europe's New Green Colonialism," Rosa-Luxemburg-Stiftung, June 30, 2023, https://www.rosalux.de/en/news/id/50690/beware-europes-new-green-colonialism, Accessed November 28, 2024.

under the guise of environmentalism (see in detail Chapter 3.1.3). It brings us to the applicability of sustainable development goals. Without addressing these greater challenges that are inherent to global injustice, the credibility of the idea is questioned. According to Du Pisani, less developed nations had concerns that affluent industrialized nations could be imposing harsher guidelines and regulations on aid to poorer nations under the guise of sustainable development.[51] There were doubts that the implementation of sustainable development would serve only to widen the divide between developed and developing nations.[52]

### 2.1.3 Livability as an Alternative Metric

With all the emphasis on sustainable development, the subject of livability emerges as a key criterion for evaluating the viability of smart and sustainable cities. Alongside the comprehensive approach of sustainable development that not only meets the present and future needs of humanity without leading to resource depletion of the planet but also seeks lesser environmental impact on the city, livability deals with the immediate aspects that city residents experience in their daily lives, including both social and environmental dimensions in urban areas. In other words, the livability of a city is reflected in how sustainable goals change into tangible and real-life improvements.

The World Bank sets some metrics to adopt as the dimensions of sustainable cities. Accordingly, cities and towns must be prosperous and practical in four ways if they are to facilitate the health of their inhabitants. They must first and foremost be livable, providing a fair standard of living and equal access for all people. They must, therefore, be competitive, well-governed and run, financially secure, or bankable in

[51] Du Pisani, "Sustainable Development," 93.
[52] Mitcham, "The Concept of Sustainable Development," 323.

order to accomplish that aim.[53] Strong governance, which includes efficient leadership, coordinated municipal and territorial development, jurisdictional and multilevel cooperation, inclusive community participation, and proper funding, results in sustainable and inclusive communities. Reducing urban poverty and deprivation, creating a healthy urban climate, improving personal security by minimizing the risk of crime, conflict, traffic collisions, and natural disasters, developing an equitable system of legal defense and government participation, and making cultural and leisure facilities accessible to everyone are all on the agenda for improving livability.[54] Building livable cities necessitates strong, broad-based jobs, wages, and investment growth. Incentives that promote profitable and sustainable businesses of all sizes must, therefore, be compatible with approaches to fostering urban equity and social safety nets.[55] Competitive cities adapt dynamically to business opportunities in terms of output, investment, jobs, and trade. To ensure that the advantages of urban agglomeration are realized and the diseconomies are minimized, cities must have productive markets for property, labor, credit, and inputs (particularly transportation, communications, and housing).[56]

The opportunities provided by cities give urbanization a social benefit. However, the socioeconomic significance of urbanization can only be realized in tandem with its intangible value. This broad category includes the structures that allow cities to operate efficiently, such as the rule of law, property rights, and democratic participatory processes, among others. The cultural aspect of towns, from the varied origins of their inhabitants to the cultural heritage properties at their disposal, is encapsulated in this intangible attribute.[57] Unlocking the social value of urbanization necessitates a paradigm shift toward people-centered strategies and requires holistic

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[53] The World Bank Infrastructure Group Urban Development, *Cities in Transition* (Washington, DC: The World Bank, 2000), 46.
[54] Ibid, 47.
[55] Ibid, 48.
[56] Ibid.
[57] UN-Habitat, *World Cities Report 2020: The Value of Sustainable Urbanization* (2020), 71.

and integrated urban planning values. The social value of urbanization is built on the pillars of spatially just resource allocation, political agency, and social, economic, and cultural diversity.[58] Sustainable urbanization's intangible importance applies to strong institutions (both formal and informal), good government, respect for human rights, and cultural diversity celebration and the importance of urbanization and improving quality of life is the synergy between institutions, the national constitution, rules, legislation, and social norms.[59] On the other hand, as cities evolve, so does the notion of livability. It is no longer enough to assume that a city is livable if it has clean streets, clean air, inexpensive housing, access to public transit and other facilities, and is safe. Several parameters have become part of the conversation as information technology penetrates cities. A contemporary city needs to fulfill a number of requirements to be livable, including the ability to communicate with authorities and institutions digitally, having a platform for learning about local news, having your voice heard, and having your data and privacy safeguarded, getting involved with the decision-making processes, etc.

Livability emerges as a concept that inherently carries the key imperatives of a smart city and sustainable development as it strives for good quality living for all in the urban environment. However, some critical issues arise from the very foundational principles of the way that livability is often conceptualized. First, reliance on an indexing system, which reduces the multivariate qualities of a city into quantifiable metrics, oversimplifies the rich shades of urban life. Different scoring systems, dominated by the standards of the West, have managed to turn livability into one more tool for global competition that is representative more of market priorities than the needs of a diverse population. Finally, such frameworks do not account for the question of livability for whom and, consequently, the issues of justice and equity

[58] Ibid.
[59] Ibid, 72.

among different members of society. It is, therefore, incomplete as a concept unless deeper connections with social justice and inclusiveness are made in practice.

## 2.2 Smart Cities and Problems of Justice

The Information Age has completely overtaken the globe. Rapidly paced disruption created by the possibilities of billions of people linked by mobile devices, with unparalleled computing speed, storage space, and access to information, technology continues to reshape economies and communities. Emerging scientific breakthroughs in areas like artificial intelligence, robotics, the Internet of Things, autonomous vehicles, 3-D printing, nanotechnology, biotechnology, materials science, energy conservation, and quantum computing would multiply these possibilities. Cities are at the center of these shifts, as dense populations and human movements inspire technological and engineering expertise to congregate. Some cities are benefiting directly and indirectly from technical advances while also dealing with emerging issues such as e-waste, monitoring, labor disruption, and digital and spatial exclusions, which can intensify inequality and environmental issues.[60] As a result, smart cities emerged as a hybridization of computing and urbanism, concerned with the idea of integrating digital into the physical reality of future cities.[61] Given the debates regarding emerging cities and the shifts in the processes of urbanization, one can claim that the definition of the problem is shifting from "ideal city" to "future city."

[60] UN-Habitat, *World Cities Report 2020*, 181.
[61] Matthew Claudel and Carlo Ratti, "Dimensions of the Future City," in *Cities in the 21st Century*, (London: Routledge, 2016), 192-210.

### 2.2.1 Origins of Smart Cities

While the Fourth Industrial Revolution is set to transform civilization drastically, it is built on the foundations laid by the previous three. The invention of the steam engine in the 18th century ushered in the first industrial revolution, enabling for the first time the mechanization of industry, and accelerating social reform as citizens grew more urbanized. Electricity and other technological advances contributed to mass manufacturing during the Second Industrial Revolution. Computers and modern media were born during the third industrial revolution, which began in the 1950s.[62] As a result, manufacturing has become increasingly automated, causing instability in sectors such as finance, electricity, and communications. Klaus Schwab, the founder of the World Economic Forum and author of the book The Fourth Industrial Revolution, was the one who coined the term to describe today's developments. According to Schwab, the Fourth Industrial Revolution, like the previous transformations, has the ability to increase global income levels and boost the quality of living for people all over the world. Technological progress would also lead to a supply-side miracle in the future, with long-term improvements in production and productivity, he added. Transportation and connectivity costs will decrease, distribution and global supply chains will improve, and trading costs will decrease, both of which will expand new markets and spur economic growth.[63] Mitchell's observation succinctly captures this new paradigm as "that of the digital telecommunications revolution, the ongoing miniaturization of electronics, the commodification of bits, and the growing domination of software over materialized form."[64]

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[62] Devon McGinnis, "What is the Fourth Industrial Revolution?" *Salesforce Blog*, July 5, 2023, https://www.salesforce.com/blog/what-is-the-fourth-industrial-revolution-4ir/#:~:text=The%20Fourth%20Industrial%20Revolution%20is,quantum%20computing%2C%20and%20other%20technologies, Accessed September 30, 2024.
[63] Ibid.
[64] William J. Mitchell, *City of Bits: Space, Place, and the Infobahn* (Cambridge, MA: MIT Press, 1996), 5.

The emergence of the smart city movement can be attributed to the advancement of computational analytical skills during the third industrial revolution.[65] As the earliest example of its kind, the Los Angeles Community Analysis Bureau utilized IBM-360 mainframe computers to create a database encompassing several social and physical variables for census tracts around the city, known as a Cluster Analysis of Los Angeles in 1974.[66] The aim was to integrate a data-driven decision-making system into urban governance. Then, in 1994, Amsterdam inaugurated De Digital Stad (DDS), which was a free network created to provide simple internet access and enhance citizen-government communication, translating to The Digital City, signifying the formal inception of the phrase "smart city."[67] From the early 2000s onwards, there emerged a trend of tech companies investing in smart city projects: Cisco initiated smart city research in 2005, IBM Smarter Planet project investigated how to address urban problems with networks, sensors, and analytics in 2008, Microsoft launched CityNext in 2013 to share best smart city practices and identify opportunities to collaborate, Sidewalk Labs was involved in the Quayside project in Toronto aiming to create a data-driven, smart neighborhood, Siemens created City Performance Tool (CyPT) in 2022 to help cities analyze their environmental impact and improve sustainability etc.

While the practical implications of smart cities were being tested in line with technological advancements, an earlier history of computationally networked urbanism, which began in the early 1970s, is expanded and built upon by the smart city agenda.[68] The idea was conceptualized with different terms: *wired cities* (Dutton et al., 1987; Mitchell, 1996), *entrepreneurial cities* (Harvey, 1989), *cyber cities* (Graham and Marvin, 1996), *virtual cities* (Mitchell, 1999), *technocities* (Downey

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[65] Immersive Learning Showcase Spring 2022, "Definition and History of Smart Cities," Ball State University, https://digitalresearch.bsu.edu/immersive-learning-showcase-spring-2022/exhibits/show/smart-city-muncie/definition-and-history-of-smar, Accessed October 1, 2024.
[66] Ibid.
[67] Ibid.
[68] Coletta, Claudio, Leighton Evans, Liam Heaphy, and Rob Kitchin, eds., *Creating Smart Cities* (New York: Routledge, 2018), https://doi.org/10.4324/9781351182409.

and McGuigan, 1999), *digital cities* (Ishida and Isbister, 2000), *network society* (Castells, 2002), *intelligent cities* (Komninos, 2002), *creative cities* (Florida, 2005), *sentient cities* (Shepard, 2011), *senseable cities* (Ratti), *platform urbanism* (Barns, 2020), *hybrid cities* (Graham, 1998; Souza e Silva, 2006). The differentiation in concepts stems from the emphasis on different dimensions of the broad framework called smart city. When trying to define what a smart city is, one discovers that in addition to involving a wide range of topics—information technology, corporate innovation, governance, communities, and sustainability—the term itself frequently makes assumptions about how these topics relate to one another (e.g., the consensus and balance discussed earlier).[69]

Hollands has identified five key features of a smart city: the broad integration of ICT into the urban environment; business-led urban development and a neoliberal approach to governance; an emphasis on the human and social dimensions of the city from a creative standpoint; the adoption of a smarter community agenda with initiatives aimed at social learning, education, and social capital; and an emphasis on social and environmental sustainability.[70] These features collectively highlight the multidimensional, multifaceted, and dynamic nature of smart cities. However, they also underscore the tensions inherent in smart city frameworks, particularly the challenge of balancing market-driven, growth-oriented practices with inclusive and equitable strategies.

### 2.2.2 Changing Definitions and Motivations

The image that is extensively being promoted as a "smart city" or "future city" mostly corresponds to the very reality of contemporary far East Asian cities. Especially China and South Korea are determined to lead the competition with the

[69] Robert G. Hollands, "Will the Real Smart City Please Stand Up? Intelligent, Progressive or Entrepreneurial?" *City* 12, no. 3 (2008): 303-20, https://doi.org/10.1080/13604810802479126, 306.
[70] Ibid.

help of faster-than-ever technologies, building more, higher, and faster. Shenzen and Songdo are the two examples that promise the most advanced technologies to investors. These cities are called "smart" because of the extensive advancements they are promoting for the efficiency of their engineering and infrastructure. Smart sensors, smart lighting, smart waste, water, electricity and water management, smart transportation, and communication systems are thrown on the cities just like a "digital blanket."[71] However, there seems to be a fundamental misunderstanding of what truly defines a city, as many of the aspects being promoted tend to overlook "people" as individuals, focusing on them instead as data or categories. Instead of "why" and "how," the questions majorly revolve around "how many."[72] Le Corbusier's concept of a "house as a machine" has the potential to evolve, through advancing technologies, into an interpretation of the "city as a computer." The insertion of "people" at the very core of the discussion of smart cities is fundamental. In order to overcome the "objectness" of the discipline of architecture and urbanism in future cities, there needs to be a broader civic awareness that does not imply taming and controlling nature and people but rather intends to have the most symbiotic relationship with them. In other words, "smart" should have a supporting role rather than a leading role.[73]

Following this paradigm shift that has been dominating all the disciplines, smart cities have witnessed a tremendous shift in the level of thought and discourse. Its theory has evolved from its initial image that had been promoted as an efficient, organized, controlled, and predictable masterplan, which we have been seeing its extreme examples in Asian and Middle Eastern cities, to a more holistic understanding that does not prioritize certain technologies and acknowledge that the "smartness" is, in fact, a multi-layered complex phenomenon that can be channeled

[71] Matthew Claudel and Carlo Ratti, "Dimensions of the Future City."
[72] Shannon Mattern, "A City Is Not A Computer," *Places Journal*, February 2017, https://placesjournal.org/article/a-city-is-not-a-computer/?cn-reloaded=1, Accessed October 15, 2021.
[73] Ibid.

through different dynamics. A more sophisticated understanding of a smart city has been defined by many scholars as follows:

Table 1 The Shift in the Smart City Understanding

| Year | Definition | Author | Key Concepts |
|---|---|---|---|
| 1995 | *"Wired cities, characterized by telecommunication and information technology infrastructures."*[74] | William J. Mitchell | Telecommunications and digital infrastructure |
| 2000 | *"The vision of 'Smart Cities' is the urban center of the future, made safe, secure, environmentally green, and efficient because all structures – whether for power, water, transportation, etc. are designed, constructed, and maintained making use of advanced, integrated materials, sensors, electronics, and networks which are interfaced withcomputerized systems comprised of databases, tracking, and decision-making algorithms."*[75] | Robert E. Hall | Safety, efficiency and connectivity |
| 2009 | *"Connecting the physical infrastructure, the IT infrastructure, the social infrastructure, and the business infrastructure to leverage the collective intelligence of the city… A city striving to make itself "smarter" (more efficient, sustainable, equitable, and livable)"*[76] | Andrea Caragliu | Efficiency, sustainability, livability |
| 2013 | *"The 'smartness' of a city is a "certain intellectual ability that addresses several innovative socio-technical and socio-economic aspects of growth"*[77] | Spyros Zygiaris | Socio-technical, socio-economic aspects, growth |

[74] William J. Mitchell, *Digital Design Media*, 2nd ed. (New York: Van Nostrand Reinhold, 1995).
[75] Robert E. Hall, "The Vision of a Smart City," paper presented at the 2nd International Life Extension Technology Workshop, Paris, France, September 2000.
[76] Andrea Caragliu, Chiara Del Bo, and Peter Nijkamp, "Smart Cities in Europe," *Serie Research Memoranda* 0048 (VU University Amsterdam, Faculty of Economics, Business Administration and Econometrics, 2009), 2292.
[77] Spyros Zygiaris, "Smart City Reference Model: Assisting Planners to Conceptualize the Building of Smart City Innovation Ecosystems," *Journal of the Knowledge Economy* 4, no. 2 (2013): 217–231, https://doi.org/10.1007/s13132-012-0089-4, 218.

Table 1 (continued)

| | | | |
|---|---|---|---|
| 2018 | *"an urban locality functioning as a healthy system [...] with sustainable and balanced practices of economic, societal, environmental, and governance activities generating desired outcomes and futures for all humans and nonhumans"*[78] | Tan Yiğitcanlar | Societal, environmental, governance activities, sustainability, humans and nonhumans |
| 2019 | *"A smart city can also be taken to mean a technologically and data–analytically advanced city that is able to monitor and understand its environment and citizens and explore and analyze various forms of data to generate useful knowledge in the form of applied intelligence that can immediately be used to solve different problems, or to make changes to improve the quality of life and the health of the city"*[79] | Simon Elias Bibri | Technologically advanced, quality of life, health and wellness of citizens |
| 2020 | *"Smart city is a concept of urban transformation that should aim to achieve a more environmentally sustainable city with a higher quality of life, that offers opportunities for economic growth for all of its citizens, but with respect to the particularities of each locality and its existing inhabitants. This transformation is currently enabled by various types of technologies…that are embedded into the city's infrastructure system."*[80] | A. M. Toli and N. Murtagh | Sustainability, economic growth, citizens, inclusivity |

Since the smart city does not have a set definition and principles like sustainable development (e.g., Brundtland Report, SDGs), defining and evaluating the smart city has been a challenge. However, both concepts share a focus on addressing global challenges such as urbanization, resource management, environmental, social, and

[78] Tan Yigitcanlar, "Smart City Policies Revisited: Considerations for a Truly Smart and Sustainable Urbanism Practice," *World Technopolis Review* 7, no. 2 (2018): 97–112.
[79] Simon Elias Bibri, "On the Sustainability of Smart and Smarter Cities in the Era of Big Data: An Interdisciplinary and Transdisciplinary Literature Review," *Journal of Big Data* 6, no. 1 (2019): 25, 11.
[80] A. M. Toli and N. Murtagh, "The Concept of Sustainability in Smart City Definitions," *Frontiers in Built Environment* 6 (2020): 77, https://doi.org/10.3389/fbuil.2020.00077, 8.

economic sustainability, and social equity. The emphasis of the idea of the smart city lies in the incorporation of technological innovations as a central means to address those challenges at the urban scale. Early definitions from the 1990s and the beginning of the 2000s focused on aspects related to telecommunications infrastructure and digital networks, binding urban space through technology. Definitions started to broaden in the middle of the 2000s, incorporating wider themes such as urban efficiency, ICT, and sustainability, representing the reinforcement of the use of technology in urban management. This was later developed in the 2010s to include under its cover issues of social inclusion, engagement by citizens, and collaborative governance, together with technological integration, since smart cities also have to serve social and participative needs besides the purely technological ones. Current definitions of smart cities also bring into focus the need for sustainability and resilience with an inclusive approach, firmly resting on data-driven decision-making and enhancement of human and nonhuman well-being to foster equitable and sustainable urban futures. While the idea of smart cities draws from sustainability and sustainable development, critics argue that smart cities often prioritize economic efficiency and technological determinism over broader social and environmental concerns. This raises questions about whether smart cities genuinely fulfill the holistic vision of sustainable development. To address this disconnect, while some scholars expanded and developed the definition area of the concept of "smart city" to adopt the principles of sustainability better (Table 1), some combined those two concepts under one title as "smart sustainable cities," blending the positive qualities of sustainable cities in terms of the design and planning ideas and principles of sustainability with the strengths of smart cities in terms of the creative solutions being produced for sustainability.[81] Considering the different definitions and changing understandings of the smart city, it refers to an

[81] Simon Elias Bibri, "A Foundational Framework for Smart Sustainable City Development: Theoretical, Disciplinary, and Discursive Dimensions and Their Synergies," *Sustainable Cities and Society* 38 (2018): 758–794, https://doi.org/10.1016/j.scs.2018.01.010.

understanding of the city that utilizes the affordances of technology to make both the physical infrastructure and the administrative operation of the city faster, more efficient, environmentally, economically and socially sustainable, responsive and interactive for humans and non-humans, while at the same time creating space for its inhabitants to shape the environment in which they live. In this context, the thesis sees the potential for empowering the citizens, ensuring urban justice, and achieving the right to the city in the smart city's creation of this space using the possibilities of digital technology.

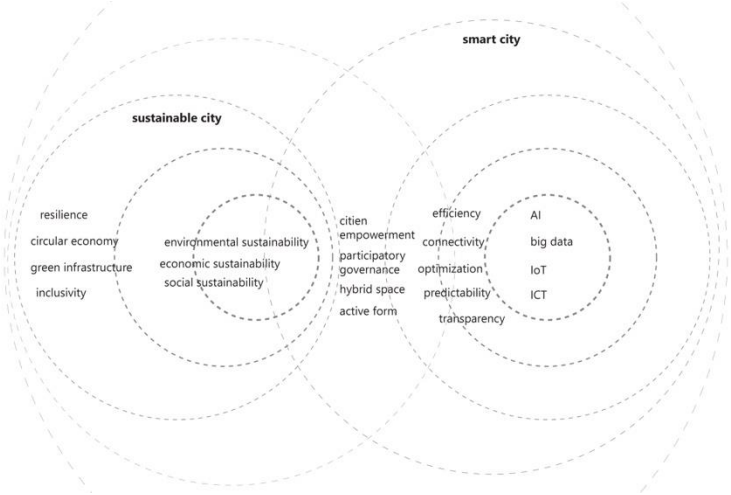


Figure 3 Relationship Between Smart and Sustainable City Concepts

Stratigea et al. state that "smart-city solutions must start with the "city" not with the "smart," shifting from a technology-pushed to an application-pulled smart-city planning approach, matching different types of "smartness" (technologies, tools, and applications) with different types of urban functions and contexts."[82] Cohen

[82] Anastasia Stratigea, Chrysaida-Aliki Papadopoulou, and Maria Panagiotopoulou, "Tools and Technologies for Planning the Development of Smart Cities," *Journal of Urban Technology* 22, no. 2 (2015): 43–62, https://doi.org/10.1080/10630732.2015.1018725.

distinguishes three types of smart cities: *smart cities 1.0* are technology-driven and are defined by technology companies pushing the adoption of their solutions in cities that were ill-prepared to fully comprehend the ramifications of the solutions or how they would affect the standard of living for their citizens; *smart cities 2.0* are technology-enabled and city-led in which instead of tech companies, visionary mayors and city administrators take the lead in deciding how to best use smart technology and what their city's future holds; *smart cities 3.0* are citizen co-created in which citizens play an active role in creation and transformation of their cities.[83]

Table 2 Types of Smart Cities

| Type | City | Description | Type Features |
|---|---|---|---|
| Smart City 1.0<br><br>Technology-driven | Songdo International Business District | It was built from scratch as a corporate-driven smart city in South Korea. | Companies like Cisco implemented integrated technology systems such as automatic waste disposal, smart energy grids, and an array of sensors for monitoring traffic and the environment. Most of the technology infrastructure was actually provided by corporations themselves in an off-the-shelf, smart solution showcase. |
| | Masdar City | Masdar is planned to be a zero-carbon and zero-waste city, the development of which is hugely dependent on corporate technologies. | Many tech companies supplied systems of renewable energy, driverless electric cars, and intelligent building design. |

[83] Boyd Cohen, "The 3 Generations of Smart Cities," *Fast Company*, June 11, 2015, https://www.fastcompany.com/3047795/the-3-generations-of-smart-cities, Accessed April 20, 2023.

Table 2 (continued)

| | | | |
|---|---|---|---|
| | PlanIT Valley | The ambitious plan for a smart city in Portugal using an integrated operating system. | It aimed to integrate sensors and software provided by tech companies to monitor and manage the city. |
| Smart City 2.0<br><br>Technology-enabled city-led | Barcelona | The municipal government has pursued an ambitious agenda for enhancing urban living through smart city initiatives. | Smart street lighting, sensor-based waste management, and a city-wide Wi-Fi network initiated through government tenders. The government orchestrated the deployment of technologies, selecting vendors through bidding processes. |
| | Singapore Smart Nation Initiative | A government-led initiative to transform Singapore. | The government issues tenders and partners with tech companies to implement solutions such as sensor networks, smart traffic systems, and digital government services. |
| | Amsterdam | Amsterdam Smart City was initiated by the Amsterdam Metropolitan Region to enhance sustainability and quality of life. | The projects, such as smart energy meters, intelligent traffic management, and open data platforms, have been carried out by the government and in collaboration with businesses and research institutions. |
| Smart City 3.0<br><br>Citizen co-created | Bristol | Bristol puts a strong emphasis on the participation of its citizens in smart city projects. | The "Bristol Approach" involves active co-creation by residents in creating community energy projects, local data initiatives, and more. The projects are designed through direct input from and collaboration with the community, putting the needs of the citizens at the forefront. |

Table 2 (continued)

| | | | |
|---|---|---|---|
| | Medellin | Once troubled by crime, Medellín reinvented itself with community involvement. | It established "library parks," built public transit options including the Metrocable, and created urban innovation centers. Projects were designed and carried out in participation with local communities to make sure that they responded to real needs. |
| | Ghent | Ghent focuses on sustainable urban living through effective co-creation with its citizens. | The "Ghent Living Lab" appeals to and engages its residents in testing and developing new technologies, such as energy-sharing platforms. Initiatives in the city are citizen-driven; thus, the community takes an active part in shaping the smart solutions of the city. |

The smart city approach has the risk of resulting in highly constructed and defined systems, the development of which may rely significantly on external forces, such as institutions and private entities, that shape and manage them. In this version—smart city 1.0—the city starts to act as a user-friendly interface, a catalog of options for the customers who can afford it. Richard Sennett defines this type as the *prescriptive smart city* in which the politics of centralized control dictates how individuals should live.[84] The prescriptive city risks becoming unbalanced by separating function from critical inquiry, a danger Norbert Wiener anticipated, warning that "big data"—a term he coined—could be manipulated by monopolistic

[84] Richard Sennett, *Building and Dwelling: Ethics for the City* (New York: Farrar, Straus and Giroux, 2018), 156.

forces, reducing human lives to mere digital representations of needs and desires.[85] On the other hand, a different form of smart city—smart city 2.0 and 3.0—is created when technology is used to coordinate activities rather than govern them.[86] The *coordinative smart city*, in Sennett's terms, is democratic as opposed to the authoritarian prescriptive smart city.[87]

### 2.2.3 Data as Power: Implications and Consequences

Smart technologies that are rapidly developing increase their impact every day and are built on an essential key component: data. In the 21st century world, where all kinds of data are of such importance, we are witnessing that the understanding of "Knowledge is power" is evolving into "Data is power." Data has become sacred, and this understanding has been explored deeply from the early 2000s onwards. One of the most important pioneers of a data-focused approach to urbanity is the Datatown project of MVRDV (Figure 4). In this work, the authors want to use the tools of the discipline of architecture and statistical insights to help humanity create for itself a sustainable, orderly world.[88] Datatown is a city that is described only by data, a city that wants to be explored only as information, charged with no prescribed ideology, no representation, no context.[89] While Datatown exists as an independent entity, disconnected from any political or socio-economic context, it simultaneously establishes a manifesto that fiercely contests liberal ideals. The city emerges not as the creation of an architect's or a planner's free will but is shaped by objective information instead of personal choice.[90] However, even though Datatown is a kind of machine, a computer that takes a variety of parameters and creates algorithms for

[85] Ibid, 160.
[86] Ibid, 161.
[87] Ibid, 164.
[88] MVRDV, "Metacity/Datatown," https://www.mvrdv.com/projects/147/metacity--datatown, Accessed October 3, 2021.
[89] Ibid.
[90] Ibid.

the use of architecture and urbanism, here, you cannot help but include and keep up with the constant and dynamic inputs of the city. Datatown realizes the forces that are shaping our cities, our economics, our socio-political structure, and us people. These forces are so diverse and dynamic that according to the Datatown manifesto, the way to handle and benefit from them is to turn that raw material into a quantified, structured, and analyzed set of data and create outputs that are meaningful on the global scale. It does not offer a design solution or a design methodology rather, it provides an alternative framework for reassessing the changing population, demands, and technologies and how the understanding of megapolis corresponds to the new age. Thus, urban dwellers, in fact, are not the subjects of the system but the architects of it.

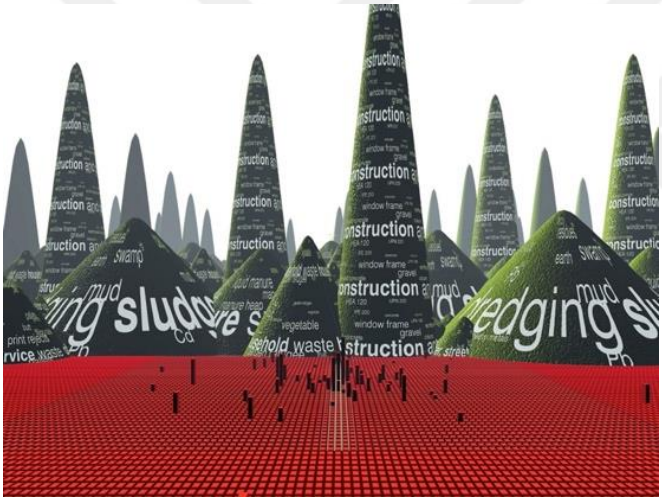


Figure 4 Metacity/ Datatown by MVRDV. Retrieved from https://www.mvrdv.com/projects/147/metacity--datatown-

Data has a critical power to observe, understand, and even control a multi-layered, complex, and dynamic phenomenon like the city. In order to analyze the urban phenomenon, which requires an inter-scale, inter-disciplinary, inter-genre, and inter-conceptual understanding, and then to develop a holistic approach appropriate to its context and time, the data must also be multifaceted. The growing influx of real-time

data extracted from a variety of sources, known as big data, has gained significant attention as it promises to offer insights into and control over this complex phenomenon that is the city. Big data comprises extensive, dynamic, heterogeneous, intricate, interconnected, and cost-effective datasets that can be integrated and employed in various manners, thereby facilitating a transition from data scarcity to data abundance, static representations to dynamic developments, coarse aggregations to high-resolution analyses, and relatively simplistic hypotheses and models to more intricate, sophisticated simulations.[91] Kitchin categorizes the sources of big data into three: *directed data* are produced by conventional surveillance techniques, in which a human operator directs the technology's focus toward an individual or location, such as passport control and immigration or mobile and real-time 2D and 3D mapping through spatial video, LiDAR, thermal, or other types of electromagnetic scanning of the surroundings; *automated data* are created as an inherent, automatic function of the device or system, such as digital devices, like mobile phones, that record and share their own usage history; and transactions and interactions across digital networks that not only transfer information but also generate data about the transactions and interactions themselves; and *volunteered data* are provided by users voluntarily, such as social media interactions, crowdsourcing, in which users create data and then contribute it to a shared system, like GPS traces uploaded into OpenStreetMap to establish a shared, open mapping system.[92]

The importance of big data lies in its ability to reveal patterns that humans cannot recognize, or that would take too much time and resources to realize. It has proven to be a profitable tool in the technology sector for assessing markets, predicting customer behavior, and training machine-learning algorithms. However, the incorporation of data into smart cities triggers a wide array of concerns that defy the

[91] Rob Kitchin, "The Real-Time City? Big Data and Smart Urbanism," *GeoJournal* 79, no. 1 (2014): 1–14. http://www.jstor.org/stable/24432611, 3.
[92] Ibid, 4.

utopian vision of urban innovation. First, the greater meaning attached to data is to be questioned. Data itself is not enough because data is not objective. It cannot alone solve any problems or transcend the complexity and dynamics of the social worlds it measures. Data do not exist independently of the ideas, processes, technologies, people, and environments that conceive, generate, process, manage, analyze, and store them.[93] It is necessary to shift our gaze to data's human, institutional, and technological creators, curators, preservers, owners, users, hackers, and critics.[94] Second, smart cities are increasingly outsourcing such data collection and analysis to private technology companies, and the fear is growing that corporate interests might override public welfare. It may deprive the public of transparency in the way data is collected, processed, and utilized, as most of the mechanisms are kept obscure to the citizens. After all, citizens do not normally know how their personal data get collected, stored, and utilized en masse, from mobility patterns to health records, energy consumption, etc. Such absence of transparency can easily lead to the loss of the confidence of the public when data gets employed in ways other than its actual collection for commercial purposes or surveillance. Moreover, large sets of data accumulated from smart cities raise serious privacy concerns. While many cities employ sensors, cameras, and IoT devices that routinely monitor everything from traffic to air quality, people are often under constant surveillance. This could be done without proper consent or even the possibility of opting out by the citizenry, which begs a series of ethical questions about how much personal privacy individuals are willing to cede for convenience and in return for better urban services. The situation becomes even graver as data-driven cities become increasingly vulnerable to cyberattacks. The more there is dependence in the city on data for the operation of essential services, such as electricity, water, and transport, the more the city becomes

[93] Rob Kitchin, "The Real-Time City? Big Data and Smart Urbanism," 8.
[94] Shannon Mattern, "Methodolatry and the Art of Measure," *Places Journal*, November 2013, https://placesjournal.org/article/methodolatry-and-the-art-of-measure/, Accessed October 15, 2021.

vulnerable to potential breaches that could lead to consequences other than just disclosure of sensitive information, impacting physical safety and resilience.

The discussions suggest that smart city practices may lean towards technocratic and depoliticized foundations, with urban management increasingly shaped by data, algorithms, and efficiency-driven solutions, potentially leaving less room for democratic deliberation and political involvement. Here, it is crucial to turn to the theory of "depoliticization." Depoliticization has been hailed as a significant post-war development, with the European Policy Forum praising its promise, the World Bank promoting it as vital for enhancing state capacity and market confidence, and the United Nations hosting events on themes like "depoliticizing the civil service"[95]—which was an important attempt for enabling an impartial attitude in the provision of civil service, being at just and equal distance to all citizens. However, the issue lies with the depoliticization of citizens, not with the civil service itself. Flinders and Buller provide a summarizing definition of depoliticization as "the range of tools, mechanisms and institutions through which politicians can attempt to move to an indirect governing relationship and/or seek to persuade the demos that they can no longer be reasonably held responsible for a certain issue, policy field or specific decision."[96] They clarify that the term "depoliticization" is actually a misnomer, and depoliticization often involves shifting the arena or governance structure through which decisions are made, rather than removing politics altogether, meaning politics is still present but framed within a narrower scope that focuses on institutions and individuals associated with representative democracy, while the issues themselves remain inherently political.[97] Similarly, Hay views depoliticization as a process of displacing political decisions beyond the reach of

[95] European Policy Forum, *Making Decisions in Britain* (London: European Policy Forum, 2000); World Bank, *Bolivia: From Patronage to Professional State*, Report No. 20115-BO (2000); United Nations, "Depoliticising the Civil Service," Eleventh International Anti-Corruption Conference, May 27, 2003, New York. As cited in Matthew Flinders and Jim Buller, "Depoliticisation: Principles, Tactics and Tools," *British Politics* 1, no. 3 (2006): 293–318.
[96] Matthew Flinders and Jim Buller, "Depoliticisation: Principles, Tactics and Tools," 295-296.
[97] Ibid, 296.

direct contestation, usually through mechanisms such as the delegation of authority to technocratic bodies or the framing of policies in terms of external constraint. He calls for a nuanced exploration of those dynamics while making sure that the functional benefits of depoliticization are weighed against the potential costs of erosions of democratic accountability.[98] Wood and Flinders present three forms of depoliticization: *governmental depoliticization* involves politicians delegating matters to independent authorities, courts, or technocratic institutions, limiting their discretion, and moving issues from government to the public sphere; *societal depoliticization* refers to shifting issues from the public to the private domain, focusing on the availability of choices, the capacity for deliberation, and the move toward individualized solutions for social challenges; and *discursive depoliticization* shifts concerns from the private sphere to a "realm of necessity," where events occur without contingency and focus on how ideas and language can depoliticize issues, reducing them to mere fate.[99] Habermas, on the other hand, claims that the depoliticization of the population and the erosion of the public realm as a political institution are key aspects of a system of domination that suppresses the public discourse on practical issues.[100] In other words, a ground that allows for the emergence of conflicting views and for these views to coexist and challenge each other is intrinsic to an inclusive and equitable society. In a smart city where depoliticization is imposed through various mechanisms (Table 3), the ways in which to re-politicize it are explored to reclaim decision-making power from technocratic agents to citizens via participatory governance and planning, municipalism, grassroots activism, etc.

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[98] Colin Hay, "Depoliticisation as Process, Governance as Practice: What Did the 'First Wave' Get Wrong and Do We Need a 'Second Wave' to Put It Right?" *Policy and Politics* 42, no. 2 (2014): 293–311.
[99] Matt Wood and Matthew Flinders, "Rethinking Depoliticisation: Beyond the Governmental," *Policy and Politics* 42, no. 2 (2014): 151–70.
[100] Jürgen Habermas, "The Scientization of Politics and Public Opinion," in *The Habermas Reader*, ed. William Outhwaite (London: Polity Press, 1996), 44–52.

Table 3 Mechanisms of Depoliticization in the Smart City

| **Mechanism** | **Methods** | **Effects** |
|---|---|---|
| Privatization and Commodification | Monetization of public services and infrastructures | Reduces public ownership, prioritizes profit over public good, and restricts access to services for low-income populations |
| Surveillance | Deploying sensors, cameras, data collection, tracking technologies in the urban environment | Erodes privacy, fosters distrust, and normalizes constant monitoring |
| Manipulating the perception of the society | Branding smart city as purely positive | Creates a biased view of technological development, marginalizes critical discourse, and limits public scrutiny |
| Technocratic governance | Relying on AI and algorithms for decision-making | Reduced accountability, objective neutrality illusion, algorithmic bias |
| Erosion of the contextually sensitive approaches | Standardizing solutions that ignore local needs and demands | Creates one-size-fits-all solutions, abstracts cultural identity, and reduces responsiveness to community-specific concerns |
| Fragmentation of the local networks | Implementing digital platforms that replace traditional community networks | Weakens local social bonds, increases isolation, and limits the effectiveness of grassroots activism |
| Splintering urbanism | Creating high-tech zones vs. low-tech, uneven distribution of resources | Intensifies socio-spatial divides, creates “haves” and “have-nots” in digital access, and fuels inequality in urban space |
| Eliminating the political arena | Through commercialization, greening, etc. of the physical space, moving political discourse to controlled, digital platforms or forums | Reduces physical space for public protest, weakens collective action, and centralizes power in online platforms owned by private entities |
| Increasing exposure to global market forces | Encouraging foreign investment | Subjects local governance to corporate interests, reduces local control, and destabilizes local economies |

Table 3 (continued)

| | | |
|---|---|---|
| Gentrification | Attracting high-income residents, investing in high-tech amenities | Displaces lower-income communities, drives up costs of living, and replaces culturally significant spaces |
| Marginalizing communities | Leaving out those who do not prefer to participate in this system | Increases barriers and perpetuating inequality |
| Reduction of civic engagement and public participation | Limiting public input, replacing engagement with one-way digital feedback | Diminishes citizen influence, leads to decisions that fail to reflect public needs, and lowers community cohesion |
| Virtualization of the public sphere | Shifting civic spaces online, reducing physical gatherings | Weakens shared community spaces, reduces social capital, and leads to digital divide |

## 2.3 Current Debates and Future Directions

Scholars have debunked the myth of cities as separate from nature, reframing the urban process as a socio-natural phenomenon and challenging dominant 20th century urban sociology perspectives, while the urban metabolism approach transcends the nature-society binary to highlight the inherently political nature of socio-ecological processes and the incompleteness of urban theory that excludes nature.[101] In contemporary urban discourse, the debate on human rights has gained prominence not only because of its focus on human well-being but also because it offers a perspective on the alarming state of our planet. "The Anthropocene,"[102] conceptualized by Crutzen and Stoermer, argues that the global environmental impact of humans is causing Earth systems to become increasingly less predictable, unstable, and maladaptive and that the planet is rapidly approaching a dangerously

[101] Erik Swyngedouw and Maria Kaika, "The Environment of the City… or the Urbanization of Nature," in *A Companion to the City*, ed. Gary Bridge and Sophie Watson (Oxford: Blackwell, 2003), https://doi.org/10.1002/9780470693414.ch47, 98.
[102] Paul J. Crutzen and Eugene F. Stoermer, "The Anthropocene," *Global Change Newsletter* 41 (2000): 17-18.

unstable state.[103] At a time when human influence has such a negative impact on our planet and all its components, it is no longer possible to discuss the concept of "rights" only in terms of human beings. Therefore, although its scope and boundaries are still being debated, and although in many parts of the world, it has not been achieved for every human being without discrimination in a fair manner, the understanding of human rights must now be approached from a more inclusive perspective. In today's context, where the anthropocentric worldview is being deeply questioned, it is necessary to adopt a worldview in which the rights of all sensitive and non-sensitive values, which can be categorized as green and grey ecologies, are taken into consideration with a post-anthropocentric approach. Post-anthropocentrism challenges human exceptionalism— that is, the perceived value of humans above all other living things - and calls for an intrinsic valuation of nature and its nonhuman constituents. Yet, while these discussions of post-anthropocentric urbanism are important and reflect one increasingly ecologically aware direction in which approaches to smart cities are moving, they fall outside the primary scope of the thesis.

This being said the chapter begins by acknowledging that the smart city's foundational goals show parallels with that of sustainability, and the concept has evolved in such a way that sustainability has become an integral part of the smart city. Therefore, it examines the origins of sustainable and smart city concepts and their discursive and practical evolution under the influence of socio-political and socio-cultural dynamics in order to situate them in the context of its thesis. This examination is critical in order to uncover the contradictions, pitfalls, and underlying subtexts of these concepts beyond the values they promote and thus to build a critical perspective in the chapters that follow. In this thesis, it is not the concept, or its purpose which is criticized but the way it is put into implementation. Despite the

[103] Louis Kotzé, "Reimagining Human Rights and the Environment in the Anthropocene," *The Anthropocene Review* 1 (2013), https://doi.org/10.1177/2053019614547741, 5.

preparation of numerous international reports, the signing of treaties, and the holding of summits, evaluation results indicate that states and corporations often ignore these efforts or exploit loopholes, failing to make a significant impact.[104] Consequently, the concept of sustainability is open to diverse perceptions and interpretations, which can sometimes limit its potential to achieve the practical impact it aspires to have. Moreover, the environmental issue has evolved into one that evokes a variety of political impulses as "sustainable development" turns into a commercial logic that creates new opportunities for capital accumulation.[105] As the idea of sustainable development turns more and more towards technological fixes, the concepts of smart city and sustainable city are becoming increasingly intertwined. It could be argued that the smart city has become a tool for sustainability goals and green transition, but more importantly, a method of self-legitimization.

[104] "The progress assessment carried out in 2024 reveals that the world is severely off track to realize the 2030 Agenda." UN Department of Economic and Social Affairs (UN DESA), *The Sustainable Development Goals Report 2024 – June 2024* (New York: UN DESA, 2024), https://unstats.un.org/sdgs/report/2024/, Accessed November 30, 2024.
[105] Erik Swyngedouw and Maria Kaika, "The Environment of the City… or the Urbanization of Nature," 100.

# CHAPTER 3

## RETHINKING THE RIGHT TO THE CITY

The smart city discussions have revealed the discursive and practical contradictions of the evolving city. On the one hand, there is the ambition and competition driven by humanity's quest to advance, explore boundaries, and leap forward; on the other hand, questions of equality, inclusiveness, justice, and the right to the city—made even more pressing by the ecological, economic, social, and political challenges facing our planet—lie at the heart of these contradictions. A technocratic and depoliticized approach to the city can be seen as both the source of this problem, i.e., imposed through a conscious ideology to the exclusion of political discourse and practice, and the consequence, i.e., as a side effect of the increasing reliance on technocratic solutions. In this context, researching and questioning the right to the city and justice is critical for determining the trajectory of the evolving city. For this reason, this chapter primarily aims to draw a theoretical framework. It reconsiders the right to the city and the concepts of social, spatial, and environmental justice that the thesis argues should be considered inseparable from it, especially in the context of contemporary challenges such as the rise of digital technologies and their transformative impact on urban life. Starting from Henri Lefebvre's original premise, the chapter explores how the concept of justice—social, spatial, and environmental—has evolved over time and questions its relevance in the age of information technologies. It seeks to portray the inter-scalar nature of the smart city, moving back and forth between the individual-urban-global scales and the inter-conceptual nature of social-spatial-environmental justice questions. Barcelona is examined as a case to illustrate the city's attempts to balance democratic ambitions with the imperatives of technological innovation, shedding light on the complex dynamics of urban governance in a smart city paradigm. In light of these discussions, the chapter seeks to explore the questions of how can the right to the city be

reconceptualized in an increasingly commodified and privatized digital era, how technology-driven urban practices intersect with justice at multiple scales, from the individual experience to collective aspiration, and how do cities like Barcelona balance the drive toward digital democracy with the risk of technocratic governance?

## 3.1 Origins of the Idea

In order to understand the concept of the "right to the city" in depth, we must first understand the concept of "right." The understanding of "rights" has been unfolded under the generalization of "human rights" since the notion was first conceptualized. In the most general terms, human rights are defined by the United Nations as follows:

*"Human rights are rights inherent to all human beings, regardless of race, sex, nationality, ethnicity, language, religion, or any other status. Human rights include the right to life and liberty, freedom from slavery and torture, freedom of opinion and expression, the right to work and education, and many more. Everyone is entitled to these rights, without discrimination."*[106]

Although the notion of "right" has a legal connotation, it primarily has an ethical articulation.[107] The fundamental aspects of the notion have been protected in a non-negotiable position by various laws and treaties. The Universal Declaration of Human Rights (UDHR) was prepared by delegates from all over the world and proclaimed by the UN General Assembly on December 10, 1948, in Paris, as a universal standard for the well-being of all peoples and nations.[108] The Declaration is the first legislative document that outlines common standards for human rights to

[106] United Nations, "Human Rights," https://www.un.org/en/global-issues/human-rights#:~:text=Human%20rights%20are%20rights%20inherent,and%20education%2C%20and%20many%20more, Accessed April 16, 2024.
[107] Amartya Sen, "Elements of a Theory of Human Rights," *Philosophy & Public Affairs* 32, no.4 (2004): 315-356, 321.
[108] United Nations, "Human Rights."

be safeguarded for everybody. In the following years, complementary treatises were made to expand the scope of the concept. For instance, The International Covenant on Economic, Social and Cultural Rights was enacted in 1976 to ensure the right to live, work, socialize, and get an education under fair and favorable conditions.[109] The International Covenant on Civil and Political Rights, which was enacted first in 1976, and then again with the second protocol in 1991, seeks to promote people's right to express their opinions freely and take part in the political arena while prohibiting any act of detrimental and degrading treatment.[110]

However, as the notion expands, it becomes harder to ensure the exercise of each and every right by law as a well-defined article. The right to the "highest standards of physical and mental well-being," or "the enjoyment of benefits of cultural freedom and scientific progress" included in The International Covenant on Economic, Social, and Cultural Rights requires a holistic understanding of a larger scale, such as the proper functioning of institutions and the existence of a developed economy.

The term "justice" has developed a particularly strong hold on the public and political imagination, compared to alternatives such as "freedom" with strong conservative overtones, "equality" dominated by a more cultural politics of difference, and the search for universal human rights independent of a specific time and place.[111] In 1971, in his seminal book *A Theory of Justice*, John Rawls provided an extensive theory of the concept of justice. Rawls places justice at the center of all social institutions, which he defines as "Justice is the first virtue of social institutions, as truth is of systems of thought."[112] He presents the idea of "justice as fairness," in which he envisions an equitable and cooperative society that is geared toward promoting the well-being of its members in which everyone embraces the same

[109] Ibid.
[110] Ibid.
[111] Edward W. Soja, "The City and Spatial Justice," *Public Los Angeles* (2019), 3.
[112] John Rawls, *A Theory of Justice* (London, England: Belknap Press, 2005), 3.

principles of justice.[113] His understanding is based on the social aspect of the idea that ensuring justice in society is to be achieved via the morality of its members and social institutions. He conceptualizes this distinction as natural duties and obligations. As a natural duty, addressing a sense of justice among the members of society, he believes that the development of a moral capacity is crucial to reinforcing the principles of justice, which will come to life via social cooperation and mutual respect. Obligations, on the other hand, come from institutional frameworks such as rules, laws, and agreements, as well as voluntary acts. The central question of equality has been hotly contested since John Rawls initiated the investigation into the contemporary theory of social justice and fairness. Among the widely accepted views were Amartya Sen's "basic capability equality,"[114] Ronald Dworkin's "equality of resources,"[115] and John Rawls' "equality of primary goods."[116]

The concept of the "right to the city" has emerged as a pivotal idea in relation to these discussions. Different perspectives have been built under the title of "right to the city," whether arguing from a social, political, or spatial point of view. The idea was first conceptualized by the French philosopher Henri Lefebvre in 1967 during the social and political upheavals of France's May 1968 protests. He argued that urbanization under capitalism meant the alienation and commodification of the city and, thus, the complete negation of cities designed for the benefit of their dwellers. He envisioned the Right to the City not as a matter of access to urban resources but as the radical restructuring of social, political, and economic relations in such a way that inhabitants could fully participate in an appropriate urban space. Lefebvre approaches it as "a cry and a demand" for the right to urban life.[117] According to

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[113] Ibid.
[114] Amartya Sen, "Equality of What?" *The Tanner Lecture on Human Values*, delivered at Stanford University, May 22, 1979, 217.
[115] Ronald Dworkin, "What Is Equality? Part 2: Equality of Resources," *Philosophy & Public Affairs* 10, no. 4 (Autumn 1981): 283–345.
[116] John Rawls, *A Theory of Justice* (London, England: Belknap Press, 2005)
[117] Henri Lefebvre, *Writings on Cities*, trans. and ed. Eleonore Kofman and Elizabeth Lebas (Oxford: Blackwell, 1996), 158.

him, the right can be stated as spatial right, which is the embodiment of the presence of the urban dweller and acting in and through it by having access and making use of the utilities of the city, being involved in the production process of urban space and avoiding all forms of discrimination and segregation.[118] His understanding of the right to the city offers a system of rights that starts from our basic presence in spatial organization and use of it and, through it, extends to claiming a privileged place for all.

Building upon Lefebvre's foundational ideas, David Harvey defines his understanding of the right to the city as the collective right to shape power over the processes of urbanization.[119] It is a struggle to gain power in and through socio-political organizations. He argues that reclaiming the right to the city is a call to action against neoliberal urbanism for democratic management of urban resources, aiming at the dispossession and disenfranchisement that has occurred through capitalist urbanization. In fact, Lefebvre's and Harvey's views cannot be separated and considered as two different approaches, they start their discourses from different points of the same concept but converge in a variety of nodes. Their main difference is in the relation between social and spatial processes. While Harvey privileges the effects of social forces, for example, capital accumulation, Lefebvre is for a balance between social and spatial causality. However, there are no certain lines or groupings; it is a blurred set of understandings. The set consists of a range from tangible; the right for housing, transportation, health, education, cultural activities, etc., to intangible, the right for citizenship, vote, participation in decision-making, etc.

The right to the city is a powerful catalyst to investigate the multi-faceted nature of justice within an urban context. Thus, the right to the city intrinsically demands a

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[118] Edward W. Soja, *Seeking Spatial Justice* (Minneapolis: University of Minnesota Press, 2010), 99.
[119] David Harvey, *Rebel Cities: From the Right to the City to the Urban Revolution* (London: Verso, 2012), 4.

radical restructuring of the power dynamics of an urban environment in a way that all its inhabitants have equal access to the resources, opportunities, and decision-making in shaping their cities. This pursuit of justice is not monolithic but intersects with a number of dimensions-primarily, social, spatial, and environmental. The unfolding of such justice into three distinctive yet interrelated spheres is needed because this provides for deeper understanding and more concrete application in complex injustices typical of the urban environment. This dissection of justice into the various dimensions allows a more effective identification, analysis, and challenge to the concrete mechanisms of inequality and exclusion that the right to the city is trying to overcome in order to foster holistic transformation toward more inclusive and equitable urban spaces.

### 3.1.1 Social Justice

The concept of social justice[120] has evolved to encompass a broader range of aspects over time. Different readings and interpretations of this concept have led to the emergence of different views in both definition and methodology. For example, egalitarian views are confronted with Aristotle's argument that "there is nothing more unequal than the equal treatment of unequals," positive legal theories where the law determines what is just, utilitarian views based on the good of the many, natural rights views and many other interpretations of justice make arguments about how the fairest social justice should be.[121] Craig's expansive definition of social justice describes the multi-faceted nature of the concept: "a framework of political objectives, pursued through social, economic, environmental and political policies, based on an acceptance of difference and diversity, and informed by values

[120] The term "social justice" was first coined by Jesuit priest Luigi Taparelli d'Azeglio in the early 19th century. In his 1883 magnum opus, A Theory of Natural Law, he aims to provide a foundation for the moral values of society, social structure, individual choice, and behavior. (Mulligan, R., F., A Brief History of Social Justice)

[121] David Harvey, *Justice, Nature & the Geography of Difference* (Oxford: Blackwell, 1996), 342.

concerned with achieving fairness, and equality of outcomes and treatment; recognizing the dignity and equal worth and encouraging the self-esteem of all; the meeting of basic needs; maximizing the reduction of inequalities in wealth, income and life chances; and the participation of all, including the most disadvantaged."[122] David Harvey's definition points to a multidimensional understanding: "Like space, time, and nature, 'justice' is a socially constituted set of beliefs, discourses, and institutionalizations expressive of social relations and contested configurations of power that have everything to do with regulating and ordering material, social practices within places for a time."[123]

Harvey discusses social justice, which is largely based on Lefebvre's right to the city and Rawls' notions of justice, through the dynamics of the city and the modern metropolis. In his seminal book *Social Justice and the City*, Harvey examines how urbanization and urban processes contribute to social (in)justice. His argument is deeply rooted in Marxist theory, addressing social power dynamics, class struggle, the influence of capital on urban environments, and revolutionary change. He discovered that the motivations and demands of social justice and economic efficiency are not only mostly incompatible but contradictory in an urban environment.[124] This means that urbanization and the economic development it is promised to bring about do not tend to be homogeneously distributed among the stakeholders of the city. In this context, it is worth considering the applicability of the claims of inclusiveness and equality in smart city approaches. For example, we see that China and India, which have been seen as rising economic powers in recent years, stand out in terms of economic growth and technological and infrastructural

[122] Gary Craig, "Poverty, Social Work and Social Justice," *The British Journal of Social Work* 32, no. 6 (2002): 669-82, https://doi.org/10.1093/bjsw/32.6.669.
[123] David Harvey, *Justice, Nature & the Geography of Difference,* 330.
[124] James L. Greer, Review of *Social Justice and the City* by David Harvey, *Ethics* 90, no. 4 (1980): 604-607, https://www.jstor.org/stable/2380460, 606.

investments, but it turns out that they do not rank high in social justice and equality rankings.

However, this is also something to be questioned. We see that the tendency to analyze through numerical data, which is common in smart city approaches, has also found its place in issues such as inclusion, equality, and justice, which are discussed through qualitative concepts in social sciences. As a result of the quantification of these issues, which need to be evaluated in a multi-dimensional and multi-layered manner, they are transformed into indicators such as the gender inequality index, democracy index, and human capital index, which are used to make comparisons between countries, continents, and regions. Even though the social dimension has been internalized in order to turn it into data, researchers use these indicators to establish a relationship between the social sciences and the positive sciences. It is possible to use a similar method to learn about the relationship between social justice and economic growth. For example, in a study made in 2020, researchers conducted a comparative analysis across G20 countries.[125] The results show that social justice and economic growth go hand in hand to a certain extent in developed countries, whereas in developing countries, the social justice gap leads to a deviation in the development process.[126] Although such a method is insufficient for establishing a direct relationship and making inferences, it can provide insights under conditions where numerical data are available (literacy rates, education level, gender pay gap, number of parliamentary seats for women and men, maternal mortality, crime rates, life expectancy, etc.).

When we look at the definitions and debates on social justice, we see that a distributive approach is dominant. In other words, the focus is on the equal distribution of rights and resources among members of a society. However, this

[125] Shijun Li, Bing Wang, and Robert Read, "Is Social Justice the Superior Economic Growth Model? Comparative Analysis on G20 Countries," *Cogent Social Sciences* 6, no. 1 (2020), https://doi.org/10.1080/23311886.2020.1760413.
[126] Ibid, 12.

perspective, which is based on social capital, has a limiting aspect as it is unidirectional. Understanding a one-way flow from states and institutions that guarantee the implementation of rights and distribute resources to citizens overlooks the spatial dimensions of rights and justice. As Pirie asserted, in order for the idea of spatial justice to be more than a means of defining "justice in space," a specifically spatial conception of justice needs to be developed.[127]

### 3.1.2 Spatial Justice

Informed by Lefebvre's spatial perspective on the idea of right and justice, scholars have developed a discourse on the spatial expansions of the conception of justice. Harvey approached it as a geographical problem and conceptualized it as "territorial justice," which is "to design a form of spatial organization which maximizes the prospects of the least fortunate region."[128] Soja went on to develop the concept of spatial (in)justice[129] in the broadest sense as "an intentional and focused emphasis on the spatial or geographical aspects of justice and injustice. As a starting point, this involves the fair and equitable distribution in the space of socially valued resources and the opportunities to use them."[130] He approaches spatial justice with a particular emphasis and a different perspective, not as an alternative to other forms of justice. He uses the term spatial justice as a struggle over geography to explore and enrich new ideas.[131] According to Soja, there are three interactive levels of geographical

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[127] Gordon H. Pirie, "On Spatial Justice," *Environment and Planning A: Economy and Space* 15, no. 4 (1983): 465–73, https://doi.org/10.1068/a150465, 469.
[128] David Harvey, *Social Justice and the City* (Baltimore: Johns Hopkins University Press, 1973), 110.
[129] Gordon Pirie was the one who first mentioned the term "spatial justice" in the early 1980s. As a geographer himself, he questioned if geographers might transcend the limitations of territorial distributive justice with the aid of a theory of spatial justice; Stephen Przybylinski, "Spatial Justice," in *Theorising Justice: A Primer for Social Scientists*, ed. Stephen Przybylinski and Johanna Ohlsson, 1st ed. (Bristol: Bristol University Press, 2023), 191–204, https://doi.org/10.2307/jj.7941370.19, 195.
[130] Edward W. Soja, "The City and Spatial Justice," *Justice spatiale/ Spatial justice* 1, no. 1 (2009): 1-5, 2.
[131] Soja, *Seeking Spatial Justice*, 13.

reasoning. Boundary making and political organization when privileged private property rights and spatial manipulation within electoral districts contribute to the production of unjust geographies under the law. Decision-making of individuals and institutions when preferences lead to discriminatory zoning, such as racial segregation or unjust settlement of dangerous facilities in particular areas. The last one is on a regional scale and about uneven developments resulting in the globalization of injustice.[132]

The levels show that it is not only a top-down intervention aiming to create zones but also a natural process that occurs from below, at the public level. Soja's categorization of segregation is also parallel with the three aspects of Lefebvre's categories: *spontaneous*, coming from revenues and ideologies; *voluntary*, establishing separate spaces; and *programmed*, in the form of planning.[133] It would not be wrong to claim that increasing polarization in relation to wealth and power is the most important reason for the emergence of the idea of segregation that has direct effects on spatial forms of the cities, resulting in more privatized, thus restricted areas such as gated communities and fortified public spaces restricting the access for the ones who can afford it, even if it is not only a fiscal problem.[134] The outer banlieues of Paris turned into a ring of inner suburbs of high-rise housing estates inhabited by the working class after World War II as a result of the operation of cleansing the working class from the urban core. The Apartheid policy of the former regime of the Republic of South Africa created separate administrative regions for the white elite and left the majority African population in the periphery as labor reserves, exemplifying the spatial segregation over race.[135]

In fact, there is a dichotomy in the sense of theory and practice of segregation. Although top-down imposition from a powerful body or discrimination on race,

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[132] Ibid, 8-9.
[133] Lefebvre, *Writings on Cities,* 139.
[134] Harvey, *Rebel Cities,* 15.
[135] Soja, *Seeking Spatial Justice,* 33-39.

gender, nationality, or wealth is usually contradicted in theory, there are also views that favor practical segregation. According to Lefebvre, anti-segregationist approaches would be ideological and have good humanist intentions, but practice tends towards segregation, the state from above and the private enterprise from below.[136] Similarly, Soja states that segregation is not always unjust, it can be voluntary and useful, for example, in the case of a residential district where people from similar backgrounds such as geography, workplace, or even beliefs choose to live together to support and help each other.[137] Therefore, whether from above as a development method or from below as preferences of individuals, the idea of practical segregation is valid as long as it does not aim to push away a particular group for some reason. At this point, planning as a tool for the production of space and the body to produce it, public or private, has a critical role in organizing the space and providing order while avoiding discriminatory, not necessarily segregationist, strategies and preventing natural formations.

Although the concept is based on a foundation related to space and geography, it is impossible to think of space as an independent entity. Therefore, it would be more accurate to think of space as a network of relationships that affect and are affected by space. Based on this, we can examine the reflections of spatial justice at the urban scale with certain layers. The infrastructure layer includes grid systems (electricity, water, natural gas, sewerage, etc.), transportation, landscape, and digital infrastructure; the planning layer includes zoning status, development zones, culture-arts, sports and other recreational areas, and the positioning of industrial and waste areas within the scope of planning decisions; urbanism layer includes parameters such as universal design criteria, the presence of quality public space, and invested projects. None of these layers exist independently and are under the umbrella of urban governance, and it depends on many different factors: national laws,

[136] Lefebvre, *Writings on Cities*, 140.
[137] Soja, *Seeking Spatial Justice*, 55.

regulations, international agreements, economic situation, political orientations, etc. Madanipour asserts that the concept of spatial justice has four dimensions: the geographical/spatial distribution of elements that we can define as beneficial and harmful or burdensome; access to space to live a quality life; the process of space formation that supports or creates unjust social practices; and the temporality of spatial justice across generations.[138]

With the rise of various digital technologies and cloud systems, we are witnessing a shift that has the potential to transform the way individuals perceive and interact with the physical space. So, how has the meaning of spatial justice evolved in this context? It is quite clear that a discussion based on the conventional elements of space will no longer be sufficient. A new understanding, and therefore a new language, is needed for the space that has moved to a different dimension. In this paradigm shift, it is useful to approach space from two different perspectives. Firstly, the construction of virtual space (which is discussed in Chapter 5.2) and its apparatuses: data, algorithm, cloud, user interface, avatars, interaction mechanisms, database, etc. In this context, the discourse on spatial justice begins with recognizing the rights and conditions for accessing this new space, progressing towards ensuring that the space is created in a manner that is fair and respectful to its subjects. However, this discussion takes us to the most fundamental issue of spatial justice: the right to be present in physical space. Since the emergence of this phenomenon, the debate on unequal spatial practices has been primarily about the right to be present in space. The idea that the space which people live in, could be replaced by another space—the virtual space—where our right to exist depends on certain material capabilities raises important questions about its alignment with the principles of human rights, the right to the city, and the broader concept of spatial justice. For this reason, the thesis recognizes the existence

[138] Ali Madanipour, Mark Shucksmith, and Elizabeth Brooks, "The Concept of Spatial Justice and the European Union's Territorial Cohesion," *European Planning Studies* 30, no. 5 (2021): 807–24, https://doi.org/10.1080/09654313.2021.1928040, 4.

of a well-functioning physical space as one of the most fundamental elements of the discussion on smart cities of the future.

### 3.1.3 Environmental Justice

Before the emergence of the relatively new concept of environmental justice, environmentalist groups focused on the protection of nature had long existed. These groups fought for the salvation and protection of endangered animals, national parks, and natural habitats, and developed a discourse on this issue. However, it is problematic to consider the concepts of nature and environment as independent, as a phenomenon detached from human beings and human habitats. At this point, Taylor's criticism on the mobilization of the environmentalist groups for non-human creatures, and on their failure to devote the same attention, effort, and resources to issues concerning human beings, such as homelessness, unemployment, the situation of migrants, etc., is pertinent.[139] Hence, the need for an understanding of justice from an environmental perspective, as distinct from the social justice approach, has emerged. In this context, the environmental justice movement has been centered on the concern for human survival and well-being, especially for the poor, the marginalized, and vulnerable groups.[140]

Although the starting point is not clear, it is argued that the environmental justice movement was influenced by the local community protests against unwanted land use in the USA before the 1980s.[141] Since 1968, local activists have been organizing under the banner of environmental justice. A historic environmental discrimination case brought to court in Houston in 1979, and related legal actions in the 1980s

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[139] Dorceta E. Taylor, "Can the Environmental Movement Attract and Maintain the Support of Minorities?" *Race and the Incidence of Environmental Hazards* (2019).
[140] David Harvey, *Justice, Nature & the Geography of Difference*, 386.
[141] "Environmental Justice History," Office of Legacy Management, U.S. Department of Energy, https://www.energy.gov/lm/environmental-justice-history#:~:text=The%20initial%20environmental%20justice%20spark,of%20toxic%20waste%20along%20roadways, Accessed June 27, 2024.

inspired activists to demand government action and take a stand against businesses.[142] In the early 1980s, the movements defending the cause of environmental justice were transformed into a nationwide movement for social and racial justice. The first spark of this movement was a protest in 1982 after Warren County, a predominantly African-American county in North Carolina, was designated for a hazardous waste landfill.[143] With this incident, the concept of "environmental racism" came to the agenda for the first time,[144] and thus, the understanding of environmental justice has gained a new perspective. In addition, Warren County protests spurred the Commission for Racial Justice to commission a study titled "Toxic Waste and Race."[145] This is the first study to link waste facility locations to demographic characteristics in the United States, and the results show that race is the strongest predictor of where waste facilities are located, beating out variables such as poverty, land values, and home ownership.[146] Today, we know that minorities, low-income groups, indigenous people, and people of color face increased environmental exposures, including air, water, and soil pollution from industrialization, militarization, and consumer practices.[147] A new generation of environmental activists gathered in Washington, D.C., in 1991 to bring national attention to the pollution problems threatening communities of color and low-income communities, seeking to draw attention to the fact that black, poor, and working-

[142] Robert D. Bullard and Beverly H. Wright, "Environmental Justice for All: Community Perspectives on Health and Research," *Toxicology and Industrial Health* 9, no. 5 (1993): 821–841, https://doi.org/10.1177/074823379300900508.
[143] Ibid.
[144] Robert D. Bullard, "Environmental Justice in the 21st Century: Race Still Matters," *Phylon* 49, no. 3/4 (2001): 151–71, https://doi.org/10.2307/3132626, 151.
[145] Commission for Racial Justice, *Toxic Wastes and Race in the United States* (New York: United Church of Christ, 1987).
[146] Robert D. Bullard, "Environmental Justice in the 21st Century," 151.
[147] Mohai & Bryant, 1992; Brown, 1995; Szasz & Meuser, 1997; Evans & Kantrowitz, 2002; Ringquist, 2005 as cited in Paul Mohai, David Pellow, and J. T. Roberts, "Environmental Justice," Annual Review of Environment and Resources 34 (2009): 405–430, https://doi.org/10.1146/annurev-environ-082508-094348, 406-9.

class neighborhoods were less environmentally protected than white and more affluent communities, the leaders introduced the idea of environmental justice.[148]

As a way to combat environmental racism, Bullard explained the environmental justice approach with the principle that "all people and communities are entitled to equal protection from environmental and public health laws and regulations."[149] The concept of environmental justice is defined by the US Environmental Protection Agency (EPA) as "the just treatment and meaningful involvement of all people, regardless of income, race, color, national origin, tribal affiliation, or disability, in agency decision-making and other Federal activities that affect human health and the environment."[150] In other words, the movement aims to ensure that everyone has equal access to a sustainable, healthy, and resilient environment. This aims to protect against disproportionate harmful environmental impacts such as climate change, ecological burdens, and structural or systemic barriers such as racism.[151]

Even though the term itself originated and gained recognition in the USA,[152] the concept has started to be widely studied all around the world especially as the impacts of climate change have exacerbated in all regions. Since the issue of environmental justice is dominated by the USA in the literature, we see that the discussion is mostly based on race and therefore on the settlements of different ethnic origins. Although it is a debate on the environment and geography, it cannot be considered independent from other understandings of rights and justice. Zoning and planning, which addresses the distribution of housing, infrastructure, healthcare and

[148] Bullard and Wright, "Environmental Justice for All"
[149] Mohai et al., "Environmental Justice," 407.
[150] USA Environmental Protection Agency, "Environmental Justice," https://www.epa.gov/environmentaljustice/learn-about-environmental-justice, Accessed June 27, 2024.
[151] Ibid.
[152] Maureen G. Reed and Colleen George, "Where in the World Is Environmental Justice?" *Progress in Human Geography* 35, no. 6 (2011): 835-842, 838.

sanitation services, economic investment, job creation, etc., are all part of the physical, social, and cultural realms we define as the environment.[153]

Mohai et al. categorize the causes of environmental injustice into two groups. The so-called economic explanations argue that injustice arises from pure market dynamics and that there is no intentional discrimination against vulnerable and marginalized groups. This distinction could have arisen in one of two ways: either these groups may have settled by chance in areas where the industry could maximize its profits, or there may have been a natural selection over time between groups that could afford to leave the area after the industry arrived and those that could not. Sociopolitical explanations, on the other hand, suggest that when government and industry select sites for facilities that may be harmful to the environment and human health, they target communities where they are likely to face less resistance, which in the end may be low-income minority groups with fewer resources and political representation.[154] While these two categories imply that there are different root causes of environmental injustice, in fact, the same groups have been victimized by generations of social, political, and economic practices, and the cumulative impact of these practices has been passed down from generation to generation. The result is the same every time: vulnerable communities suffer. According to the UN Environment Programme's Emissions Gap Report 2023, around 80 percent of fossil and LULUCF emissions between 1850 and 2021 came from G20 countries, while only 4 percent came from the least developed countries[155] (Figure 5). Yet it is the least developed countries that are most affected by the climate crisis and have the fewest resources to cope. According to reports by the International Rescue Committee, countries such as Somalia, Syria, Afghanistan, Yemen, Chad, South Sudan, Nigeria, and Ethiopia will be most affected by the disastrous consequences

[153] Bullard, “Environmental Justice in the 21st Century,” 153.
[154] Mohai et al., "Environmental Justice," 414.
[155] UN Environment Programme, *Emissions Gap Report 2023* (Nairobi: UNEP, 2023), 8.

of the climate crisis and will have to cope with extreme food insecurity, drought, disease outbreaks, malnutrition, intense flooding, conflicts.[156]

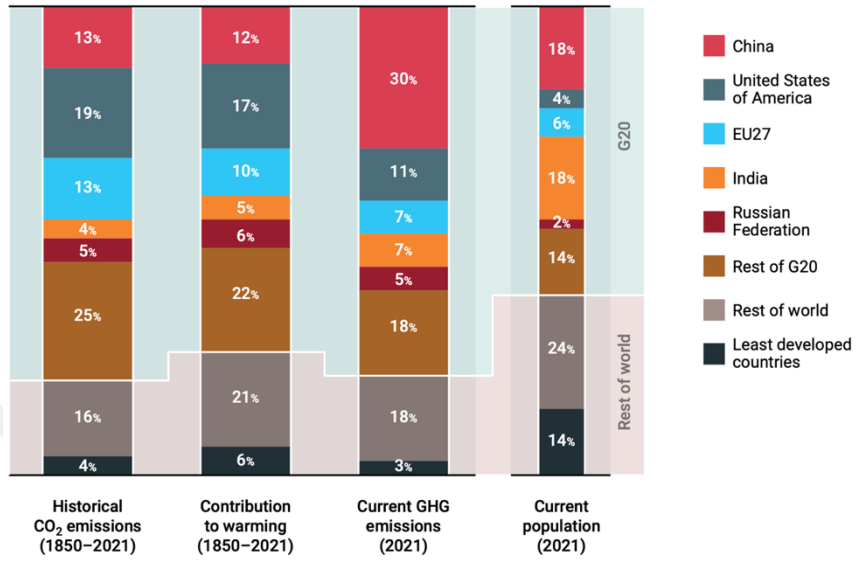


Figure 5 Contributions to Climate Change, Retrieved from UN Environment Programme, *Emissions Gap Report 2023* (Nairobi: UNEP, 2023)

With the rise of information technology and the spread of the smart city approach, goals such as sustainability, zero-carbon emission, and economic prosperity became associated with this understanding. Government officials and industry executives claimed that the technology sector was environmentally sensitive and ecologically sustainable.[157] Because from the user's perspective, the shift toward the digital environment did not seem to have any detrimental impact on the environment. On the contrary, it was assumed that there would be savings in natural resources, energy, and manpower and exemption from harmful emissions. However, research shows

[156] International Rescue Committee, "10 Countries at Risk of Climate Disaster," *International Rescue Committee*, https://www.rescue.org/article/10-countries-risk-climate-disaster, Accessed July 6, 2024.
[157] Mohai et al., "Environmental Justice," 420.

that the environmental impact of technology is more complex than previously thought. If we are to review the process, the technology and electronics industry is highly mineral intensive and relies heavily on industrial chemicals and consequently generates large amounts of waste materials and water.[158] Starting with mining for the minerals, deforestation, land degradation, water pollution, and emission of harmful gases stand out as some of the byproducts of the activity.[159] To convert natural resources into sophisticated technological devices, massive amounts of energy are required, including their transportation; therefore, it has a carbon-intensive supply chain. According to the UN's Environment Programme, the global technology industry produced two to three percent of the world's carbon emissions in 2021.[160][161] In addition, the technology sector's adoption of a strategy that favors hyper-consumerism with constant updates and new releases contributes negatively to these impacts.[162]

Not only the electronics industry with its output products but also the network-based artificial intelligence industry leaves a significant carbon footprint. According to a 2019 study by researchers at the University of Massachusetts, the carbon dioxide

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[158] Ibid.
[159] Gomi Design, "The Hidden Impact of Tech on the Environment," *Gomi Journal*, https://gomi.design/blogs/journal/hidden-impact-of-tech-on-the-environment, Accessed July 8, 2024.
[160] Saurabh Saha, "The Carbon Emissions of Big Tech," *Electronics Hub*, October 2023, https://www.electronicshub.org/the-carbon-emissions-of-big-tech/, Accessed July 8, 2024.
[161] According to OVO, a leading UK based energy company, Brits are sending out more than 64 million unnecessary emails each year, and that adds 23,475 tonnes of carbon dioxide equivalent to the UK's annual carbon footprint. If every British person could send one less email per day, they could save 16,433 tons of carbon annually, equivalent to 81,152 flights to Madrid; OVO Energy, "Think Before You Thank: If Every Brit Sent One Less Thank You Email a Day, We Would Save 16,433 Tonnes of Carbon a Year – the Same as 81,152 Flights to Madrid," OVO, https://company.ovo.com/think-before-you-thank-if-every-brit-sent-one-less-thank-you-email-a-day-we-would-save-16433-tonnes-of-carbon-a-year-the-same-as-81152-flights-to-madrid/, Accessed June 30, 2024.
[162] According to Statista's 2023 data, there are around 6.9 billion smartphone mobile network subscriptions in the World which is forecasted to be 7.9 billion in 2028; Statista, "Number of Smartphone Users Worldwide from 2016 to 2024," https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/, Accessed June 29, 2024.

emitted (lbs) to develop a state-of-the-art AI technology (NAS) is about five times the carbon dioxide emitted by an average car over its entire lifetime, including production.[163] Therefore, we cannot consider AI as one-sided. On the one hand, this technology has positive outcomes with its use in modeling energy efficiency and climate change predictions, designing low-emission infrastructure, and smart grid design, as well as in social security, healthcare, and cybersecurity; on the other hand, AI technology itself is a serious carbon emitter.[164] And at the end of the day, it is vulnerable countries and communities that bear the negative burden.

In addition, there is a tendency for developed countries to use underdeveloped countries as backyards for their dirty work and waste in exchange for small economic incentives. For example, tons of electronic waste generated in rich countries every year is shipped to urban areas and villages in Asia, Africa, and Latin America, where locals either dismantle it for new production processes or simply pile it up as waste.[165] It is in this context that we can see the reflection of the relationship between scales mentioned in Chapter 3.2.2 on environmental justice. By this logic, the action of a person videoconferencing from their home in the USA is more likely to reduce the quality of life of a person in Africa, which is directly affected by the consequences of the climate crisis.

## 3.2 Right to the City in the Age of Information Technology

The advent of information technology has profoundly affected urban life and led to a rethinking of the understanding of the "right to the city." With the increased smart technologies and data-driven solutions, conventional ways in which citizens relate

[163] Emma Strubell, Ananya Ganesh, and Andrew McCallum, "Energy and Policy Considerations for Deep Learning in NLP," *Proceedings of the 57th Annual Meeting of the Association for Computational Linguistics* (2019): 3645-3650, https://doi.org/10.18653/v1/P19-1355.
[164] P. Dhar, "The Carbon Impact of Artificial Intelligence," *Nature Machine Intelligence* 2 (2020): 423–25, https://doi.org/10.1038/s42256-020-0219-9, 423.
[165] Mohai et al., "Environmental Justice," 420.

to their urban spaces and civic processes have been transformed. On the one hand, these new tools generate new possibilities to provide citizens' right to the city, but on the other, they also create challenges that did not exist before. Concepts such as the realm of digital public space, the threshold of participation, surveillance, real-time city, data sensitivity, and technocratic governance have begun to constitute new areas of debate in the discourse on the right to the city. It requires looking into these dynamics in order to grasp how environmental, spatial, and social justice would be challenged in the era of information technology and how citizens could reclaim their rights both in physical and virtual urban spaces.

### 3.2.1 What Does the Right to the City Mean in the Current Context?

The affordances of smart technologies provide opportunities not only on the infrastructural level but also on the social and managerial level by enhancing participation, contacting authorities, receiving real-time information, etc. Those with the resources to do so are today more informed today and active in the organizational affairs of the city they live in. However, looking at these advanced digital tools as the only alternative becomes problematic when one examines the core of the issues that have been the subject of discussion. Additionally, the difficulties brought on by these new instruments are largely unexplored, necessitating a different strategy. "Technology is the answer, but what was the question?" asked Cedric Price in 1966.[166] If we step back and ask the same question again, it would lead to the question, what do we mean by the right to the city in the age of smart cities?

As discussed earlier, the right to the city denotes more than having access to the amenities of a city. Lefebvre emphasized the political aspect of urban space and explored the ways in which it can become a political tool as well as an instrument of

[166] Dan Hill, "Architects Without Architecture," *Medium*, December 30, 2020, https://medium.com/butwhatwasthequestion/architects-without-architecture-9e9395dd9314, Accessed May 20, 2021.

change.[167] Lefebvrian understanding of the "right to the city" in the context of smart cities translates itself into something beyond accessing, choosing, and using services and products offered by public and private bodies, and strives to claim the right to participate in the production, management, and ownership of everything in the process.[168] What deviates significantly in the reconceptualization is the shift from centralization to decentralization in terms of power and organization. Lefebvre sees centrality as a power over the capital.[169] Harvey, on the other hand, emphasizes collective power rather than individual power, since changing the city requires the exercise of collective control over urbanization processes.[170] Therefore, the right to the city should be implemented on a global rather than local level. He claims that the only effective resistance to global financial capital must be equally expansive in scale and focus.[171]

On the other hand, smart cities are being viewed as a contemporary manifestation of a neoliberal approach to the production of urban space, one that values space primarily for its trade value and places a higher priority on private property rights than other demands.[172] Born out of a Marxist point of view, the "right to the city" understanding ideally opposes a system in which the citizen is considered a customer, and the city acting as a service provider where the value primarily corresponds to an economic equivalent. On the other hand, the proponents of the "right to the smart city" challenge this view, arguing that individuals are to be appreciated for their various roles within society. According to Nancy Roberts'

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[167] Gregory Busquet, "Right to the City," in *The Wiley Blackwell Encyclopedia of Urban and Regional Studies* (Cambridge, MA: Wiley- Blackwell, 2019), 1-9.
[168] Irina Anastasiu, "Unpacking the Smart City through the Lens of the Right to the City: A Taxonomy as a Way Forward in Participatory City-Making," in *The Hackable City: Digital Media and Collaborative City-Making in the Network Society*, eds. M. de Lange and M. de Waal (Singapore: Springer, 2019), 244.
[169] Lefebvre, *Writings on Cities*, 5.
[170] David Harvey, *Rebel Cities.*
[171] David Harvey, "The Right to the City," *New Left Review* 53 (2008): 23-40, 39.
[172] Maša Galič and Marc Schuilenburg, "Reclaiming the Smart City: Toward a New Right to the City," in *Handbook of Smart Cities*, ed. J.C. Augusto (2020), https://doi.org/10.1007/978-3-030-15145-4_59-1, 11.

classification, citizens take on different roles in different contexts within a city, and they act as *subjects* in an authority system, as *voters* in a representative system, as *clients* in an administrative state, as *interest-group advocates* in a pluralist system, as *consumers/customers* in a political/ market economy, as *volunteer* and *co-producers* in civil society, and as *co-learner* in a social learning process.[173] This classification is claimed to build an inclusive perspective on the roles of the urbanite in the smart city, as it addresses both the systemic dimension and multifaceted nature of the city. However, although it is meant to emphasize the citizen's involvement in the city, it also implies the continuity of conventional neoliberal practices. In other words, while the manipulation of the smart city concept for political and economic goals poses significant risks, the concept of the smart citizen also carries the potential to become problematic if it reduces individuals to a purely utilitarian role, overlooking their unique capabilities.

In terms of accessibility, service delivery, customer satisfaction, etc., digital and smart technologies that are aimed directly at people, whether by governmental institutions or private businesses, provide enormous conveniences. Some of them even build a shared platform and advocate for more inclusive, accessible, and participatory cities using the advantages offered by these technologies. However, addressing the complex problems of an urban environment requires acknowledging the challenges they pose. First of all, there is a threshold for access. Only those with sufficient digital literacy and access to the required tools, such as smartphones and computers, as well as the financial means to do so, are able to participate in it. People with little financial resources, the elderly, and young children, for example, find it challenging to cross the threshold and participate in this alternate public realm. Even though over half of the world's population is now online, more than three billion

[173] Nancy Roberts, "Public Deliberation in an Age of Direct Citizen Participation," *The American Review of Public Administration* 34, no. 4 (December 2004): 315–53, https://doi.org/10.1177/0275074004269288.

people still do not have access to affordable Internet.[174] Moreover, the gap between genders, and different ethnic and religious groups is widening. In this context, Ben Green questions, "What difference does it make that poor, minority communities can contact the government via an app if they feel excluded from the protection of the law and their rightful place in society—not to mention that they are frequently harassed and shot by police, who are among the most visible of the 'street-level bureaucrats?'"[175]

New information and communication systems always have benefits and drawbacks for a certain domain. As a result, the potential risks linked with big data analytics should be given more consideration when it comes to human rights, where the stakes are higher due to marginalized populations. Big data analytics may violate private rights and norms while promoting or defending human rights, which could ultimately contribute to individual damage.[176] Digital technology has cast doubt on long-standing notions of privacy, including the freedom from invasion of one's personal space and control over one's personal information, as well as the right not to be monitored without permission. The pervasive surveillance, enormous datasets, and lightning-fast global distribution of information made possible by information technology are all regarded as substantial threats to privacy, according to technology and ethics scholar Helen Nissenbaum.[177] Technology is not inherently neutral, and moral values like sexism and prejudice are frequently ingrained in the design and operation of modern devices. Rob Kitchin categorizes the impacts of increasingly data-dependent systems on the privacy of individuals into four: first, people are the target of monitoring and dataveillance as smart city technologies collect inputs from individual lives; second, it is becoming nearly impossible to go about daily life

[174] UN-Habitat, People-Centered Smart Cities, n.d., Accessed 2020, 1.
[175] Ben Green, *The Smart Enough City*, 46,
[176] Mark Latonero, "Big Data Analytics and Human Rights: Privacy Considerations in Context," in *New Technologies for Human Rights Law and Practice*, eds. Molly K. Land and Jay D. Aronson (Cambridge: Cambridge University Press, 2018), 150, https://doi.org/10.1017/9781316838952.007.
[177] Ibid.

without leaving digital traces due to the prevalence of digitally-mediated transactions and monitoring, as well as the rising usage of unique IDs and PII to access services; third, the widespread collection, organization, storage, and dissemination of big data about a phenomenon altering the potential applications of such data, both beneficial and destructive; and fourth such data allowing for a great deal of interpretation.[178]

The amount of personal information required and whether it is handled to increase service quality or just allow surveillance determine the extent of public concern about this data collection. Graham states that the extensive array of ICTs permeating modern cities is fundamentally a tool of surveillance.[179] The fact that these technologies, which have infiltrated every part of the city, record every interaction we have with them and how, when, where, and how long we interact with them confirms this view. On the other hand, Lyon offers a different perspective on this. He claims that surveillance extends beyond mere coercion and control, encompassing influence, persuasion, and seduction, as individuals contribute to their own monitoring by leaving traces that various agencies collect, creating a spectrum of power that ranges from strict control to subtle influence.[180] In that sense, surveillance can be offered as a depoliticization mechanism to promise security. According to Lyon, modern surveillance is a form of social orchestration that functions based on utilitarian rules rather than universal moral and justice criteria; therefore, it frequently avoids using the language of justice and helps to shield real-life circumstances from ethical examination.[181]

On the other hand, there are real-life efforts that deal with this challenge. For instance, Zaragoza, Spain, has adopted a smart "citizen card" that saves personal data and enables users to access and pay for city services. Even though the card's use

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[178] Rob Kitchin, *Getting Smarter about Smart Cities: Improving Data Privacy and Data Security* (Ireland: Maynooth University, 2016), 31.
[179] Stephen Graham, ed., *The Cybercities Reader* (London: Routledge, 2004), 299.
[180] David Lyon, "Surveillance in the City," in *The Cybercities Reader*, ed. Stephen Graham (London: Routledge, 2004), 299–306, 302.
[181] Ibid, 304.

leaves a significant trace of related transaction records, researchers attribute this attitude to the card's perceived status as a secure payment method, the trust that has been built up between the public and government, and the relatively small amount of personal information that is currently stored on the card.[182] As the concerns regarding data privacy, transparency, how it is collected, by whom, and for what purposes they are being used grow with the increasing awareness among the general public, ethics has started to be used to get rid of any questioning. When ethics-washing is used, it appears that a problem is being addressed seriously and that significant action is being taken, but the underlying goal is to avoid formal regulation and legal systems.[183] Therefore, understanding the challenges and the limitations of these tools, as well as their positive potential, is essential.

### 3.2.2 Inter-Scalar Understanding

The expansion of information technology in every bit of one's life has created complex layers of interaction among individuals, communities, cities, and the higher levels of institutional and territorial layers. The distance between the fingertip and the boundaries of the planet has become smaller and smaller. In 1994, Mitchell envisaged a future that he defined as "bitsphere" which is an interconnected, electronically mediated environment where networks are pervasive, and the majority of the artifacts that operate there—from nano to global—have the ability to communicate and think.[184] In bitsphere, which exactly overlaps with today's world, the nervous system has transformed into a "bodynet" that communicates at the nanoscale and through various interfaces such as smartphones, medical monitoring systems, data glove, and various smart mobile applications, connects to the

[182] Anthony Townsend and Carolina Zambrano-Barragán, *Big Urban Data: A Strategic Guide for Cities* (IDB, 2019), https://doi.org/10.18235/0001918.
[183] Rob Kitchin, "The Ethics of Smart Cities and Urban Science," *Philosophical Transactions of the Royal Society A* 374: 20160115 (2016), https://doi.org/10.1098/rsta.2016.0115.
[184] William Mitchell, *City of Bits*, 167.

interconnected network at the upper scale, which turns one into a "modular, reconfigurable, infinitely extensible cyborg."[185] With this technology, the smallest, most unique, and most private part of the human being has gained a public value. The human body has started to act as a data transmitter with the many technologies and devices that surround it. Information that meant something only to a single individual started to produce a different discourse when it became part of a whole. While this may serve a purpose for the public good, such as learning the cause of an epidemic and implementing control measures, there is also a risk that it could be used in ways that prioritize the interests of certain individuals or institutions over others. (Strava heatmap exposure,[186] Flo Period & Pregnancy Tracker data share,[187] etc.)

On a larger scale, the public space an individual belongs to—whether physical or digital—can be seen as the fundamental building block of the collective system. In the smart city, this space serves as an interface where each individual is coded and registered in the system with various information. Technologies such as CCTV cameras, heat, sound, and air quality sensors, public Wi-Fi and IoT hubs, garbage tracking systems, bicycle and electric scooter rental spots, EV charging points, GPS apps, and smart parking systems are the channels that connect the human scale with the regional, city, country and even global scale. In addition to individual data (the criminal behavior detected by CCTV cameras), there is a prevailing order in which the information generated by collective data has a significant meaning at a higher

[185] Ibid, 29.
[186] The fitness monitoring business has disclosed sensitive information regarding the locations and personnel of military bases and espionage missions worldwide; Alex Hern, "Fitness Tracking App Gives Away Location of Secret US Army Bases," *The Guardian*, January 28, 2018, https://www.theguardian.com/world/2018/jan/28/fitness-tracking-app-gives-away-location-of-secret-us-army-bases, Accessed October 16, 2024.
[187] The FTC claims in a complaint that Flo breached its promise to protect the privacy of customers' health information by disclosing to marketing and analytics companies, such as Facebook and Google, confidential health information belonging to millions of users; Federal Trade Commission, "FTC Finalizes Order with Flo Health, a Fertility-Tracking App that Shared Sensitive Health Data with Facebook, Google, and Others," June 22, 2021, https://www.ftc.gov/news-events/news/press-releases/2021/06/ftc-finalizes-order-flo-health-fertility-tracking-app-shared-sensitive-health-data-facebook-google.

scale. This order works in a dynamic and inter-scalar approach where a city's air quality map guides the green infrastructure or industrial zone to be built, a collection schedule is prepared according to the garbage and waste monitoring system, or climate crisis research is carried out according to changing temperature data. In this sense, the data infrastructures of our cities—which are made up of the information systems and protocols that specify where and how services should be located—are increasingly shaping the fundamental utilities and infrastructures of the cities.[188]

This highly interconnectedness also brings a different understanding of the order of rights and responsibilities. It is possible now that an individual's action can affect a person on the other side of the world. As mentioned in Chapter 3.1.3, one example of this is that the impact of digital and artificial intelligence technologies, which are used more frequently in developed countries with a single click of a person, on the climate crisis is felt more in underdeveloped countries. In other words, a higher standard of living of an individual in one place can lead to a lower standard of living in another. The understanding of urban justice becomes an issue above the geographical context.

### 3.2.3 The Commodification of Urban Intelligence

The concept of the smart city has reached increasing importance in recent years within the discourse on urban development by promising the use of technology to create more efficient and livable urban environments. However, while the smart city paradigm is often presented as purely objective, focusing on problem-solving and improvement, it has the risk of reflecting existing power structures and prioritizing economic gains, sometimes at the expense of social equity. As the free market becomes more and more involved, both public and individual rights are increasingly

[188] Sarah Barns, *Platform Urbanism: Negotiating Platform Ecosystems in Connected Cities* (Singapore: Palgrave Macmillan, 2020), https://doi.org/10.1007/978-981-32-9725-8, 10.

commoditized. Almost everything in the digital environment, from the individuals' digital presence to their data, has an economic value. There is a growing infiltration of the private sector into urban life to provide the capital, talent, know-how, and risk capacity needed for sustained development and growth. However, the private sector is not only involved with this positive agenda. They are free to run their own autonomous systems in neoliberal economies, albeit subject to state oversight. Apple, for example, is one of the largest technology companies in the world, and because it has such a large scale of influence, it can manipulate the global market to its advantage. The company admitted that it has purposefully slowed down iPhones through software upgrades.[189] Although the company claimed that the reason was to prevent unexpected shutdown issues due to deteriorating batteries and denied taking any action to deliberately reduce a product's lifespan, they were fined for failing to provide customers with clear information about the "essential" features of lithium batteries, such as their average life expectancy and how to maintain or eventually replace them in the company's iPhones.[190] Through lack of information, the company has set up a pattern of continuous growth and profits by manipulating customers into buying every new product that comes out. At the end of the day, this translates into a system where the public good is sacrificed in order to finance private interests.

To explore the argument of commodification, the thesis visits Noel Castree's reading of the principal elements of commodification identified in the work of contemporary Marxists' writing about nature. Castree offers a typology of the commodification process: *privatization* refers to the transfer of legal ownership to a specific person, organization, or group in which the owner has almost exclusive rights under the title to dispose of the property as they see fit; *alienability* refers to to the ability of a certain commodity, or certain categories of commodities, to be kept both physically

[189] Alex Hern, "Apple and Samsung Fined for Slowing Down Phones," *The Guardian*, October 24, 2018, https://www.theguardian.com/technology/2018/oct/24/apple-samsung-fined-for-slowing-down-phones, Accessed October 16, 2024.
[190] Ibid.

and ethically apart from its providers and context, making them transferable and tradable; *individuation* refers to the act of physically and figuratively removing a particular object or entity from its supporting context to allow phenomena to be purchased, sold, and utilized by similarly "bounded" persons, groups, or organizations; *abstraction* refers to the process that integrates the qualitative distinctiveness of any unique entity—be it a person, a gene, a seed, or anything else—into the qualitative homogeneity of a more general kind or procedure; *valuation* refers to assigning a monetary value to natural entities or processes, hence making them capable of being bought and sold in the market; and *displacement* refers to concealing the underlying ecological and social processes or effects, such labor exploitation or environmental degradation.[191]

By thinking through Castree's classification, we can explore the modes of commodification in smart cities as follows:

*Data privatization* assigns ownership and control over data to private entities, leading to potential implications of exclusionary practices, loss of autonomy of citizens on their data, transparency, and privacy concerns.

*Infrastructure commodification* treats city infrastructure, such as roads, utilities, public spaces, etc., as commodities, potentially leading to privatization and restricted access.

*System fragmentation* treats urban components, such as transportation, energy, and water, as isolated systems, thus ignoring the holistic nature of urban ecosystems, with the potential implications of inefficiencies, redundancies, and reduced resilience.

[191] Noel Castree, "Commodifying What Nature?" *Progress in Human Geography* 27, no. 3 (2003): 273–297, https://doi.org/10.1191/0309132503ph428oa, 279-283.

*Technological abstraction* implements generic, one-size-fits-all technological solutions to urban problems without taking into consideration the unique social, cultural, and environmental contexts of each city.

*Technological displacement* causes technological solutions to obscure or displace attention from underlying social, economic, and environmental issues, leading to increased inequalities.

*Technocratic governance* leads to reliance on algorithms for decision-making processes that may cause bias, discrimination, and accountability issues.

The problem with commodification does not only stem from the fact that it is an intervention from outside, mostly by the private sector, and is, therefore, a purely technical or managerial issue. Over time, it also transforms society by shaping perceptions, habits, and preferences. In this respect, Sennett revisits Tocqueville's concept of "equality of condition" to make sense of perceptional shift. Through the concept of "equality of condition," Tocqueville aimed to communicate that individuals will eventually desire the same things to which they have extremely uneven access, such as consumer goods, education, and housing standards.[192] While Adorno dubbed equality of circumstance "the massification of consumer taste," Tocqueville extended massification to behavioral norms.[193] In other words, as societies become more equal in aspirations but remain unequal in access, both material desires and social norms could become increasingly homogenized.

## 3.3 The Case of Barcelona: From A Neoliberal Smart City to A Democratic City

Barcelona exemplifies the vital discussion regarding the right to the city within the smart city framework. In recent decades, the city has experienced substantial

[192] Richard Sennett, *Building and Dwelling*, 144.
[193] Ibid.

changes, adopting a tech-focused smart city strategy, evolving with new mayoral leadership, and emerging as a leader in both smart technology and socialist ideals. The city attempts to leverage the affordances of information technology not only for enhanced efficiency and infrastructural investments but also as a means to empower citizens and advance social justice. This understanding has created a political environment that prioritizes social equity, participatory governance, and the re-politicization of the urban fabric. The socialist administration has played a crucial role in steering the smart city agenda towards more democratic objectives. Barcelona's approach defies the traditional notion of a smart city by fostering digital commons, sharing open data, and creating citizen-focused platforms. These initiatives enable active participation in urban planning and decision-making processes.

### 3.3.1 The City

The transformation of Barcelona into a smart and democratic city has been brought about by a complex interaction of historical developments, changes in political orientations, and innovative planning for urban development (Figure 6). All this journey flows from the rich cultural heritage of the city, in response to socio-economic challenges, and as part of a well-pronounced strategy adopting technology with respect to its citizens. The city's expansion in the 19th century was conducted through the implementation of the "Eixample" plan by the engineer Ildefons Cerdà, a grid system planned to enhance living conditions through better ventilation and sunlight access. This plan reflected early commitments to urban planning that prioritized citizens' well-being.[194]

[194] Barcelona's historical development deviated from Cerdà's plan in part because of unanticipated rises in population density, land use percentages, and building occupancy. Still, Cerdà's design of avenues and streets has held up; Montserrat Pallares-Barbera, Anna Badia, and Jordi Duch, "Cerdà and Barcelona: The Need for a New City and Service Provision," *Urbani izziv* 22, no. 2 (2011): 122-136, 123.

Figure 6 Timeline of Barcelona

The late 20th century was a pivotal period for Barcelona. The death of the dictator Francisco Franco in 1975 brought about Spain's transition towards democracy, which allowed Catalonia to regain its autonomy and develop a distinctive political and cultural identity.[195] One of the most notable features of the city's evolution since democracy was restored is that the Partit dels Socialistes de Catalunya (PSC), a social democratic party, has governed it continuously, and the city has pursued a rather cohesive and well-rationalized urban policy.[196] It was in the 1990s that Barcelona initially adopted a rather entrepreneurial model, basically focusing on restructuring and urban development. However, the process leading to this understanding was again led by the socialist party, planners, and architects. Oriol Bohigas, who was appointed as the municipal designer from 1980 to 1984 by Mayor Narcís Serra, directed the transformation of contemporary Barcelona.[197] He rejected comprehensive systematic plans for Barcelona's rebuilding, advocating instead for a democratic approach grounded in the immediate realities of streets, squares, neighborhoods, and parks while emphasizing that meaningful urban renovation and reconstruction must be led by public administrations rather than driven by private capital, which prioritizes new construction over thoughtful renewal.[198] Later, with Pasqual Maragall as mayor and Josep Anton Acebillo continuing to implement Bohigas' vision as the municipal urban designer, the effort to return the city to its people aligned with the development of facilities for the 1992 Summer Olympic Games, intertwining the two projects so closely that preparing for the Games became synonymous with urban renewal.[199] With this project, it can be said that Barcelona gradually started to establish closer ties with the private sector.

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[195] Donald McNeill, Urban Change and the European Left: Tales from the New Barcelona (London: Routledge, 1999).
[196] Donald McNeill, "Barcelona: Urban Identity 1992-2002," *Arizona Journal of Hispanic Cultural Studies* 6 (2002): 245–61, 246.
[197] Edgar Illas, "The Barcelona Model of Urban Transformation," in *Thinking Barcelona: Ideologies of a Global City* (Liverpool: Liverpool University Press, 2012), https://doi.org/10.5949/UPO9781846317873.004, 142.
[198] Ibid, 144.
[199] Ibid, 147.

Under the Clos mayoralty, Barcelona repositioned itself as a knowledge economy in order to enhance its global competitiveness following its success in hosting the 1992 Summer Olympics and fears of an approaching economic downturn.[200] He focused on efficient municipal management and "city-making," with an emphasis on using technology to address citizens' needs, making e-governance a key government priority and a major selling point for large corporations.[201]

The project that best exemplifies this innovative and developmental approach adopted by Barcelona is 22@Barcelona. This project marks the beginning of a new era, distinct from the previous one, characterized by a distinctly neoliberal approach. The policies implemented within the 22@Barcelona project align with these neoliberal principles. The project, which started in 2000 and is still continuing, is a district that is located on two hundred hectares of former industrial land in the southeast of the city.[202] The district, which has suffered decades of poverty as a working-class neighborhood, has been developed as a site for social, economic, and urban innovation by utilizing modern technology and prioritizing knowledge-based activities, mainly information and computer technology (ICT), media, bio-medical, energy, and design.[203] Like London's Docklands, 22@Barcelona carries similar motivations focusing on economic growth with both local and international capital. The fact that the city is so technology-oriented and has invested large amounts of money into this smart plan has raised some questions. It had the risk of moving towards technology for technology's sake.

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[200] Maria Garcia-Ramon and Abel Albet, "Pre-Olympic and Post-Olympic Barcelona, a 'Model' for Urban Regeneration Today?" *Environment and Planning A* 32 (2000): 1331-1334, https://doi.org/10.1068/a3331.
[201] Julie T. Miao and Nick Phelps, *Smart City Report 1: The Evolution of Smart City: Case Studies of Barcelona, Spain and Helsinki, Finland* (2019).
[202] Metropolis, "22@ Barcelona," https://use.metropolis.org/case-studies/22-barcelona, Accessed July 17, 2024.
[203] ECPA Urban Planning, "Case Study 22: Barcelona Innovation District," *Smart Cities Dive*, https://www.smartcitiesdive.com/ex/sustainablecitiescollective/case-study-22-barcelona-innovation-district/27601/, Accessed July 17, 2024.

The Trias administration that came in place after 2011 further boosted the transition to a smart city, concretizing a complex mix of public-private projects and initiatives of digital social innovation that made Barcelona a leading smart city.[204] The City Council expressed its intention to become Spain's first truly smart city after realizing the value of having a thorough and consistent smart city policy.[205] Barcelona set out to enhance both its residents' quality of life and economic prosperity through the application of new technology, international positioning, global collaboration, and innovative local initiatives, many of which were carried out through public-private partnerships.[206] "La Ciutat Digital" (The Digital City), the first digital plan for Barcelona in the year 2001,[207] would become a smart city agenda by the 2010s, where it would increasingly aspire to be a global referent in smart urbanism and digital transformation through the web of partnerships with multinationals like Cisco and Microsoft.[208] Data was gathered as part of people's daily lives and sent to city hall and partners in the corporate sector, where it was analyzed to gain insight into how the city could be administered more effectively or to create services and goods that could be sold.[209] From transportation to irrigation, smart technologies have made Barcelona a leading example of smart cities.

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[204] Gareth Charnock, Hug March, and Ramon Ribera-Fumaz, "From Smart to Rebel City? Worlding, Provincialising and the Barcelona Model," *Urban Studies* 58, no. 3 (2019): 581–600, https://doi.org/10.1177/0042098019872119.
[205] Miao & Phelps, *Smart City Report 1,* 14.
[206] Ibid, 16.
[207] Gareth Charnock and Ramon Ribera-Fumaz, "A New Space for Knowledge and People? Henri Lefebvre, Representations of Space, and the Production of 22@Barcelona," *Environment and Planning D: Society and Space* 29, no. 4 (2011): 613–632, https://doi.org/10.1068/d17009.
[208] Matthew Thompson, "What's so New About New Municipalism?" *Progress in Human Geography* 45, no. 2 (2020): 317–342, https://doi.org/10.1177/030913252090948.
[209] Thomas Graham, "Barcelona is leading the fightback against smart city surveillance," *Wired*, May 18, 2018, https://www.wired.com/story/barcelona-decidim-ada-colau-francesca-bria-decode/, Accessed July 16, 2024.

### 3.3.2 From Socialism to Smart Policies: A Dual Transformation

During the last decade, a wave of citizen protests all over the world—characterized by demands for new democratic models, strategic use of social media, and occupation of public spaces—such as the 15M movement in Spain, the Arab Spring, the Gezi Protests in Türkiye, #YoSoy132 in Mexico, Occupy Central in Hong Kong, Occupy Wall Street, etc. has challenged and influenced public policy.[210] A key weakness of these movements has always been their limited access to institutions and influence over public policy; however, the 2015 Barcelona City Council election marked a breakthrough, as Barcelona en Comú (BeC)—a coalition of minor parties, collectives, and unaffiliated activists from the 15M movement—successfully "occupied" public institutions by winning the election.[211] What makes this movement different is that it puts citizens and their problems and aspirations at the center of the process, ensuring their active participation, listening to their suggestions, and calling for a democratic innovation policy.[212]

When Ada Colau—who co-founded the anti-eviction organization Platform for People affected by Mortgages and an active participant in the indignados, or 15M movement—became the mayor in 2015, she inherited one of the top smart cities in the world. As an activist, Colau had been protesting and campaigning against poor housing conditions, war, gentrification, and global warming.[213] She has declared her intention to "feminize" politics by steering clear of old-left rhetoric and patriarchal practices and consistently revisited the key topics of justice, inclusion, participation,

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[210] Aragón et al., "Computational Social Networks," *Computational Social Networks* 4, no. 8 (2017): DOI: 10.1186/s40649-017-0044-4, 1.
[211] Ibid.
[212] Cristina Flesher Fominaya, "Beyond the Square: The Legacy of the 15-M Movement," *Green European Journal*, December 20, 2022, https://www.greeneuropeanjournal.eu/beyond-the-square-the-legacy-of-the-15m-movement/, Accessed October 21, 2024.
[213] Dan Hancox, "Is this the world's most radical mayor?" *The Guardian*, May 26, 2016, https://www.theguardian.com/world/2016/may/26/ada-colau-barcelona-most-radical-mayor-in-the-world, Accessed July 18, 2024.

democracy, and human rights.[214] Colau argued that the fundamental cause of Spain's and Barcelona's economic woes is political and rooted in a deeper democratic problem.[215] Therefore, when the left-wing candidate and former activist became mayor in 2015, the focus and perspective of the municipality began to transform. With her lead, the municipality started to undertake civic-minded actions to make Barcelona:

*A diverse and feminist city*; with the initiatives of the Councillor's Office for Feminism and LGBTI, Barcelona Cuida project for care workers and caregivers, the Concilia programme which is a child-minding service to enhance work-life balance, employment programmes for women from Barcelona Activa,

*A cultural and science capital*; with Science Plan, Cultural Rights Plan, Ciutadella of Knowledge, and initiatives like "In Residence," the Neighbourhood Plan, or the EscoLab program, which encourages children, especially females, to pursue careers in science, to ensure that culture and science reach all neighborhoods and those who need them most,

*Right to housing*; by collaborating with social entities, resident groups, and industry specialists for the promotion of new public rental apartments, mobilizing vacant housing, and supporting housing cooperatives, while the Barcelona Anti-eviction Unit provides assistance for people facing eviction,

*A walkable city*; with the project Barcelona Superblock, the city restricts vehicular traffic to some of the major roads to encourage public transportation and cycling,

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[214] Ibid.
[215] Amy Goodman, interview with Ada Colau, "From Occupying Banks to City Hall: Meet Barcelona's New Mayor Ada Colau," *Democracy Now!*, June 5, 2015, https://www.democracynow.org/2015/6/5/from_occupying_banks_to_city_hall, Accessed October 21, 2024.

reduce pollution, provide more walkable areas for citizens as "citizen spaces" and more urban greenery,[216]

*A democratic city*;[217] encouraging citizens to participate directly in the matters of the city with the digital participatory platform Decidim (discussed in detail in Chapter 4.3.3).

Although Colau's government considered the excessive involvement of private companies in the city a major problem and rejected the smart city idea initially, they ended up embracing it because of its significance for innovation and the economy.[218]

### 3.3.3 Barcelona Democratic City vs. Barcelona Smart City

After being a leading smart city under a right-wing government, Barcelona has also transformed its understanding of the smart city in line with this new perspective. The Deputy Mayor of Barcelona explained this transformation as follows: "In a democratic city, technology should serve to digitally empower citizens, to protect their privacy from abuses by the public and private powers, to fight against corruption and to advance towards a more equitable and sustainable economy. That has a name: conquering technological, digital sovereignty, for the common good."[219] For their part, the municipal council makes a distinction between data sovereignty as protecting citizens' privacy, technological sovereignty as ending reliance on private programs and fostering public leadership, and transparency as citizen's audit.[220] They put great emphasis on the rights of the citizen regarding their data. In an effort

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[216] Ada Colau, "Ada Colau: Mayor of Barcelona," *Ada Colau Barcelona*, https://adacolau.barcelona/en, Accessed July 18, 2024.
[217] Barcelona has been recognized as the European Capital of Democracy in 2023-2024 and the European Capital of Inclusion and Diversity in 2022.
[218] Interview with the director from the Ecology System Research Center in 2019, published in Miao & Phelps, *Smart City Report 1*, 18.
[219] Gemma Galdon, "Technological Sovereignty: Democracy, Data, and Governance in the Digital Era," *CCCBLAB*, April 25, 2017, https://lab.cccb.org/en/technological-sovereignty-democracy-data-and-governance-in-the-digital-era/. Accessed July 20, 2024.
[220] Ibid.

to combine a "digital revolution with democratic revolution," a new series of experiments with open data, control over personal data, civic applications, and crowd-sourced sensors are utilized for the transition.[221] Francesca Bria, who became the first CTO of Barcelona, focused her discourse on battling against corruption, integrating public intelligence, and ensuring that governments are not black boxes ignoring the needs of the people but incorporating them effectively with a bottom-up strategy.[222] In other words, Barcelona has worked to "re-politicize" the smart city and transfer ownership and management from the government and business sector to local people, civic movements, and social innovation.[223]

This civic movement, led by Colau, was not manifested in Barcelona in a holistic way. While the smart city initiatives (e.g. 22@) started under the previous administration continue apace, the Barcelona City Council (BCC), in line with the vision of the city's new chief architect Vicente Guallart, has stated that the city aims to be a "laboratory and leader"[224] in this field. In line with this goal, BCC has gathered the departments of planning and infrastructure, housing, environment, and ICT under the roof of Habitat Urbà, indicating that it wants to shape the city as a smart city prototype in a holistic way. Guallart develops his understanding of urban phenomena through information technology and explains it as follows: "network created by data-store and computing nodes, connections that pass information, an environment where [nodes and connections] are developed and protocols governing them."[225] He makes analogies between the architecture of the digital and the

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[221] Paolo Cardullo and Rob Kitchin, "Smart Urbanism and Smart Citizenship: The Neoliberal Logic of 'Citizen-Focused' Smart Cities in Europe," *Environment and Planning C: Politics and Space* 37, no. 5 (2019): 813–30, https://doi.org/10.1177/0263774X18806508, 826.
[222] Francesca Bria, DECODE presents: Data commons and the city [Online Video Clip] as cited in Tooran Alizadeh, Eshita Dutia, and Rebecca Clements, "Smart Barcelona: The Gap between Inspiring Rhetoric and Lackluster Implementation in Transformative Approaches," Planning Practice & Research 39, no. 5 (2024): 839–54, https://doi.org/10.1080/02697459.2024.2369977, 5.
[223] Ibid.
[224] Barcelona City Council, 2012 as cited in March & Ribera-Fumaz, "Smart Contradictions: The Politics of Making Barcelona a Self-sufficient City," 818.
[225] Guallart, 2012 as cited in March & Ribera-Fumaz, "Smart Contradictions: The Politics of Making Barcelona a Self-sufficient City," 819.

architecture of the physical. Code, or software, sensors, and protocols play a crucial part in this architecture, as they do on the Internet, in reprogramming urban life according to a paradigm of networked habitats and integrated and distributed management of the urban flows.[226] Concrete steps have been taken to realize this vision. The Media-ICT building, built in 22@ and designed as a hub for Barcelona's communication technology, audiovisual, and media sector companies, can be considered a building-scale prototype of this new vision with its smart sensors, solar panels and all the other technologies it has adapted for sustainability, green architecture, and smart building.[227] Similarly, the district heating and cooling system, also implemented in 22@, brings a more efficient and sustainable system on a network scale in terms of energy use and CO2 emissions.[228]

Colau's vision of a civic-minded democratic Barcelona on the one hand and Gaullart's vision of a techno-solutionist smart city on the other, although emphasizing similar social concerns, are not fully aligned. It is in this context that we can examine the manifestation of the contradictory relationship between economic development and social justice at the urban scale. The tension between Barcelona democratic city and Barcelona smart city is reflected in the political discourse, motivation, target audience, and investment projects of these two visions. First of all, in contrast to Colau's discourse of re-politicizing the smart city, there is a depoliticized and decontextualized smart city approach on the other side. Although BCC envisions distributed management of socio-environmental flows at various scales with citizen participation, its real strategy is to sign contracts with major utility companies, opening undeveloped urban areas to capital and consequently not challenging the hierarchical structures that currently exist.[229]

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[226] Ibid.
[227] Ibid, 820-21.
[228] Ibid.
[229] Ibid, 824.

As in many other cities around the world, Barcelona continues to attract creative talent and innovative initiatives in order to stay ahead in the global development competition. This vision of development that keeps up with the current trends exists for Barcelona as one of two different agendas, running in parallel and each consistent within itself. Although it is assumed that the output of each will have a positive value (justice, right to the city, inclusiveness for one, sustainability, economic development, etc. for the other), the output of the latter undermines the former.

Although these two agendas represent different aspects of the smart city, they also overlap with Smart Barcelona's distinction between discourse and implementation. According to the research conducted by Alizadeh et.al., the gap between the strong discourse that rebranded Barcelona as a democratic smart city and the implementation is created by big tech reliance, even if they have openly opposed investing more money in digital firms, BCC signed the "Barcelona Declaration for Digital Social Inclusion" with a coalition of major telecom companies, including the Lenovo, Vodafone Foundation, Orange Foundation, and Cisco; governance level discrepancies and limitations where political level and executive level are not aligned; technological sovereignty that Barcelona Digital City Plan's public participation was inadequate since it only made an effort to include suggestions from the larger Municipal Action Plan 2016–2019 that dealt with digital and IT, and even then, these were vague, aspirational aims.[230]

Barcelona is a good example to illustrate the difficulty in the transition from idea, discourse, and even policy to practice in the pursuit of urban rights and justice in the context of smart cities. In this thesis, it is already stated that the problem to be overcome in designing the cities of the future does not stem from technical inadequacies but from the disconnection from the notions of the right to the city and justice and that the relationship between them needs to be reconceptualized. The new

[230] Alizadeh, Dutia, and Clements, "Smart Barcelona: The Gap between Inspiring Rhetoric and Lackluster Implementation in Transformative Approaches," 8-11.

threshold at this point arises from the duality of discourse-action and policy-implementation. The case of Barcelona shows that the right policies of the municipality could not be fully realized due to the city's inability to break away from the ongoing neoliberal understanding of the city. Therefore, in order to realize the right to the city, the reproduction of the technology strategy plan with the discourse of democracy and justice alone is not enough to create a holistic approach. This brings us to the next step in the tripartite approach, namely urban governance.

The arguments in this chapter establish the theoretical and conceptual foundation for subsequent discussions. When viewed in relation to the thesis, the concepts of social, spatial, and environmental justice—expansions of the right to the city—highlight the pivotal role of urban justice. The inter-scalar and multi-dimensional nature of this transformed world order leads to a more pronounced experience of environmental (in)justice. As Barcelona example illustrated, technological developments cannot be disentangled from the power dynamics embedded in urban governance systems, political progression, and market dynamics. Although Barcelona's efforts in digital transformation illustrate the potential of using digital technology for a more equitable and participatory city, its evolution into a smart city reveals a conflict between Mayor Colau's civic-centered vision and the techno-solutionist strategy of the former administration. Although democratic values were promoted, implementation faced obstacles such as dependence on major technology firms, governance mismatches, and limited engagement from the public, revealing a gap between policy intentions and real-world outcomes. Thus, it cannot be claimed that technology solely addresses market demands, jeopardizing justice and the right to the city; neither can it be asserted that efforts towards participatory and inclusive technology use will ensure these outcomes. This situation highlights the imperative to harmonize urban governance with justice and city rights, stressing that genuine transformation necessitates fundamental changes that go beyond mere technological advancements and rebranding efforts. This leads us to the chapter that examines depoliticization via governance mechanisms, often obscured by a facade of technological optimism, which must confront these structural forces by acknowledging them. The thesis

interprets the concept of the right to the city by analyzing the duality between the public and private sectors, recognizing that technocratic discourses and practices frequently mirror market forces.

# CHAPTER 4

## SITUATING TECH WITHIN DARK MATTER

Building on the concepts elaborated in the previous chapters, a critical challenge facing citizens' right to the city is that technocratic discourses and policies often hinder actions like questioning, challenging, and proposing changes. In this part of the thesis, the mechanisms of depoliticization and their associated potentials are explored by focusing on two interconnected categories: urban governance and spatial configurations. This chapter examines the mechanisms of urban governance—specifically the power structures, financial systems, and institutional dynamics—that serve as the primary channel for the technocratic and depoliticized discourses and practices that are a significant threat to social, spatial, and environmental justice and the right to the city in smart cities. In this chapter, it is argued that the depoliticization of urban governance, frequently hidden behind a facade of technological optimism, must be confronted by acknowledging and tackling with these structural forces. Recognizing that technocratic discourses and practices often emerge as a reflection of market forces, the thesis, therefore, reads the concept of the right to the city and justice through the duality of the public and private sectors. However, it treats this dichotomy not as a separate or opposing positioning but as a spectrum of relations. It examines the relationship between the public and the private sector, the role of the public sector, the level of inclusion, and the relation between an equitable and inclusive urban life. Therefore the chapter initially explores how the improved digital technology leads to the questioning of the understanding of governmentality and its practices and how different dimensions of smart technologies—producers, users, ethics, and market—play a pivotal role in shaping the trajectory of urban futures. Then, it endeavors to unpack how technological change interacts with economic and political configurations and whether such interactions enable or hinder the realization of just and inclusive cities. The chapter is structured to address

important questions of who holds power over the urban agenda during the era of technological prevalence, in what ways the profit-driven logic of the private sector affect urban development and governance, what role could or should the public sector steer towards changing these developments into equitable directions, can alternative frames, such as degrowth, provide paths towards repoliticizing urban governance and countering the depoliticized logic of the smart city?

## 4.1 Reorienting the Urban Agenda

The shifts cities are experiencing today do not solely stem from the nature of digital technologies, virtual experiences, and online platforms, but all the complex dynamics of what makes a city have a role to play in it: deliberate steps taken by city officials to adopt their cities to the changing world and to be able to compete in national and global levels, to be able to reduce transportation and communication costs, to attract investors and talents, etc. The governance of smart cities is reconceptualized by the logic of smartness emerging from governance dynamics, posing the challenge of establishing legitimate rules for city perceptions, information access, and decision-making knowledge.[231]

The issue of governmentality has proven very influential in explaining the history and development of cities, reflecting how power, knowledge, and governability mechanisms interact within urban spaces. According to Foucault, government refers to more than just political systems or state administration, translating to potential means of directing the behavior of individuals or organizations while encompassing not just the legally recognized forms of political or economic subordination but also more or less deliberate and determined ways of behavior intended to influence other people's potential for action.[232] He defined the dimensions of governmentality as: an

[231] Albert Meijer, "Datapolis: A Public Governance Perspective on 'Smart Cities'," *Perspectives on Public Management and Governance* 1, no. 3 (2018): 195–206, 197.
[232] Michel Foucault, "The Subject and Power," *Critical Inquiry* 8, no. 4 (1982): 790.

ensemble formed by institutions, practices, evaluations, and calculations, and by strategies and tactics that enable the practice of this particular, though highly complex kind of power that takes the public as its target, political economy as its fundamental source of knowledge, and security apparatuses as its primary technical tool; a long-term trend has been underway toward that form of power which can be called "government," in a trend that gradually subordinates or even absorbs other forms of power, such as sovereignty and discipline, with many kinds of specialized governmental apparatuses and a vast body of knowledge; and the processes by which the legal system of the Middle Ages evolved into an administrative state throughout the fifteenth and sixteenth centuries, progressively becoming "governmentalized."[233]

Governmentality has never continued on a single trajectory for cities and countries. Global factors, wars, pandemics, economic crises, etc., changing governments, and technological developments have also affected the forms and strategies of governance. With the smart city becoming a mandatory trend, the movement of governance across layers and scales has been facilitated. Governance has transformed to take many forms: smart governance, sustainable governance, technocratic governance, collaborative governance, etc. With the new tools at hand, cities are now able to multiply and enrich their governance mechanisms. Smart energy grids, smart irrigation, smart lighting, smart sensors, car and bike-share applications, public transit applications, and many other tools are currently indispensable for urban governance. Real-time data have created a paradigm shift, in a way, in the ethos, purpose, and methods of governmentality. Data, through software systems, not only informs but constantly manipulates the subject, whether it is a person, a state agency, or a corporation. In other words, governmentality has moved beyond subjectification—training of individuals and restriction of their

[233] Michel Foucault, "Governmentality," 219-20, as cited in Nuno Rodrigues, "Algorithmic Governmentality, Smart Cities and Spatial Justice," *Justice Spatiale | Spatial Justice*, no. 10 (2016), Liberty, Equality, IT, 5.

behavior—to controlling their emotions, needs, and views and stimulation to behave within a specific range.[234]

City dashboard, for instance, uses visual analytics to display information about the variety of data of the city: public administration, statistical, operational, scientific, crowdsourced, geo-referenced data, etc.[235] Although the quality of the data collected, its privacy, the groups or regions from which it is collected, and how impartially it is analyzed require a separate evaluation, this system provides insight into the city from a broader perspective. For instance, Dublin Dashboard offers a wide array of data and interactive data visualization to the public, planners, policymakers, and businesses which includes location-based services, interactive maps, indicator trends, inter- and intra-urban benchmarking, and real-time information.[236] Collecting such a large amount of data on a city at a single point and having the ability to control it brings a different understanding of power. Systems differ in the extent to which they resort to automated management and how they try to affect governmentality; it is quite possible to say that these are through the techniques of capture and control or surveillance and discipline, the use of transparent or "black-box" systems, and strategies of coercion, co-optation, self-disciplining, punishing, modulation, intervention, mediation, coordination, direction, and optimization, as Kitchin et.al. categorizes it.[237]

Urban informatics transforms governmentality from disciplinary forms to forms of social control by way of technology as part of the city's infrastructure and services.[238] According to Deleuze, in societies of control, numerical control speaks the language of codes that grant access to information or deny access. We are no longer working with the pair mass/individual; people are now "individuals," as well as "masses",

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[234] Rob Kitchin, Claudio Coletta, and Gavin McArdle, "Urban Informatics, Governmentality, and the Logics of Urban Control," 2017, https://doi.org/10.31235/osf.io/27hz8, 3.
[235] Ibid, 6.
[236] Ibid, 11.
[237] Ibid, 16.
[238] Ibid.

"samples", "data", "markets", or "banks."[239] Rouvroy reflects on this epistemic position as people being "objects of observation, classification and forward-looking evaluation", and technology to "translate or transcribe the physical world, its inhabitants, their trajectories, behaviors, actions, choices, preferences, attitudes."[240] Individuals and the masses, i.e., the data, are the fuel of this new governmentality mechanism. Gabrys, on the other hand, proposes a different perspective by referring to Foucault's environmentality, which does not relate to environmentalism but the idea of governance through the milieu,[241] and discusses how mechanisms of subjectification and distributions of material-political power which may have changed when the environmental technologies operate as spatial technologies of government.[242]

This "algorithmic governance" understanding reveals that urban governance is highly correlated with the governance of urban perception.[243] According to Kitchin, data represent an epistemology, a perspective on the world, or more accurately, the recognized method of learning about it.[244] Therefore, this understanding entails seeing the city through data and acting within the scope of the information provided by the data. Quantitative and evidence-based rationale constitutes the decision-making mechanism. On the other side, there is the perspective of discourses, culture, history, established habits, power structures, etc., dominated by social dynamics. As discussed in Chapter 2.2.3, there are various challenges with an approach based on

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[239] Gilles Deleuze, Postscript on the Societies of Control (Pouparlets: Columbia University Press, 1990), 5.
[240] Antoinette Rouvroy, "Governmentality in an Age of Autonomic Computing: Technology, Virtuality and Utopia," in *Law, Human Agency and Autonomic Computing*, ed. Mireille Hildebrandt and Antoinette Rouvroy (Abingdon: Routledge, 2011), 4.
[241] Michel Foucault, *The Birth of Biopolitics: Lectures at the Collège de France*, 1978-79, ed. Michel Senellart, trans. Graham Burchell (Basingstoke, England: Palgrave Macmillan, 2008), 261.
[242] Jennifer Gabrys, "Programming Environments: Environmentality and Citizen Sensing in the Smart City," *Environment and Planning D: Society and Space* 32, no. 1 (2014): 30-48, https://doi.org/10.1068/d16812, 6.
[243] Meijer, "Datapolis: A Public Governance Perspective on 'Smart Cities'," 199.
[244] Rob Kitchin, The Data Revolution: Big Data, Open Data, Data Infrastructures and Their Consequences (Los Angeles, CA: SAGE Publications, 2014).

the supremacy of data, such as bias, fairness, transparency, and privacy of data. For a pluriform democracy, the governance challenge is to balance various perspectives on urban issues rather than relying just on quantitative data to achieve consistent urban administration.[245] However, when the problem is considered independently of the smart city context, i.e., abstracted from the mode of the tools used to collect and process this data, one can read that the fundamental concern about data remains. In other words, the active role of technology in governance is not the sole factor at play. Instead, this emphasizes the widespread assumption that any bureaucratic and technical process materializes categories such as race, gender, social status, and geographic location.[246] These systems often reflect existing societal biases, power structures, and inequalities—rather than originating them—and, once implemented, they have the potential to reinforce and amplify these disparities.[247]

The thesis claims that a depoliticized, technocratic understanding of governance that accepts the supremacy of data and algorithms and is abstracted from its social context is one of the biggest challenges to achieving equitable smart cities. The perception of ease and efficiency brought by data and algorithms has also turned into a discursive tool in the approach to governance. This approach, which is presented as objective, is actually the product of a deliberate depoliticization policy, and depoliticized discourses contain a different ideological understanding behind them. For instance, depending on who holds ownership and control over these data and technologies, different governance dynamics may emerge: if market forces dominate, a neoliberal framework could take shape; if the state has greater control, regulatory mechanisms may become more pronounced; and if citizens play a central role, a more collaborative and socially driven governance model might prevail. The thesis argues that in order to achieve just smart cities, a deliberate re-politicization

[245] Meijer, "Datapolis: A Public Governance Perspective on 'Smart Cities'," 199.
[246] Christian Katzenbach and Lena Ulbricht, "Algorithmic Governance," *Internet Policy Review: Journal on Internet Regulation* 8, no. 4 (2019), 7.
[247] Ibid.

agenda should be adopted. The state's trajectory of observing, gathering data, informing, optimizing, controlling, and intervening are to be explored to varying degrees. It means that the state can redefine its role by taking more control or transferring it to individuals or the private sector. Thus, it could take on the position of facilitator, associator, trendsetter, or entrepreneur.

## 4.2 The Role of the Private Sector

The need for capital and talent that has emerged with the growing prevalence of the smart city concept has led states to open more and more space for the private sector within the framework of the public order, both due to the capacity of the treasury and the speed and flexibility of bureaucratic functioning. In the scenario where the state acts as a facilitator and an interface, the city has the potential to be shaped largely by the dynamics of the free market. However, this scenario should not be interpreted as the state retreating and taking a back seat, but rather as a conscious choice and a way to direct the power dynamics. On the other hand, as the smart city approach has become more widespread, private services or experiences have started to infiltrate everyday life more and more. In this new paradigm, unlike its predecessors, a person has a constant relationship based on mutual benefit (data, service, financial return, etc.) with a private entity through the services they use every day. Given the sensitivity of this relationship in terms of the rights of the individual, it needs to be subject to certain regulations.

### 4.2.1 Capital and Its Repercussions

There is a widespread acknowledgment of the dominance of neoliberal urban spaces, a gradual transition from managerial to entrepreneurial forms of urban administration in most Western cities, and a growing influence of large businesses

and/or corporations on the development of cities.[248] Entrepreneurial modes of activity have gradually replaced the managerial method so prevalent in the 1960s during the 1970s and 1980s.[249] The cornerstone of this neoliberal ideology is the belief that open, competitive, and uncontrolled markets, free from any governmental intervention, provide the most effective means for economic progress.[250] Confronted with diminishing profitability in conventional mass-production sectors and the challenges posed by Keynesian welfare policies, national and local governments in the established industrialized world commenced the disassembly of fundamental institutional elements of the postwar settlement and initiated various policies aimed at enhancing market discipline, competition, and commodification across all societal sectors.[251]

With a business-led urban development mindset, the private sector plays an important role in building smart cities through innovation, investment, service provision, and job creation. As the privatization increases, the government would no longer be the only provider, rather, private sector suppliers would introduce competition for government service delivery contracts, introducing a market into the provision of public services.[252] Ranging from tech giants to startups, they develop and deploy technologies that underpin smart cities. In the face of increasing and widespread privatization, the position of the public sector and what kind of agenda it creates is crucial to ensure the well-being of citizens, protect their rights, and ensure inclusiveness. However, the research reveals that municipal administrators

[248] Robert G. Hollands, "Will the Real Smart City Please Stand Up? Intelligent, Progressive or Entrepreneurial?" 308.
[249] David Harvey, "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism," *Geografiska Annaler: Series B, Human Geography* 71, no. 1 (1989): 3–17, https://doi.org/10.1080/04353684.1989.11879583, 4.
[250] Neil Brenner and Nik Theodore, "Cities and the Geographies of 'Actually Existing Neoliberalism,'" *Antipode* 34 (2002): 349-379, 350.
[251] Ibid.
[252] Mildred E. Warner, "Privatization and Urban Governance: The Continuing Challenges of Efficiency, Voice and Integration," *Cities* 29, suppl. 2 (2012): S38–S43, https://doi.org/10.1016/j.cities.2012.06.007, S39.

are essentially practical individuals.[253] When city officials are given the choice to select the best service delivery model, pragmatic considerations take precedence over political ones, even though political ideology has influenced national policy (in the UK, the EU, Australia, and New Zealand) and the preferred urban governance model of international funders like the World Bank; in other words, they are generally motivated by the practical concerns such as service quality and cost reduction.[254] Warner claims the reason behind this is that the quality of reforms is tangible and visible to the citizens in the services provided.[255]

In this context, public-private partnerships (PPPs) emerged as a mechanism for the purpose of utilizing private funding to compensate for the lack of public funding.[256] Aiming to get the best out of both sides, Cruz et al. describe its benefits as a net reduction of life cycle costs, using private capital to finance the development and maintenance of public infrastructure, saving up public resources for other uses in the public sector, enabling governments to focus on their core functions, and accessing the best available know-how of private operators.[257] European cities' approach to partnering with the private sector is mainly targeted towards infrastructural enhancements. Barcelona, as mentioned before, has been a pioneer smart city thanks to its collaboration with private companies in various projects. Similarly, Amsterdam benefitted from this collaboration, such as with Philips to develop smart lighting solutions.[258] London has also developed several projects with important private-sector involvement. In the Connected London Programme, the city collaborated with telecom companies such as BT and Virgin Media to provide high-speed broadband

[253] Ibid.
[254] Ibid.
[255] Ibid.
[256] Carlos O. Cruz and Joaquim M. Sarmento, "Reforming Traditional PPP Models to Cope with the Challenges of Smart Cities," *Competition and Regulation in Network Industries* 18, no. 1-2 (2017): 94-114, https://doi.org/10.1177/1783591717734794, 102.
[257] Ibid, 103.
[258] Amsterdam Smart City, "Philips," https://amsterdamsmartcity.com/organisations/philips, Accessed December 18, 2024.

and 5G networks for the city.[259] Vienna's Aspern Smart City Research involves partnerships with Siemens and Wien Energie to develop advanced energy systems and building technologies.[260] By collaborating with companies like Hitachi and Cisco, Copenhagen also aimed to optimize traffic flow through smart traffic management systems.[261] However, Graham and Marvin argue that the addition of privatized regimes that must draw in foreign financial capital to state forms of collectivized infrastructure development is likely to encourage the fragmentation of integrated networks into numerous independently funded and managed infrastructure projects.[262]

On the other hand, there are some quite bold projects in which private companies are provided with great independence in developing a district almost from tabula rasa. These projects mostly emerge outside Europe, generally in East Asian and Middle Eastern cities where available land is more abundant, and governments are keen to attract international investment. Here, the degree of involvement and freedom of the private sector defines the outlook of the city in terms of its environment as well as the rights of the citizens. However, this approach raises controversial questions, especially from the citizen's perspective.

[259] Greater London Authority, "Connected London," *Mayor of London*, https://www.london.gov.uk/programmes-strategies/business-and-economy/mayors-priorities-londons-economy-and-business/connected-london, Accessed December 18, 2024.
[260] Aspern Smart City Research, https://www.ascr.at/en/, Accessed December 18, 2024.
[261] Copenhagen Solutions Lab, *City Data Exchange (CDE): Lessons Learned from a Public-Private Data Collaboration* (Copenhagen: Copenhagen Solutions Lab, 2017).
[262] Stephen Graham and Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (1st ed.; London: Routledge, 2001), https://doi.org/10.4324/9780203452202, 97.

### 4.2.2 The Cases of Quayside Toronto and Masdar City: Corporate Utopias in the Making

The well-known Quayside project in Toronto (Figure 7) has emerged as the embodiment of this urban understanding. In 2017, Sidewalk Labs, Google parent company Alphabet's startup, teamed up with Waterfront Toronto, a non-profit organization supported by the government, to revitalize 12 acres of previously docklands area.[263] The project, which was expected to accommodate tens of thousands of people, aimed to develop advanced climate-positive energy and waste systems, self-driving mobility systems, new construction methods, and architectural and urban design that enhance citizen's quality of life by creating more affordable, safer, sustainable, and welcoming environments. Sidewalk Labs envisioned Quayside as a "city as a platform" centered around an advanced digital infrastructure designed to create and manage a range of digitally-enabled services.[264] The project displayed a decent living environment in terms of architectural and urban design, as well as its rhetoric directed towards sustainability and smartness. However, it failed to be realized mainly owing to possible privacy and inclusion concerns, as well as a reluctance to engage core neighborhood partners in the creation of its data governance system.[265] The project was aimed to be highly networked, closely monitored, and self-regulating in which public wi-fi would be provided, and a variety of sensors would be placed all over the neighborhood to gather information on traffic flow, energy consumption, building usage, etc., to be analyzed and managed by a software platform.[266] Although the developers claimed that personal data should

[263] Jun Wang, "Why Did Sidewalk Labs's Quayside Project Fail? The Practical and Institutional Difficulties of Smart City Practice," paper presented at The Environmental Design Research Association (EDRA) 52 Conference, May 2021, 3.
[264] William Lim, "Quayside Smart Community: Case Study of Sidewalk Lab's 'City as a Platform,'" *IGLUS Case Studies* 1, no. 3 (November 2020), 1.
[265] Townsend & Zambrano-Barragan, *Big Urban Data A Strategic Guide for Cities*, p.9
[266] Laura Bliss, "A Big Master Plan for Google's Growing Smart City," *Bloomberg*, June 25, 2019, https://www.bloomberg.com/news/articles/2019-06-25/toronto-s-alphabet-powered-smart-city-is-growing, Accessed July 30, 2024.

never be sold to outside businesses or shared without permission, only the raw data should be anonymized and stored in a third-party "data trust,"[267] in such a data-driven scenario, citizens could not be satisfied with the possibility of breach of privacy and misuse of the data in question. The project was shut down in May 2020, as they announced, due to "the unprecedented economic uncertainty brought on by the COVID-19 pandemic."[268]

Figure 7 Quayside Toronto Project by Sidewalk Labs. Retrieved from https://www.archdaily.com/920147/sidewalk-labs-unveils-full-quayside-master-plan-for-toronto

COVID-19 is not the sole reason for the project's termination, nor is data sensitivity the only issue it faced. From a technology-governance-space perspective, it is questionable how the technical solutions to problems such as data and privatization will translate into the governance dimension if the project is realized. First of all,

[267] Ibid.
[268] Karrie Jacobs, "Toronto Wants to Kill the Smart City Forever," *MIT Technology Review*, June 29, 2022, https://www.technologyreview.com/2022/06/29/1054005/toronto-kill-the-smart-city/, Accessed July 30, 2024.

Sidewalk Labs' involvement in the project with a large investment[269] creates an unbalanced power dynamic. Although Waterfront Toronto was appointed as the ultimate decision-making authority over the project's approval and alignment with public policies and regulations, the private party would seek to get a return on their investment through real estate sales or technological solutions and services. They may end up selling houses at exorbitant prices, or they may charge for the technological services that were planned to be used in all areas of the project, which could potentially lead to different degrees of access to the amenities, such as basic or premium use. Therefore, the fact that such a powerful organization, whose motivation is primarily to pursue its own interests, is in such a powerful position raises questions, especially about the protection of the rights of vulnerable groups. On the other hand, in order to ensure the sustainability of the technology introduced by Sidewalk Labs, it needs to be developed, managed, and fed with data to train artificial intelligence by the company itself. In other words, in a scenario where the entire system is based on technology, the plan to control possible problems that may arise with rules and regulations is not a realistic solution.

The spatial impacts of the project, contrary to what was promised, paint a problematic future in terms of social and spatial justice. First of all, such a high-profile project, even though affordable housing was planned, would only appeal to the upper-income group due to both increased land value and maintenance costs. In addition, it would not only alienate its potential residents with its high cost of living but would also lead to gentrification in its surroundings, which were previously inhabited by lower-income groups. This situation, which seriously threatens social and spatial justice, would eventually displace existing communities and turn the area

[269] According to Sidewalk Labs' Master Innovation and Development Plan (MIDP), to fund the $3.9 billion Quayside and Villiers Project, together with its partners, they would contribute $900 million in equity, in addition to more than $2 billion that would be reinvested as the project moves forward through its proposed phases; Meagan Simpson, "Waterfront Toronto Raises Concerns as Sidewalk Labs Releases Quayside Master Plan," *BetaKit*, June 24, 2019, https://betakit.com/waterfront-toronto-raises-concerns-as-sidewalk-labs-releases-quayside-master-plan/, Accessed July 30, 2024.

into a high-income neighborhood. It would accelerate the fragmentation and disintegration process of the city by attracting large market forces to the region and transforming the neighborhood perception.

On the other hand, Masdar City (Figure 8) is a proper example to see what the future holds for a similar vision that has already begun to be implemented. The construction of the project, which aims to be the world's first zero-carbon city, started in Abu Dhabi in 2008. Designed by Foster and Partners and developed by Masdar, which is a subsidiary of the Abu Dhabi government's state-owned business Mubadala Investment Company, Abu Dhabi National Oil Company, and the Abu Dhabi National Energy Company PJSC (TAQA).[270] By its creators, it is defined as "a world-class business and technology hub, Masdar City has developed a thriving ecosystem of leading global organizations that are working together to create a greener tomorrow."[271] Although having one of the highest carbon emissions annually per capita, powering air-conditioning, providing water for golf courses and fountains, desalinating ocean water, etc.,[272] the UAE has adopted a vision towards sustainability. As in Masdar City, this vision comes to life through top-down and quite bold initiatives.[273] Masdar City was imagined to rely on renewable energy, become carbon neutral and zero waste, be the first city to operate without fossil-fueled vehicles, attract international businesses in clean tech, and become a hub for the development of energy production.[274] Although only a small portion of the

[270] "Our Shareholders," Masdar, https://masdar.ae/en/our-company/our-shareholders#:~:text=Masdar%20is%20owned%20by%20three,TAQA)%20and%20Mubadala%20Investment%20Company, Accessed July 31, 2024.
[271] "About Masdar," Masdar City, https://masdarcity.ae/about-masdar, Accessed July 31, 2024.
[272] Anthony Flint, "What Abu Dhabi's City of the Future Looks Like Now," *Bloomberg*, February 14, 2020, https://www.bloomberg.com/news/articles/2020-02-14/the-reality-of-abu-dhabi-s-unfinished-utopia, Accessed July 31, 2024.
[273] For example, Noor Abu Dhabi is one of the world's largest stand-alone solar plants and Mohammed bin Rashid Al Maktoum Solar Park is the largest single-site solar park in the world.
[274] Foster+Partners, "Masdar City," https://www.fosterandpartners.com/projects/masdar-city; Bryan Walsh, "Masdar City: The World's Greenest City?" *Time*, January 25, 2011, https://time.com/archive/6934748/masdar-city-the-worlds-greenest-city/, Accessed August 1, 2024.

project is built, and completion is not expected earlier than 2030,[275] it continues to be implemented with the participation of universities, research centers, private companies, and residents.

Figure 8 Masdar City Project by Foster + Partners. Retrieved from https://www.fosterandpartners.com/projects/masdar-city

However, even though it is called Masdar City, the project is far from being that of a real city. As every action that requires electricity is monitored and analyzed to optimize energy use—lights, refrigerators, showers, temperature, etc.—the project is more reminiscent of a laboratory constantly monitored by a "green policeman" than a city, as John Vidal asserts.[276] These and similar projects, which set out with the goal of being sustainable and "green" and are developed with a tabula rasa logic,

[275] Flint, "What Abu Dhabi's City of the Future Looks Like Now."
[276] John Vidal, "Masdar City – A Glimpse of the Future in the Desert," *The Guardian*, April 26, 2011, https://www.theguardian.com/environment/2011/apr/26/masdar-city-desert-future, Accessed August 1, 2024.

have problematic starting points. In the case of Masdar, considering the cost of both construction and maintenance of a city built in the desert and the energy and resources that would be spent to build a new city from the ground up, the sustainability of the project should be questioned. The argument for researching new technologies and establishing research cities to discover a new and more sustainable way of life should be met with the counterargument that it distorts the perception of the city by imposing a sterile, constantly monitored, and controlled understanding of the city where the different values of the city are reduced to numerical data. It would be more meaningful to construct this initiative, which has already turned into an experimental research campus rather than a city, in this way during the planning phase, both in terms of managing the energy, resources, and costs of the project and developing its administrative structure. The reflection of such a city's understanding of the urban space remains an artificial urban simulation, as in the case of Masdar City.

The desire of large corporations and technology giants to directly shape urban space is not limited to the examples above but has almost become a trend (see PlanIT Valley in Portugal, Songdo International Business District in South Korea, NEOM in Saudi Arabia, Forest City in Malaysia, etc.). Behind a depoliticized discourse that emphasizes sustainability and smart city concepts lies a purely political approach. The main motivation behind this approach seems to be the desire to shape the ways of life, the perception of the city, the form of governance and control mechanism, power relations, and the place of the individual in society, all framed within an ideological narrative of "the future." Ström argues that the new capitalism based on digital information technologies tends to turn into a neo-feudalism, namely a techno-feudalism.[277] According to Weyl and Posner, techno-feudalism "stunts personal development, just as feudalism stunted the acquisition of education or investment in

[277] Timothy E. Ström, "Capital and Cybernetics," *New Left Review* 135 (May/June 2022), 23.

improving land."[278] This approach, which is based on technological progress, capital accumulation, and social control, uses urban space as a tool to achieve these goals. Ström goes even further and states that this will lead to fundamental changes in human beings and the natural world, not only on a social-practical level but also on an ontological level.[279]

### 4.3 The Role of the Public Sector

The role of the public sector is central to shaping inclusive and democratic urban governance in consonance with the principles of social justice. Hence, the public sector, against the neoliberal influences that often resulted in the privatization and commodification of urban spaces, assumes the role of an essential counterbalance that can protect the public interest and ensure the right to the city. Unlike a corporation or a tech giant, the main purpose and motivation of the public sector is expected to be ensuring the order and welfare of society. For this reason, the public sector has come to be identified with the role of an entity that maintains order and justice, controls the market system, and works to sustain growth and development.

The possibilities offered by smart technologies are used not only by the private sector but also by states to create a more sterile, more organized, more predictable, and safer urban environment. The affordances of smart technologies can be channeled for the state to ensure social order and control, maintain growth and development, and capital accumulation. Especially in states that have had a problematic relationship with democracy since the past, a depoliticized vision is perceived through a technocratic discourse similar to the examples above. Similarly, a different ideology lies behind this vision. China is one of the most extreme examples of this.

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[278] Eric A. Posner and E. Glen Weyl, *Radical Markets: Uprooting Capitalism and Democracy for a Just Society* (Princeton, NJ: Princeton University Press, 2018), https://doi.org/10.2307/j.ctvc77c4f, 232.
[279] Ibid.

It came up with the Social Credit System (SCS) in 2014, which intended to expand the use of financial credit scoring systems—which are widely employed by US financial institutions—to other government regulatory domains, such as contract enforcement, food safety, environmental protection, and corruption.[280] Described as a way for "construction of sincerity in government affairs, commercial sincerity, social sincerity, and judicial credibility,"[281] it intends to demonstrate a just society with vague concepts like "sincerity" and "credibility." The scoring method applied in the test phase of the system was designed in such a way that driving under the influence of alcohol, having more children than allowed by law, not repaying loans, etc., would lower citizens' scores, while those with fewer points would be denied mortgages, promotions or raises, and the right to travel by public transportation.[282] Profiling and categorizing through cumulative data means taking away people's right to change, to rebuild their future, to recreate the life they want, and permanently depriving them of the public sphere. This ideology is deeply rooted in social engineering based on system science, individual flexibility, and transformability[283] and makes use of technological advancements to build authority.

On the other hand, in more developed and democratic countries, although the control mechanism is active with systems such as CCTV and data collection, we more often see examples where urban innovation systems are integrated by the state for a fairer city. Scenarios in which digital technologies are used to reduce the distance between authorities and citizens and are approached as a means and interface rather than as an end arise from an understanding that the mechanism of depoliticization is less

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[280] Martin Chorzempa, Paul Triolo, and Samm Sacks, "China's Social Credit System: A Mark of Progress or a Threat to Privacy?," *Peterson Institute for International Economics*, June 2018, https://www.piie.com/publications/policy-briefs/chinas-social-credit-system-mark-progress-or-threat-privacy, Accessed August 17, 2024.
[281] Ibid.
[282] Evelyn Cheng, "China Wants to Track and Grade Each Citizen's Actions – It's in the Testing Phase," *CNBC*, July 25, 2019, https://www.cnbc.com/2019/07/26/china-social-credit-system-still-in-testing-phase-amid-trials.html, Accessed August 17, 2024.
[283] Rogier Creemers, "China's Social Credit System: An Evolving Practice of Control," *SSRN Electronic Journal* (2018), https://doi.org/10.2139/ssrn.3175792, 26.

effective. These systems would give more importance to dialogue, collaboration, and transparency to enforce democratic mechanisms within the city. Thus, instead of governing the urban population, it aims to empower them, aligning governance structures more closely with principles of justice and the right to the city. This paradigm highlights the contribution of smart city technologies not only toward efficiency in urban governance but also toward the equitable and democratic transformation of cities.

### 4.3.1 The Entrepreneurial State and Green Policies: Contradiction between the Discourse and Implementation

The state, which is considered to be the provider and protector of rights and justice, taking on a more entrepreneurial role beyond being a facilitator and utilizing the possibilities of information technology brings with it different scenarios of the evolution of the capitalist system. The idea of state entrepreneurship dates back to the 1980s; however, a broader conception of the idea was reformulated by Ebner as "specific institutional modes of coordination between the public and private sectors that shape industrial capabilities for generating and absorbing new technologies."[284] The transition of the state from a facilitator and managerial role to an entrepreneurial role not only creates space and freedom for the private sector but also creates a scenario in which the state itself determines the direction of growth and development. Mariana Mazzucato, a proponent of developmentalism, argues that within the framework of the entrepreneurial state approach, the state should, in a way, lead and direct the development trend previously led by the private sector.[285] She argues that the technological revolutions of the past (from the internet to today's

[284] Alexander Ebner, "Entrepreneurial State: The Schumpeterian Theory of Industrial Policy and the East Asian 'Miracle'," in *Schumpeterian Perspectives on Innovation, Competition and Growth*, ed. Uwe Cantner, Jean-Luc Gaffard, and Lionel Nesta (Berlin: Springer, 2009), 369-390.
[285] Mariana Mazzucato, *Girişimci Devlet: Kamu Sektörü - Özel Sektör Karşıtlığı Masalının Çürütülmesi*, trans. Esin Soğancılar (Istanbul: Koç Üniversitesi Yayınları, 2021).

green technology revolution) have been driven by massive state subsidies and that the state has played a key role in creating and shaping markets, not just repairing them.[286] Given this, it could be argued that this role of the state tends to emphasize economic development and growth, potentially placing issues of social and spatial justice and the right to the city in the background. Although governments throughout the world emphasize that they are worried about how citizens and communities use the new technology, their apparent "bottom line" economic necessity is to draw capital—especially intellectual and informational capital—to their city.[287] Inter-urban competition emerged as a result of it carrying the risk of leading to the one-fits-all repetition of specific patterns of development, such as the reproduction of World Trade Centers, shopping malls, and the like in different cities of the world.[288] As a result, the active role of the state in directing markets may contribute to the acceleration of depoliticization mechanisms. Therefore, the next question is not whether the state is necessary for market growth but rather how to include the state in the most efficient, fruitful, and long-lasting manner.[289] At the municipal level, Harvey illustrated the shift from managerialism to entrepreneurialism, where local governments, driven by the need to attract investment and skilled labor for economic growth, are seen as better suited to embrace this entrepreneurial agenda, thus sparking debate and contemplation about the decentralization of governance.[290]

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[286] Mazzucato illustrates her point by stating the fact that the first ancestor of the internet that made the iPhone functional was the ARPANET program funded by the Defense Advanced Research Projects Agency of the Department of Defense in the 1960s, that touchscreen technology was developed by Finger Works, a company founded by a professor at the University of Delaware, a public university, and one of his PhD students who received fellowships from the National Science Foundation and the CIA, and that SIRI was a byproduct of one of DARPA's artificial intelligence projects; Mariana Mazzucato, *Girişimci Devlet,* 29.
[287] Robert G. Hollands, "Will the Real Smart City Please Stand Up?" 311.
[288] David Harvey, "From Managerialism to Entrepreneurialism: The Transformation in Urban Governance in Late Capitalism," 10.
[289] Julie Tian Miao and Nicholas A. Phelps, "The Intrapreneurial State: Singapore's Emergence in the Smart and Sustainable Urban Solutions Field," *Territory, Politics, Governance* 7, no. 3 (2019): 316–335, https://doi.org/10.1080/21622671.2018.1467787, 319.
[290] Ibid.

Like almost every other developed and developing country today, Türkiye has been under the influence of the smart city movement. As Mazzucato argued, Türkiye is ideally placed for green industrial transformation due to a strong centralized state structure, a rapidly growing economy, and the government's growing interest in high-tech and green investments.[291] Even though its current situation renders a more modest image compared to leading countries, in recent years, important steps have been taken in this regard, aiming to keep up with the smart city trend in the world. The most important motivation for catching this trend is the changing expectations in society. The National Science and Technology Policies 2003–2023 Strategy Document[292] first covered macro policies for smart cities in Türkiye. It has evolved into a significant policy with the tenth development plan. In order to analyze the policies that incorporate business strategies in this area together under the roof of the smart city, it was included in the investment program as an investment area in 2015. The 2020–2023 National Smart Cities Strategy and Action Plan, which outlines a broad national vision, gave it enormous impetus.[293] Since the Local Government Policies Board was created under the Presidency, one of its responsibilities has been to offer strategic recommendations based on research on intelligent urban planning; this topic has also received considerable political leadership under the Presidency's auspices.[294] Additionally, objectives and targets for the development of infrastructure and practices connected to smart cities have been established in policy and strategy papers at the national level, such as the Information Society Strategy

[291] Erol O. Ercan, "Girişimci Devlet'in Teorisini Yazan Mazzucato: Türkiye Yeşil Dönüşüm İçin Çok İyi Konumda," *Bloomberg HT*, November 22, 2021, https://www.bloomberght.com/mazzucato-turkiye-yesil-donusum-icin-cok-iyi-bir-konumda-2292532, Accessed August 28, 2024.
[292] The document In November 2004, the High Council for Science and Technology (BTYK) appointed TÜBİTAK to determine new science and technology policies for the 20-year period leading up to 2023, the 100th anniversary of the Republic. TÜBİTAK, *Ulusal Bilim ve Teknoloji Politikaları: 200-2023 Strateji Belgesi*, (Ankara: TÜBİTAK, 2004), https://tubitak.gov.tr/tubitak_content_files/vizyon2023/Vizyon2023_Strateji_Belgesi.pdf, Accessed December 20, 2024.
[293] Baki Laleoğlu, *Akıllı Şehirler, Değişen Şehir Yönetimi ve Türkiye* (Ankara: SETA, 2021), 10.
[294] Ibid.

and Action Plan and the E-Government Strategy and Action Plan.[295] The Ministry of Environment and Urbanization's decision to assume leadership of the cities was the first action item in the action plan. The "National Smart City Architecture" concept will be developed as a first of its kind as part of the project, and all standards for data collection, processing, and sharing will be decided at the national level. Standards will be created to guarantee that cities have domestic and national technical infrastructures.[296]

The R&D and Design Center system is one of the formations developed by the state for sustainable socio-economic development based on science and technology with an entrepreneurial attitude. Basically, this system serves to direct the private sector in the desired direction through economic incentives. This system, which was created with the expectation that "R&D studies are to be returned to our country as high-tech products that will create added value in our economy and increase our competitiveness in the international market."[297] has examples in other countries and has been shown to have a positive effect on R&D studies.[298] These and similar approaches that prioritize economic development also focus on this criterion in their goals.[299] The fact that these targets and criteria set by the public sector encourage private sector initiatives, whose primary motivation is already profit-making, and do not provide a framework for the social dimension of the issue makes it difficult for these initiatives to have a sustainable, positive impact in the long term. It is quite

[295] Ibid.
[296] Ibid.
[297] Ministry of Industry and Technology, "Tasarımlar," https://agtm.sanayi.gov.tr/Tasarim/TasarimDetay, Accessed August 27, 2024 (translated by the author.)
[298] Güzide Karakuş, "Ar-Ge / Tasarım Merkezi Nedir? Türkiye'de Ar-Ge ve Tasarım Merkezi Kurulum Sürecine İlişkin Bir Araştırma," *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* 23, no. 3 (2021): 1381-1404.
[299] The purpose of the Law on Supporting Research, Development and Design Activities is listed by the Ministry of Industry and Technology as follows: innovation in products and production processes, production of technological knowledge, encouraging increased employment of R&D and design personnel and qualified labor force, accelerating the inflow of foreign direct investments in R&D and design, commercialization of technological know-how, improving product quality and standards.

possible that the system, which can encourage initiatives to produce in order to receive incentives, will create greenwashed and "smart" cities that are solely focused on growth. It is important that the "technology for technology's sake" approach is subjected to a more holistic evaluation process that includes social, environmental, and spatial justice concepts.

### 4.3.2 Municipal Leadership in Shaping Smart Cities

The role of the public sector appears to be crucial, serving as the custodian of public interest and the primary agent responsible for ensuring that technological advancements benefit all citizens equitably. Citizens, as voters, see classical municipal services such as cleaning, infrastructure, and superstructure as tasks that need to be done, and now direct their expectations such as economic and social development, increasing quality in daily life, innovative services, and increasing brand value to city managers.[300] The decentralized power structure of the governance provides space for municipalities to seek city-specific solutions that directly address the unique needs and aspirations of their communities to better establish a dialogue with citizens, facilitating participatory decision-making and collaborative problem-solving, and it enhances responsiveness and adaptability, allowing for more effective management of resources and services. To emphasize and examine the significance of local governance, municipalism emerges as a political philosophy and movement that emphasizes the role of local governments—municipalities—in fostering direct democracy, social justice, and environmental sustainability. Municipalism aims to turn urban spaces into sites of democratic engagement and social innovation, often challenging traditional state structures and capitalist economic models. The municipal state is now being redefined as "the vanguard agent of global governance" after a previous phase characterized by a more passive role of "being under siege by

[300] Laleoğlu, *Akıllı Şehirler, Değişen Şehir Yönetimi ve Türkiye*, 10.

the neoliberal economy."[301] In fact, municipalism is not a one-dimensional movement with linear development. Saunier asserts that the future is unequivocally urban, with municipalities serving as the fundamental building blocks of civilizations rather than nation-states, and he contends that municipal governance is an apolitical, technical endeavor striving for scientific rigor and that municipalities, operating within a common framework of rules and values, are globally comparable.[302]

In areas where alternative economic spaces, DIY urbanisms, transformative social innovation experiments, and diverse economies operating in post-capitalist futures have struggled to find enduring institutional form at a scale large enough to challenge prevailing logic, new municipalism moves to do just that by creating innovative municipal institutions for fostering, bolstering, and safeguarding their growth.[303] As the smart city is increasingly being privatized and commodified, municipalism offers an emerging "political horizon" of the urban that transcends state logic, not in opposition to the state, but as a force to further decentralize the political power. [304] As long as money drives exchanges, municipalities remain bound to the labor-capital relationship; however, new municipalist movements strive to create autonomous value systems by fostering economic activities that bypass traditional commodities, emphasizing social reproduction, commons, and self-provisioning through local cooperatives, assemblies, and platforms, as well as inter-urban solidarity networks, collaborative mapping, and cooperative supply chains.[305]

Municipalities in Türkiye have also been taking the initiative to execute some smart city projects. According to a PhD research focusing on smart city applications in

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[301] John Lauermann, "Municipal Statecraft: Revisiting the Geographies of the Entrepreneurial City," *Progress in Human Geography* 42, no. 2 (2018): 205–224.
[302] Pierre-Yves Saunier, "Taking up the Bet on Connections: A Municipal Contribution," *Contemporary European History* 11, no. 4 (2002): 507–527.
[303] Thompson, "What's so New About New Municipalism?" 325.
[304] Ross Beveridge and Philippe Koch, "Contesting Austerity, De-Centring the State: Anti-Politics and the Political Horizon of the Urban," *Environment and Planning C: Politics and Space*, (2019), https://doi.org/10.1177/2399654419871299, 461.
[305] Thompson, "What's so New About New Municipalism?" 334.

Türkiye, only seven cities—Istanbul, Izmir, Ankara, Antalya, Konya, Karaman, and Kahramanmaraş—are using smart city applications in other fields, even though all Municipalities in Türkiye use e-government tools and provide easy communication and online payment tools for citizens. The others are either uninterested or have only recently begun to implement smart city policies. Also worth noting is the fact that practically all applications for smart cities are built on smart mobility.[306]

Izmir Metropolitan Municipality has been taking important steps toward becoming a smart city and is the leading city in Türkiye in this regard. In terms of the primary principles of the city, Tunç Soyer, the mayor at the time, stated that before the questions of how the technology will be enriched and digital tools are used, three key criteria need to be internalized: first, accepting the richness of diversity, thus, respecting differences; second, realizing that each individual is part of the whole, each and every person is included and treated equally; and third, empathizing with each other.[307] Following these principles has earned İzmir the title of the world's first "cittaslow metropolitan city."[308] Besides the social focus, the city has also been adopting some state-of-the-art technologies. For instance, "Izmir Plan Project" aims to digitize the plans that fall under its scope, ensuring that the plans and plan amendments are coherent and linguistically consistent, reducing reliance on paper documents, displaying data quickly, securely, and methodically, establishing a Plan Management System, automatically updating the data, and establishing the standards for spatial data produced in Izmir Metropolitan Municipality units that will be shared and added to the system.[309] Another project is the "Digital Mobility Platform." In the

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[306] Gülnar Bayramoğlu Barman, *Application of the 'Smart' to the City: A Critical Evaluation: The Case of Turkey* (PhD diss., Middle East Technical University, September 2020), 104.
[307] İzmir Büyükşehir Belediyesi, "Başkan Soyer'den Akıllı Şehirler için Üç Formül," July 6, 2022, https://www.izmir.bel.tr/tr/Haberler/baskan-soyer-den-akilli-sehirler-icin-uc-formul/46939/156, Accessed September 5, 2024.
[308] Cittaslow Türkiye, "Dünyanın İlk Cittaslow Metropol Kenti İzmir," https://cittaslowturkiye.org/tr/dunyanin-ilk-cittaslow-metropol-kenti-izmir/, Accessed September 5, 2024.
[309] *2020-2023 Ulusal Akıllı Şehirler Stratejisi ve Eylem Planı*, İzmir, https://www.akillisehirler.gov.tr/basarili-sehirler-izmir/, Accessed September 5, 2024.

area of mobility, an integrated dataset where the data obtained from the operational systems of the pertinent directorates, subordinates, and subsidiaries of the Izmir Metropolitan Municipality, as well as accurate and immediate information to be obtained through real-time mobile applications, services, and passenger and freight mobility data are regularly collected, monitored and analyzed. By getting the ecosystem ready, it aims to provide a decision-support system for the transportation industry.[310] In addition, the Artificial Intelligence and Smart Cities Directorate, established within the municipality subsidiary Izmir Innovation and Technology Inc. with the local municipality changing on March 31, 2024, aims to integrate artificial intelligence into the functioning of municipal services, starting with transportation processes (expected to offer solutions to issues such as vehicle occupancy rates and traffic density).[311] Compared to the pioneers in this field in the world, these initiatives are still in the development stage, and focus on the technical development side, while the social dimension (data sensitivity, inclusion, digital divide, etc.) is not yet among the important items of the discussion in the agenda.

As mentioned above, the steps toward smart cities in Türkiye are generally taken by governmental bodies that have a top-down approach. We rarely see bottom-up citizen-led approaches in that regard. The most important reason for that can be stated as the rigid bureaucratic structure, lack of flexibility, and gaps in the system to allow citizens to penetrate. Technical challenges have been overcome much better now; however, if not supported by policy innovations, they will fail at achieving meaningful outcomes. Moreover, low levels of citizen awareness on the issue of the right to the city may be another reason. Not just being aware of the tools that are available to them, but realizing that they can claim the right to the city they live in.

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[310] Ibid.

[311] İzmir Büyükşehir Belediyesi, "Yapay Zeka ve Akıllı Şehirler Müdürlüğü Kuruldu," last modified January 23, 2025, https://www.izmir.bel.tr/tr/Haberler/yapay-zeka-ve-akilli-sehirler-mudurlugu-kuruldu/50288/156, Accessed January 20, 2025.

No smart city should include its citizens as mere customers or recipients but as active collaborators.

### 4.3.3 Participatory Governance

The origins of political participation trace back to the Greek concept of democracy, shaped by Greek political philosophy and embodied in the spatial organization of the "polis" and its political hub, the "agora," with Plato's interpretations establishing a unified and administratively controlled system of participation grounded in the principle of "Consensus Gentium."[312] Later on, the modern Athenian Polis expanded Greek democracy through practices of political debate and confrontation, laying the groundwork for participatory democracy—a heterogenous, open system where individuals engage free from dominant representative structures and challenge fixed political arrangements through agonistic participation.[313]

In the current context, the increasing importance of municipalism, together with advanced technology, has paved the way for a more effective participatory governance system. As the understanding of "smartness" is shifting more and more towards "smart people" and "smart governance," participatory governance has become a key aspect for cities that want to become "smart." Participatory governance has expanded worldwide, enabling citizens to engage in public decision-making through state-supported processes like participatory budgeting and citizen councils, giving them a voice and vote in shaping policies that impact their lives.[314] The belief that representational democracy cannot enhance the quality of state performance, empower and educate individuals, and make a respectable use of limited public

[312] Mohammad Nasim Alhanoush Alkhalaf, *Towards an Inclusive Theory of Participation in Architecture and Urbanism* (Master's Thesis, Middle East Technical University, 2023), 24.
[313] Ibid, 25.
[314] Stephanie L. McNulty and Brian Wampler, "Participatory Governance," in *Emerging Trends in the Social and Behavioral Sciences*, ed. R.A. Scott and S.M. Kosslyn (2015), https://doi.org/10.1002/9781118900772.etrds0248, 2.

resources is frequently the basis for the adoption of participatory governance.[315] Participatory governance, however, is an attempt to restructure institutions and enhance democracy, social well-being, and the state; it does not always signify a rejection of representative democracy.[316]

When discussing participatory governance, as noted by Fainstein, one is referring to both process and outcome, namely, "how" and "what."[317] About the process in contemporary literature, the notion of "participation" has been broadened to explore different approaches, methods, levels, and typologies. In fact, the term exudes an ambiguous meaning that changes depending on the era and context. First of all, what we mean by citizen participation varies significantly. The literature of the 18th century implies the importance of direct citizen participation, which acknowledges the uniqueness of each individual and the difference in their needs, demands, interests, and views. Therefore, it was emphasized that each individual should have a voice in the decision-making mechanisms. However, given the size and complexity of the contemporary nation-state, it is no longer a reasonable or viable expectation.[318] As the scale and complexity change, direct citizen engagement develops into a means of representation. To explore this fundamental issue of citizen power, Sherry Arnstein created a "ladder of citizen participation" that went from low to high power.[319]

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[315] Fung and Wright, 2003; Pateman, 1970 as cited in McNulty and Wampler, "Participatory Governance."
[316] McNulty and Wampler, "Participatory Governance."
[317] Susan S. Fainstein, "The Just City," *International Journal of Urban Sciences* 18, no. 1 (2014): 1-18, https://doi.org/10.1080/12265934.2013.834643.
[318] Robert A. Dahl, *Democracy and Its Critics* (New Haven, London: Yale University Press, 1989), https://doi.org/10.1604/9780300049381.
[319] Sherry Arnstein, "The Ladder of Participation," *Journal of the American Institute of Planners* 35, no. 4 (July 1969): 216–24, https://doi.org/10.1080/01944366908977225.

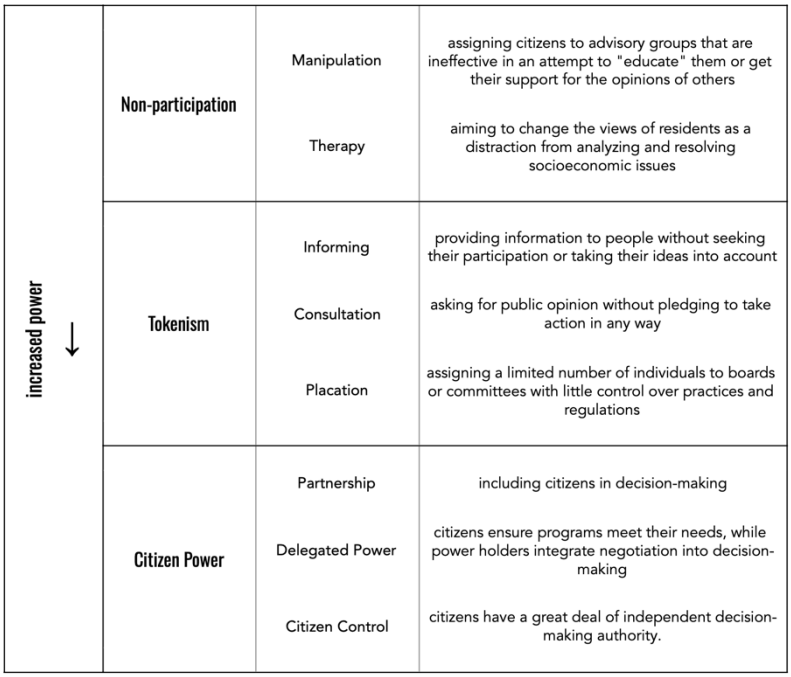


Figure 9 Arnstein's Ladder of Participation (1969), Modified from Arnstein.

Arnstein proposes that the goal at the "Non-participation" level is not to empower people in positions of authority to instruct or manipulate the participants but rather to enable citizens to engage in the decision-making process. The citizens seem to participate in the process, which Arnstein defines as one of information, consultation, and placation at the "Tokenism" level. The participation of the public and the feedback obtained from them, however, have had no significant impact on the outcome. At the "Citizen Power" level, however, citizens gain significant decision-making authority through collaboration, delegation of authority, and citizen control. Similarly, Jules Pretty created a seven-level categorization in 1995 that progresses

from “the bad form: manipulate participation” to “the better form: participation by consultation” and “the best form: self-mobilization.”[320]

As for the outcome, the aim is to achieve a just city where each individual’s rights are looked after, each individual has access to the amenities the city provides, and each individual can speak their mind in the decision-making process. However, there are two lines of thought to be considered. First of all, the process and the outcome do not always align to achieve a just city in the end. As Healey asserts, “An inclusionary collaborative process does not necessarily guarantee the justice of either process or material outcomes.”[321] A planning process carried out in a participatory manner may result in an inequitable outcome where one minority group prevails over the majority due to conflicting demands or priorities of the participants. However, making a decision in favor of the majority's preference also raises the claim that the outcome is fair. This prompts an inquiry into the complexities surrounding equality and justice, as well as our comprehension of democratic planning. In an environment where the tyranny of the majority is in question, justice cannot go beyond a claim based on the deficit of the system.

There are various cases from all around the world exemplifying a reconfigured relationship between the city and the citizen, aiming for their active participation. However, these platforms, although being marketed as empowering citizens, do not usually provide a means for the public to express their needs for demanding difficult and important political reforms, such as better schools, better bus service, or less invasive police activity.[322] For instance, the “Başkent Mobil” app, a smartphone app provided by the Metropolitan Municipality of Ankara that contains a variety of information about the city, has a section called “Söz Hakkı” (Right to Speak) that aims to gather opinions from Ankara residents on various topics. One instance is

[320] Kamacı, “A Novel Discussion on Urban Planning Practice: Citizen Participation,” 6.
[321] Patsy Healey, "Planning through Debate: The Communicative Turn in Planning Theory," *Town Planning Review* 62, no. 2 (1992): 143–162, https://doi.org/10.3828/tpr.63.2.422x602303814821.
[322] Green, *The Smart Enough City*, 48.

allowing residents to select a different program to be built on a vacant piece of land in a city. Citizens have the option of choosing one of the alternatives listed in the questionnaire or suggesting an alternative. A different instance is to ask them what they think of the new buses' color and design. These modest initiatives do not, however, have a major influence on how the city functions or allow for systemic change. Engaging citizens under the title of "participatory governance" by using the possibilities of digital technology on issues that do not have a significant meaning for democracy risks becoming a pseudo-democracy. In other words, as in the case of Başkent Mobil, choosing among a number of pre-decided options for a pre-decided issue is a practice that puts the citizens in a passive position and hinders them from claiming the right to the city. In addition to that, Ben Green argues that despite removing barriers to reaching people, transactional approaches still fail to motivate individuals to take further action. Even though a survey could have a large number of responses, some respondents might not want to or be able to participate more actively in society.[323] To put it another way, exerting as little effort as pressing a button does not result in long-lasting motivation or a strong feeling of community. Smart people are one of the essential components of a smart city, and comprehending smart people calls for an engaged civic mindset; thus, instead of "transactional" interactions, "transformational" engagements are requested.[324] De Lange states that if we are to achieve substantial change in the way urban challenges are addressed, we must reconsider how technology fits into the social structure.[325] Currently, in his opinion, it is being used as "plugins" for "the continuation of normalcy and sameness," which instead should be fundamentally political and move individuals, allowing them to then move others rather than blending in with daily life.[326] De Lange and de Waal note that in order to achieve what they refer to as the "social

[323] Ibid, 44.
[324] Ibid.
[325] Michiel Lange, "The Smart City You Love to Hate: Exploring the Role of Affect in Hybrid Urbanism," in *The Hybrid City II: Subtle rEvolutions Proceedings* (2013), 77–84.
[326] Ibid.

city," it is essential to redefine who owns the city as having a "sense of responsibility for shared issues and [...] taking action on these matters" rather than the exclusive ownership that comes with top-down governance.[327]

Although Arnstein's ladder is a milestone in understanding the degree of citizen participation, given the complex nature of the issue, if we are to create a conceptual framework, a more multi-layered and multi-dimensional perspective is needed to achieve a holistic understanding. While Arnstein was mostly concerned about how much a citizen is involved in the process of planning, there are various dimensions to be considered in relation to each other. The dimensions can be reproduced as such:

*Source;* defines whether it is a self-initiated activity developed from the bottom-up, or it is associated with an institutional power holder (state, corporations, non-profit organization, etc.) dealing with citizen or community engagement,

*Process;* includes pre-project, during-project, and post-project phases. A truly participatory planning process involves the citizens at each of these steps,

*Methods;* describe the means to be used such as informing, educating, voting, collaborating, and feedback,

*Interface;* defines the medium in which the participatory action is taking place, whether it is online via a digital platform without the necessity of physical presence, through a representative body that is usually initiated from a bureaucratic system (e.g. conventional voting system), or face-to-face encouraging stakeholders to express their opinions and discuss,

*Barriers;* address the challenges regarding online participation, which is accessibility to technological tools and digital literacy, and physical participation, which is physical accessibility and community pressure to voice opinions,

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[327] Anastasiu, "Unpacking the Smart City through the Lens of the Right to the City: A Taxonomy as a Way Forward in Participatory City-Making."

*Motivation;* describes the impulse behind the participatory action. From the perspective of an institutional body, it could be a requirement by law or regulations, gaining supporters for the upcoming project or getting informed for further action. From the citizen's perspective, it could be to act for the improvement or protection of the environment they live in or create intentional separations to leave the unwanted out,

*Outcome;* is about the target to be achieved. It can be a just city for all, economic development, environmental sustainability etc.,

*Engagement;* defines the whole process as democratic or pseudo-democratic, and it is interested in the content of the participatory action, not the degree of the citizen involvement, because citizen involvement and democracy are not directly proportional. Therefore, here, democratic activity refers to transformational engagements which is to consult citizen input for transformative matters such as education, health, transportation, etc., and pseudo-democratic activity refers to transactional engagements, indicating non-transformative matters such as choosing the color of the bus, as well as the cases where the process benefits one, not the other.

Several municipal governments from different parts of the world have developed participatory platforms, with the aim of increasing citizen engagement, transparency, and democratic governance (Table 4). This approach, which Thompson defines as platform municipalism, which provides digital space for citizen participation through civil society mobilization,[328] differs in each case in terms of its scope, inclusiveness, and applicability. While some remain at the level of tokenism through transactional engagement, as in the case of Başkent Mobil, others aim to make decisions on issues of transformative importance for society with the participation of citizens. For instance, while Decidim, Decide Madrid, Better Reykjavik, OmaStadi, and My Amsterdam provide a more comprehensive platform, allowing citizens to vote,

[328] Thompson, "What's so New About New Municipalism?" 326.

discuss, propose ideas, and collaborate, mVoting App in Seoul and vTaiwan lacks some of the features such as proposal development.

Table 4 Participatory Platforms

| Platform | Overview | Features |
|---|---|---|
| **Decidim** (Barcelona, Spain) | - **Launched**: 2016 by Barcelona City Council under Mayor Ada Colau.<br>- **Type**: Open-source participatory democracy platform.<br>- **Purpose**: Enhance citizen engagement in municipal decision-making processes. | - **Modules**: Proposals, debates, meetings, surveys, participatory budgeting.<br>- **Open-Source**: Code available for adaptation.<br>- **Transparency**: All actions are traceable.<br>- **Hybrid Participation**: Online platform with support for face-to-face meetings. |
| **Decide Madrid** (Madrid, Spain) | - **Launched**: 2015 by Madrid City Council under Mayor Manuela Carmena.<br>- **Type**: Open-source citizen participation platform.<br>- **Purpose**: Facilitate citizen proposals, debates, and participatory budgeting. | - **Citizen Proposals**: Ideas can become binding referendums.<br>- **Participatory Budgeting**: Citizens allocate a portion of the city budget.<br>- **Debates and Consultations**: Engage in discussions on municipal issues.<br>- **Open-Source**: Available for other cities. |
| **Better Reykjavik** (Reykjavik, Iceland) | - **Launched**: 2010 by the City of Reykjavik and the Citizens Foundation (NGO).<br>- **Type**: Online platform for citizen ideas and engagement.<br>- **Purpose**: Involve citizens in city governance and decision-making. | - **Idea Submission**: Citizens submit and prioritize ideas.<br>- **Deliberation**: Debate through votes and comments.<br>- **Open-Source**: Uses "Your Priorities" software.<br>- **Collaboration**: Partnership between government and NGO. |
| **My Amsterdam** (Amsterdam, Netherlands) | - **Initiative**: Amsterdam's approach to involve citizens in urban development.<br>- **Type**: Combination of digital platforms and in-person engagement.<br>- **Purpose**: Foster sustainable and inclusive city development through citizen participation. | - **Idea Submission**: Platforms for proposals on city improvement.<br>- **Co-Creation**: Collaboration between citizens, businesses, and government.<br>- **Neighborhood Focus**: Local-level engagement and projects.<br>- **Amsterdam Smart City Initiative**: Encourages innovation and sustainability. |

Table 4 (continued)

| | | |
|---|---|---|
| **Madame Mayor, I Have an Idea** (Paris, France) | - **Launched**: 2014 under Mayor Anne Hidalgo.<br>- **Type**: Participatory budgeting platform.<br>- **Purpose**: Allow citizens to propose and vote on projects funded by the city's budget. | - **Participatory Budgeting**: Allocates ~€100 million annually.<br>- **Idea Submission**: Citizens propose projects.<br>- **Voting**: Residents vote on which projects to fund.<br>- **Implementation**: Winning projects executed by the city. |
| **OmaStadi** (Helsinki, Finland) | - **Launched**: 2018 by the City of Helsinki.<br>- **Type**: Participatory budgeting platform using Decidim.<br>- **Purpose**: Engage residents in allocating part of the city budget. | - **Budget Allocation**: €4.4 million annually.<br>- **Idea Submission**: Citizens submit and develop proposals with officials.<br>- **Voting**: Residents vote on finalized proposals.<br>- **Workshops**: Facilitate co-creation of ideas. |
| **vTaiwan** (Taipei, Taiwan) | - **Initiated**: 2015 as a government-backed platform.<br>- **Type**: Online and offline deliberation platform.<br>- **Purpose**: Facilitate public participation in policymaking, especially on digital and social issues. | - **Deliberation**: Uses Pol.is for gathering diverse opinions.<br>- **Consensus Building**: Identifies shared views among stakeholders.<br>- **Transparent Processes**: All discussions and data are public.<br>- **Stakeholder Engagement**: Involves citizens, experts, officials, businesses. |
| **mVoting App** (Seoul, South Korea) | - **Launched**: 2014 by Seoul Metropolitan Government.<br>- **Type**: Mobile application for citizen participation.<br>- **Purpose**: Enable real-time citizen engagement in municipal decision-making. | - **Mobile Voting**: Citizens vote on city issues via smartphones.<br>- **Notifications**: Alerts users about new polls.<br>- **Topics**: Ranges from policy decisions to local events. |

Decidim[329] is a good example of participatory governance born out of the affordances of a smart city. Launched in 2016 in the city of Barcelona as part of the

[329] "Decidim" means "we decide" in Catalan.

Barcelona City Council's municipal action plan for 2016-2019,[330] Decidim is a free and open-source digital participatory democracy platform for cities, citizens, and organizations. Their aim is "… to contribute to the democratization of society through the construction of technology, methodologies, practices, standards, actions, narratives, and values, in a free, open, collaborative and reflective way."[331] It is a virtual space that allows citizens to engage in decision-making processes to propose, discuss, and vote on ideas for improving the city and policies. It aimed to differentiate itself from its counterparts, which usually stuck at the level of "hearing the voices." The goal was to build a system that could inclusively empower citizens. Participatory processes comprise a series of time-limited sessions between members of the public and representatives of local government intended to encourage discussion and challenge ideas.[332] Citizens can participate in this process in different ways: they can make new proposals, share their ideas on existing proposals, and take part in online or face-to-face meetings.[333] Besides individual participation, they can also form citizens' initiatives, which can add items to the City Council's plenary session agenda, hold public hearings, and organize public consultation; in other words, they can act as a body to influence municipal policies.[334] Decidim itself is democratically governed through the Decidim Association, comprised of developers, users, and other stakeholders who contribute to the development and governance of Decidim. When analyzed in terms of participation dimensions, Decidim presents a holistic and comprehensive understanding (Table 5).

[330] International Observatory on Participatory Democracy, "Participatory Budgeting in Barcelona," https://oidp.net/en/practice.php?id=1407, Accessed September 15, 2024.
[331] Decidim, "About Decidim," https://decidim.org/about/, Accessed September 15, 2024.
[332] "Participatory Budgeting in Barcelona"
[333] Ibid.
[334] Ibid.

Table 5 Participatory Dimensions of Decidim

| Participation Dimensions | Decidim |
|---|---|
| **Source** | **Institutional Power Holder with Citizen Engagement**<br>Decidim was initiated and developed by the **Barcelona City Council** under Mayor Ada Colau. It represents a collaboration between the municipal government and citizens, technologists, and activists. While the platform is supported by an institutional power holder, it emphasizes bottom-up participation and is open-source, allowing for community engagement and adaptation. |
| **Process** | **Inclusive at All Stages (Pre-project, During-project, Post-project)**<br>- **Pre-project**: Citizens can submit ideas and proposals for city initiatives.<br>- **During-project**: Active involvement in discussions, debates, and collaborative drafting of policies.<br>- **Post-project**: Monitoring implementation, providing feedback, and evaluating outcomes. The platform ensures continuous citizen participation throughout the entire process. |
| **Methods** | **Informing, Educating, Collaborating, Voting, Feedback**<br>- **Informing**: Provides transparent information about policies and proposals.<br>- **Educating**: Enhances civic knowledge and digital literacy.<br>- **Collaborating**: Facilitates co-creation of proposals between citizens and officials.<br>- **Voting**: Citizens vote on proposals and budget allocations.<br>- **Feedback**: Continuous channels for comments and suggestions. |
| **Interface** | **Online Digital Platform with Face-to-Face Support**<br>- **Online**: The primary medium is an online platform accessible via web browsers, enabling participation without physical presence.<br>- **Face-to-Face**: Supports and integrates in-person meetings and assemblies to encourage direct dialogue and discussion.<br>- **Hybrid Approach**: Combines digital and physical interfaces to maximize accessibility and engagement. |
| **Barriers** | **Digital Divide and Accessibility Challenges**<br>- **Online Participation Barriers**: Limited access to technology, varying levels of digital literacy, and language differences may hinder some citizens.<br>- **Physical Participation Barriers**: Mobility issues, time constraints, and social pressures can affect in-person involvement.<br>- **Awareness**: Not all citizens may be aware of the platform or how to participate effectively. |
| **Motivation** | **Enhancing Democratic Participation and Social Justice**<br>- **Institutional Perspective**: Aimed at increasing transparency, legitimacy, and citizen trust; fulfilling commitments to participatory democracy and technological sovereignty.<br>- **Citizen Perspective**: Desire to influence policies, improve their city, address local issues, and exercise their right to participate in governance.<br>- **Mutual Goal**: Collaborative improvement of the urban environment. |

Table 5 (continued)

| | |
|---|---|
| **Outcome** | **A More Democratic and Just City**<br>- **Democratic Governance**: Creation of policies that reflect citizen input.<br>- **Social Justice**: Addressing inequalities and promoting inclusive policies.<br>- **Community Engagement**: Strengthening civic participation and community bonds.<br>- **Transparent Processes**: Enhancing accountability and reducing corruption in municipal governance. |
| **Engagement** | **Democratic (Transformational Engagements)**<br>Decidim facilitates **transformational engagements** in the consultation of citizens with regard to important issues such as urban planning, education, health, transport, and social policies. It also fosters participation whereby citizen contributions can result in making a difference, something more than the superficial or transactional involvement of citizens. |

## 4.4 An Alternative Understanding for Re-politicization

Mechanization and digitalization are inevitable. However, the thesis argues that the priority of capital and incentives should be allocated not only to mechanization and digitalization, i.e., unlimited growth plans but also to the protection and improvement of human and non-human living beings. In this context, sustainability discourses should determine a different strategy to create more livable and just cities rather than green-washing unlimited growth with the label of green technology. The thesis argues that the depoliticization of conventional smart city approaches is the major threat to urban rights and justice, and the issue should be challenged and addressed on a political basis. As opposed to a depoliticized agenda where an issue is framed as a technical or administrative matter, obscuring the power dynamics, social, spatial, or ideological differences, re-politicization seeks to reveal hidden power relations, challenge market or technical-driven solutions, and encourage greater democratic discussion and participation regarding the course of legislation or social change. Here, the notion of re-politicization refers to an approach that shifts away from growth-oriented priorities, emphasizing instead the empowerment of

people and their capacity to actively participate in decision-making processes. Therefore, the thesis explores a fundamental critique of the system, addressing an understanding that aims to deviate from constant growth and development that is anchored in the capitalist market systems.

Concerns about growth and development strategies impacting planetary well-being and the rights of living beings, along with dissatisfaction with initiatives related to smart cities, have prompted a quest for alternative solutions. Consequently, various approaches have emerged, from those suggesting alternative growth strategies to those advocating for a fundamental change in the system and a reform in the mindset. While conventional sustainability approaches aim to sustain economic growth, approaches such as degrowth, post-capitalism, and ecosocialism question economic growth altogether and focus on issues such as environmental limits, resource scarcity, social justice, and quality of life. These approaches often emphasize that the conventional understanding of sustainability is not sufficiently critical of the system itself and that fundamental social, economic, and political changes are required. With the 2008 financial crisis, the green economy model gained prominence as a solution for cities facing the challenges of economic instability and environmental degradation through low-carbon, resource-efficient, and socially inclusive development.[335] The concept of a green economy does not reject the idea of growth; instead, it is related to the understanding of "green growth."[336] Green growth assumes that economic growth and development can be reconciled within the ecological limits of the earth and that technological innovation is a mechanism for realizing this.[337] The crucial aspect of this approach lies, as Puppim de Oliveira et al.

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[335] Lucien Georgeson, Mark Maslin, and Martyn Poessinouw, "The Global Green Economy: A Review of Concepts, Definitions, Measurement Methodologies and Their Interactions," *Geography and Environment* 4, no. 1 (2017): e00036, 1–23.
[336] Osman Balaban, "Smart Cities as Drivers of a Green Economy," in *Handbook of Green Economics*, ed. Sevil Acar and Erinç Yeldan (Academic Press, 2019), 69–92, https://doi.org/10.1016/B978-0-12-816635-2.00005-5.
[337] Benedikt Schmid, "Degrowth and Postcapitalism: Transformative Geographies Beyond Accumulation and Growth," *Geography Compass* 13 (2019), https://doi.org/10.1111/gec3.12470, 2.

clearly state, in realizing that technological advancements play a key role in shaping urbanization patterns and offer opportunities to promote the green economy, yet their impact depends on societal shifts in understanding and behavior, as urbanization often drives changes in consumer preferences and attitudes.[338]

However, Schmid claims that efficiency and consistency solutions are shown to be inadequate in addressing environmental unsustainability due to rebound effects and the energy, material, and land input necessary for green technology.[339] Therefore, it is argued that green growth and similar approaches that propose greening the existing system are not a sufficient and inclusive solution and that a more radical change is required. Accordingly, Ferguson differentiates "green growth" from "green economy," which is more agnostic about growth, and has the potential to facilitate profound systemic transformations, including the redefinition of development and the incorporation of ecological constraints into economic frameworks.[340] His three typologies of green economy discourses help to represent its spectrum of impact: *weak green economy* emphasizes green growth and addresses Western sustainable consumption patterns, *transformational green economy* promotes selective growth and green consumerism and advocates institutional changes and *strong green economy* challenges the growth paradigm and aligns with post-growth perspectives.[341] This spectrum, which allows for a radical systemic transformation, distinguishes the green economy from sustainable development.

According to post-development theory, the concept of "underdevelopment" was created by the West after World War II to justify economic expansion and counter the spread of socialism by promising material progress to the Global South; this

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[338] Jose A. Puppim de Oliveira et al., "Green Economy and Governance in Cities: Assessing Good Governance in Key Urban Economic Processes," *Journal of Cleaner Production* 58 (2013): 138–152, 150.
[339] Ibid.
[340] Peter Ferguson, "The Green Economy Agenda: Business as Usual or Transformational Discourse?" *Environmental Politics* 24, no. 1 (2015): 17–37, https://doi.org/10.1080/09644016.2014.919748.
[341] Ibid, 28.

Eurocentric view, criticized by PD (post-development), reduces diverse cultures to imitating industrialized capitalist nations, viewing non-Western societies as merely "under-developed" versions of the West.[342] By the late twentieth century, PD authors argued that the era of "development" was ending due to growing ecological awareness that revealed the unsustainable nature of Western lifestyles, the obsolescence of the "development" rationale after the Cold War, the widening gap between rich and poor countries, and increasing skepticism about development's underlying agenda of Westernization.[343] The strategic coupling of post-developmentalism, as articulated by Yeung, denotes a process in which horizontal coordination mechanisms and indirect incentives have predominantly substituted the vertical direct interventions characteristic of developmentalism, offering one among various explanations for economic transformation.[344] Revisiting post-developmentalism becomes significant in the attempt to re-politicize smart city discourses as it challenges technocratic narratives by reopening critical perspectives toward power dynamics, social justice, and the socio-political consequences of technology-driven urban development.

In a discussion over a Club of Rome study that advocated for "zero growth" in the face of concerns about pollution and natural resources, New Left scholar André Gorz used the phrase "décroissance" ("degrowth" in French) for the first time in 1972.[345] About thirty years after the "décroissance" first appeared in Lyon, the movement that we now refer to as the degrowth movement had its start.[346] This approach advocates

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[342] Aram Ziai, "Post-Development," *InterAmerican Wiki: Terms - Concepts - Critical Perspectives*, https://www.uni-bielefeld.de/einrichtungen/cias/publikationen/wiki/p/post-development.xml, Accessed October 30, 2024.
[343] Ibid.
[344] H. W.-C. Yeung, *Strategic Coupling: East Asian Industrial Transformation in the New Global Economy* (Ithaca, NY: Cornell University Press, 2016) cited in Miao and Phelps, "The Intrapreneurial State: Singapore's Emergence in the Smart and Sustainable Urban Solutions Field."
[345] E. Tammy Kim, "Can Slowing Down Save the Planet?," *The New Yorker*, February 1, 2024, https://www.newyorker.com/books/under-review/can-slowing-down-save-the-planet, Accessed September 9, 2024.
[346] "A History of Degrowth," Degrowth, https://degrowth.info/about/history-of-degrowth, Accessed September 9, 2024.

that developed economies should stop aiming to increase their GDP as a measure of success; instead, they should cut energy and material consumption by reducing needless and damaging types of production, and they should center economic activity on meeting the needs and well-being of people.[347] Proponents of the idea claim that this strategy can improve social outcomes while enabling decarbonization and preventing ecological disintegration.[348] More recently, Kohei Saito developed the concept of degrowth communism, basing his ideas on Marx's study of natural sciences in his later years and the shift in his understanding from productivity to "steady-state economies."[349] According to Saito, green new dealers suggest switching from fossil fuel and natural gas to renewables instead of using less energy, and that will make it impossible to prevent climate crisis and ensure climate justice.[350] Yet, there are different degrowth initiatives that have distinct transformational aims, priorities, and techniques. A moderate degrowth movement calls for changes to growth-oriented political, economic, and social structures including internalizing production costs, implementing eco-taxes, basic income programs, and alternative prosperity metrics.[351] While radical degrowth proponents doubt the capacity of market and governmental institutions to advance social and environmental justice, and emphasize social movements and community efforts as key players in transformation.[352]

The focus on the practical implications of the idea concentrates on grassroots organizations, collective forms of ownership and decision-making, enterprises experimenting with non-monetary forms of trade, self-managed associations, and the

[347] Jason Hickel et al., "Degrowth Can Work — Here's How Science Can Help," *Nature* 612 (2022): 400–403, https://doi.org/10.1038/d41586-022-04412-x, 400.
[348] Ibid.
[349] Kohei Saito, *Marx in the Anthropocene: Towards the Idea of Degrowth Communism* (Cambridge: Cambridge University Press, 2022).
[350] Ibid.
[351] Schmid, "Degrowth and Postcapitalism: Transformative Geographies Beyond Accumulation and Growth," 4.
[352] Ibid.

like.[353] There are examples around the world that are committed to these ideals and taking their alternative path for livable, resilient, and just communities. The Transition Network was born in the small town of Totnes in the UK in 2006 as a response to the looming oil crisis and climate change,[354] and they are local practices from food production to exploring energy alternatives. La Via Campesina, which was developed in the early 1990s by 182 organizations in 81 countries,[355] coined the term food sovereignty and calls for agricultural reform, collective ownership, and protection of the rights of peasant communities to use, conserve, and trade seeds while acknowledging that social justice is a prerequisite to realize that.[356] Similarly, Detroit Urban Farming, with a growing number of community-led farms and gardens, addresses how urban agriculture may be used to achieve food sovereignty and security. Some alternative economic systems, such as time banks in Spain[357] and other sharing and barter economies, encourage mutual aid, cut down on consumption, and challenge the market-driven structure of contemporary economies.

Although its analysis of the dangers of the current system and its ideals for a different system is common sense, the idea of degrowth, like other similar grassroots and bottom-up movements (tactical urbanism, etc.), shapes public discourse and influences policy, but is weak in terms of having a radical and systemic impact. The critique is that working at the local level would foster fragmentation rather than unity of global power, that intervening where the state had withdrawn would enable the

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[353] Ibid, 6.
[354] "Transition Towns – the Quiet, Networked Revolution," Rapid Transition Alliance, 9 October 2019, https://rapidtransition.org/stories/transition-towns-the-quiet-networked-revolution/, Accessed September 11, 2024.
[355] La Via Campesina, *List of Members*, March 2018, https://viacampesina.org/en/wp-content/uploads/sites/2/2018/03/List-of-members.pdf, Accessed September 11, 2024.
[356] La Via Campesina, "Food Sovereignty, a Manifesto for the Future of Our Planet," October 13, 2021, https://viacampesina.org/en/food-sovereignty-a-manifesto-for-the-future-of-our-planet-la-via-campesina/, Accessed September 11, 2024.
[357] In the time banking system, time is considered a currency that functions as a medium of exchange; David Boyle, *The Potential of Time Banks to Support Social Inclusion and Employability: An Investigation of the Use of Reciprocal Volunteering and Complementary Currencies for Social Impact*, JRC Research Reports JRC85642 (Joint Research Centre, 2014).

state's abdication, and that even though the efforts would help some people, the interventions could not make a great impact in corporate globalization.[358] Although difficult to scale up to have a radical impact, degrowth is an approach that challenges the seemingly depoliticized discourses of smart cities. Its discourse that interpersonal, inter-city, and international justice is a political issue and should be approached as such is critical for reconceptualizing the smart city. These movements, shaped by the concepts of human rights and the right to the city, primarily aim to develop new thinking practices for postcapitalist politics. However, presenting this as a solution for all countries and all people is exactly the same logic as the sustainability approaches it criticizes. For citizens of underdeveloped countries, they need to continue to develop and grow in order to reach a certain standard of living.[359]

This chapter critically examines the deep-rooted dynamics shaping the city in question in the debates so far, revealing how urban governance is often driven by established systems of power, capital, and institutional frameworks. Situating technology within this "dark matter," the chapter argues that the evolution of the smart city is inseparable from the broader political economy and governance structures that underpin it and reads this through the relationship between the public and private sectors. The examples of Quayside Toronto and Masdar City have demonstrated that private sector-led initiatives prioritize market interests over the public good, exacerbating inequalities and missing genuine civic engagement. These examples illustrate the dangers of allowing technocratic visions of cities to dominate, where urban innovation becomes a commodity rather than an instrument of social equity and justice. However, the potential for the public sector to act as a creator

[358] J. K. Gibson-Graham, *A Postcapitalist Politics*, NED-New edition (Minneapolis: University of Minnesota Press, 2006), http://www.jstor.org/stable/10.5749/j.cttttt07, 3.
[359] If not through development, how will the world's poor become more resilient to the repercussions of climate change? Rich countries' position on climate policies, whether it is to outsource their technologies or making pressure on poor countries for transition, spark a debate on a new version of a green colonialism; Vijaya Ramachandran, "Rich Countries' Climate Policies Are Colonialism in Green," *Foreign Policy*, November 3, 2021, https://foreignpolicy.com/2021/11/03/cop26-climate-colonialism-africa-norway-world-bank-oil-gas/, Accessed September 12, 2024.

rather than a counterbalance is emerging. The concept of the entrepreneurial state and examples of municipal leadership have shown that public institutions can lead transformative urban projects when supported by their resources and vision. Nonetheless, financial expectations tied to private sector collaborations persist in hindering the realization of the right to the city by fueling technocratic practices. Conversely, participatory governance has surfaced as a valuable approach to democratizing urban decision-making, highlighting the importance of citizen engagement in shaping their surroundings. However, this chapter has critically noted that even well-intentioned public sector interventions operate within the constraints of existing neoliberal frameworks that limit their transformative potential. All these debates lead to the search for a new alternative urban strategy. Alternative paradigms such as green economy and degrowth, which challenge the growth-oriented paradigm of urban governance and promote re-politicization, are worth exploring. It is anticipated that the effects of these approaches, which prioritize values such as sustainability, equity, and inclusiveness over technocratic priorities such as technological dominance and economic efficiency, will be actively seen in urban space. Accordingly, the smart city promotes a green economy through its compact, mixed-use design, where interconnected quarters and integrated transport systems enhance efficiency, reduce costs for city administrations, and significantly lower energy consumption and carbon emissions compared to sprawling urban development.[360] While the integration of these approaches into mainstream governance is challenging, especially given global capital and political inertia, the thesis envisions that publicly-led smart city affordances will allow for a smoother transition.

The research on the use of technology in the "dark matter" of urban governance has revealed how power dynamics, private interests, and municipal strategies are shaping the direction taken by smart cities. Beyond determining who governs and gains

[360] Osman Balaban, "Smart Cities as Drivers of a Green Economy," 81.

benefits from technological interventions, these frameworks also influence how urban spaces are conceptualized, used, and experienced. As we transition from the governance of smart technologies to their spatial implications, one critical question clearly arises: How do these different governance structures and technological paradigms affect the very nature of urban space? The following chapter explores this question by discussing how the urban space is being transformed through increasing virtualization, hybridization, and privatization. It does so by investigating how such shifts both transform traditional notions of public space, complicate the right to the city, and necessitate new forms of participatory planning.

# CHAPTER 5

## URBAN SPACE IN TRANSFORMATION

With digital technology pervading almost every realm in daily life, urban space is undergoing radical transformations that definitely redefine the ways in which people interact with their environment. The digital colonization of the physical realm has transformed cities into data-centric ecosystems, where almost every object, location, and activity serves as a source of information. The city transforms into a fusion of physical and digital realms, whereby they not only reflect but also actively shape individuals' experiences in urban life. This digital overlay obscures the distinctions between public and private realms, wherein daily actions and environments are perpetually seen, recorded, and scrutinized. The public realms of a city are now inseparably linked to global networks, making urban spaces both localized and interconnected across distant sites through media, communication, finance, and transport, thereby transforming cities into nodes within expansive, technology-mediated cultural and social networks.[361] As Massey suggests, they become "articulated moments in networks of social relations and understandings."[362]

The governance strategies affecting the city analyzed in the previous chapter—the role of the state, the private sector, and the citizens, attitudes towards the use of smart technologies, strategies in terms of growth and development, and the long-term vision of the city—are phenomena that directly or indirectly affect urban space and are in constant interaction with one another. The democratic and political functions of urban space have been further complicated by the shift to virtualized spaces as

[361] Stephen Graham, ed., *The Cybercities Reader* (London: Routledge, 2004), 285.
[362] Doreen Massey, "Power-geometry and a Progressive Sense of Place," in *Mapping the Futures: Local Cultures, Global Change*, ed. J. Bird, B. Curtis, T. Putnam, G. Robertson, and L. Tickner (London: Routledge, 1993), 59–69, 66, also mentioned in Stephen Graham, ed., *The Cybercities Reader*.

well. When public spaces and participatory processes move online, there is a clear depoliticization effect in the urban context. Public squares, forums, and other places that were once central to the community for either civic engagement or protest may gradually see a shift in their spatial importance as virtual platforms begin to take on these roles. While online platforms have the potential to support new ways of interacting, their frameworks and governance can present challenges to fostering authentic democratic practices. In light of these discussions, the chapter explores the transformation of the urban space, pursuing the questions of how has the integration of technology, governance models, and socio-political shifts transformed the meaning and function of urban space, what implications these changes have for public space, participatory planning, and the rights of citizens in shaping the city, what effects will smart cities' evolving physical spaces have on civic involvement and public life, to what extent do virtual spaces in smart cities provide opportunities for public discourse, collective action, and political engagement and can virtual spaces inspire smart cities as an adequate platform to deal with the re-politicization of urban life?

## 5.1 Departing or Adapting: The Evolving Relationship with Urban Space

It is a fact that our presence in physical space is gradually being transferred to virtual space every day. This paradigm shift, which accelerated with the emergence of social media, peaked during the COVID-19 pandemic and now has become a long-term vision with the Metaverse, which is open to different interpretations. First of all, since technological developments are the main fuel for capital in the current system, it is possible to view the metacity concept as being encouraged in ways that align with and sustain the capitalist system. In order to eliminate the disruptions in the flow of capital caused by the rigid spatial conditions in our physical reality, the

flexibility offered by virtual space paves the way for a new economic order.[363] It is not only the flexibility of space that causes this but also the flexibility and fluidity of the order it brings with it. The absence of an established property system (yet), the absence of environmental concerns, the lack of defined borders and boundaries, and the absence of laws and agreements that limit movement make virtual space an attractive alternative for capital producers.

Current debates in this context have mostly focused on how space is being distanced. The increasing digitalization encourages a shift from the physical space to virtual space, which can be deliberate, i.e., by choice, indirect, i.e., manipulatively, or forced. The last one offers us a different perspective: is the space leaving us? In this context, the space is reshaped, reproduced, or even metamorphosed through large-scale capital investments. It has been changed and deactivated through neoliberal investments and engineering projects. When urban space, which has been "vaporized"[364] by governments and their collaborator technology monopolies, is manifested in the virtual environment, it is freed from certain attachments. Virtual space can be thought of as a soft amorphous structure that can be better controlled and shaped. Although this structure is compressed in terms of spatial quality, it is multi-dimensional and multi-layered. It has many dimensions, such as algorithms, databases, governance, marketing, etc., and these are different for each virtual space. Therefore, it is quite possible for humans to exist as mere data and for this data to be used wherever and however it is desired. Institutions and organizations that are attracted to this trend may gradually contribute to the dissolution of urban space, potentially making it less accessible and inviting for people over time.

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[363] Michael Hardt and Antonio Negri, *İmparatorluk* (İstanbul: Ayrıntı Yayınları, 2001) as cited in Murat Çetin, *Şahlar, Piyonlar ve [Meta]Kent: Totaliter Siyasetin Oyun Tahtası Olarak 'Buharlaştırılan' Kent Mekânı* (Ankara: Nika Yayınevi, 2024), 220.

[364] "All that is solid melts into air, all that is holy is profaned, and man is at last compelled to face with sober senses his real conditions of life, and his relations with his kind." Karl Marx and Friedrich Engels, *The Communist Manifesto* (1848), in *Marx/Engels Selected Works*, vol. 1 (Moscow: Progress Publishers, 1969), 98–137, trans. Samuel Moore in cooperation with Frederick Engels, 1888.

This discussion is very much related to the debates on the space-place dichotomy. Although it is out of the context of this thesis, it is useful to shed light on it to understand the dichotomy of physical-virtual space. Harvey distinguishes the place as the cumulative manifestations of "imaginaries," "institutionalizations," "social relations," "material practices," "forms of power," and "elements in discourse."[365] He discusses the ways in which places are contested and replete with instances of conflicts fought for equitable reinvestment that meets community needs and fosters a sense of "community," embodying values that extend beyond monetary exchange.[366] Like the dialectical relationship Harvey identifies between space and place, physical and virtual spaces are not oppositional but mutually constitutive; virtual spaces are embedded in physical infrastructure, while physical spaces are increasingly mediated by digital tools that shape the ways in which individuals interact, perceive, and inhabit them. This interaction is reminiscent of the dynamics Harvey describes: whereas places are sites of contested meaning and power, virtual spaces are similarly shaped by competing forces of capitalist commodification, technological innovation, and social resistance. The time-space compression that Harvey attributes to globalization has its parallel in the virtual, where distance is irrelevant, yet power inequalities persist. In recognizing this dialectical relationship lies the key to addressing questions of justice in the hybridized, digitally augmented environments that now constitute the urban.

## 5.2 Public Space Reconsidered: A Multi-Scalar Perspective

As transportation and communication infrastructures rapidly evolve, the dynamics of the economic and political landscape—which Bilsel defined as "centrifugal forces"—are influenced by international capital pushing the city towards its

[365] David Harvey, "From Space to Place and Back Again," *Justice, Nature & the Geography of Difference* (Oxford: Blackwell, 1996), 294.
[366] Ibid, 298.

peripheries.[367] According to Bilsel, as a result of this centrifugal expansion, the city is faced with spatial fragmentation and social segregation processes resulting in social groups becoming spatially isolated from their surroundings, upper-income groups settling outside the cities in gated communities in the name of "quality of life" and lower-income groups turn to produce their own spaces, the city ceases to be a common public space and turns into a cluster of areas divided between social and cultural groups that cannot come together.[368] The notion of "public" is under radical transformation under economic, geopolitical, and technological forces, both in geographic and discursive senses since the notion of a public sphere is now host to diverse, hybrid, and fragmented physical and virtual spaces, which counter the civic-centric view of public life.[369]

Public space is "the space of appearance," as Hannah Arendt famously described it, where people seem to perceive one another as active participants, and she views appearance as a marker of social existence and, consequently, of interaction.[370] She characterizes the public realm as being the antithesis of the private, the natural, or everything that cannot be shared. In contrast to the private realm, the public realm is an artificial world made by people themselves. Therefore, the private realm is natural and the public realm is an "objective space" between nature and humans, which is artificial.[371] These two realms are not in competition or opposition to one another, rather they complement each other. One needs to exist for the other to exist as well, which is necessary to achieve a balance in human life.[372] Habermas, on the other

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[367] Cânâ Bilsel, "Yeni Dünya Düzeninde Çözülen Kentler Karşısında 'Kamusal Alan' Odaklı Kentsel Tasarım," in *15th International Urban Design and Implementations Symposium, Urban Design in Change - Change in Urban Design*, Istanbul, May 2004, 22–28.
[368] Ibid, 23.
[369] Andreas Broeckmann, "Public Spheres and Network Interfaces," in *The Cybercities Reader*, ed. Stephen Graham (London: Routledge, 2004), 378–383, 379.
[370] Hannah Arendt, *The Human Condition* (Chicago: University of Chicago Press, 1958).
[371] Shiraz Dossa, *The Public Realm and the Public Self: The Political Theory of Hannah Arendt* (Ontario: Wilfred Laurier University, 1989), 86.
[372] Alexey Salikov, "Hannah Arendt, Jürgen Habermas, and Rethinking the Public Sphere in the Age of Social Media," 92.

hand, identifies the bourgeois public sphere that emerged in the 18th century and is rooted in the coffeehouses, salons, and literary societies of bourgeois society, functioning as a space for reasoned debate and the formation of public opinion.[373] He traces the evolution of the public sphere from *representative publicness* in the medieval period, when publicity of the power holder was attributed to status, to the *bourgeois public sphere*, where the rise of capitalism and the early modern states called for critical debate impelled by the demands of the bourgeoisie for an accountable and transparent state, and its *socio-structural transformation* that started with the expansion of mass media and the commercialization of culture undermining the public sphere and resulting in a reduction in critical discourse and reasoned speech.[374] While both Arendt and Habermas emphasize the centrality of the public sphere for political discourse and action, their understandings differ in some ways. While Arendt focuses on the public sphere as a space for political action and the exercise of political freedom, Habermas is more concerned with the role of the public sphere in facilitating rational discourse and the formation of public opinion. Moreover, Arendt insists on the bodily presence of actors and their visibility before one another, whereas in Habermas' view, members could be distributed over different locations yet still exchange with each other through media.

According to Madanipour, public space is "a medium of promoting pedestrian movement, a location for social interaction, a tool for urban management, a showcase, a selling point for the developer, a system of signs to assert different identities."[375] According to the social activist Jane Jacobs, an organically generated public life is a sign of a good space. A public space must include aspects of surprise, informal activity, and the freedom to do nothing. In a similar vein, Koolhaas emphasizes the value of an informal public life by highlighting its lack. He suggests

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[373] Jürgen Habermas, *The Structural Transformation of the Public Sphere* (Oxford: Polity Press, 1992).
[374] Ibid.
[375] Ali Madanipour, *Public and Private Spaces of the City*, 1st ed. (London: Routledge, 2003), https://doi.org/10.4324/9780203402856.

that the pleasures of life and the city have been linked to the ideas of private ownership and consumption in the absence of an informal public life.[376] When space is treated like a commodity and given specific labels and purposes for financial gain, socio-spatial disruption emerges. According to Koolhaas, functionalization undermines the standard of informal public life. In the majority of modern public spaces, such as shopping malls, there are specific behaviors that people are expected to exhibit. Even if these places, whose entrances and exits are tightly controlled, are claimed to be accessible to everyone, in reality, they are private spaces that exclude the public, and the freedom of movement in public life is not allowed in these spaces.[377]

With the proliferation of digital technologies and the increasing presence in the virtual environment, a paradigm shift has begun to be observed in the phenomenon of public space. The possibility of coming together on various internet platforms and the perception of discursive freedom has led to the idea that this new spaceless phenomenon can be considered a public space. In support of this idea, Graham and Marvin suggest a parallel between urban space and virtual space, implying that one can be an alternative to the other.[378] The metaverse, in particular, has emerged as an embodiment of this idea. On the other hand, there is a view that the virtual public space does not have the qualities of a physical public space. Drawing an analogy between the metaverse and Las Vegas, Scavnicky argues that Las Vegas is the real-life version of the metaverse and that the power behind this new virtual space is the focus of capital, just like Las Vegas, rather than providing a new experience and a

[376] Rem Koolhaas, "The Generic City," in *The Urban Design Reader*, 2nd ed., ed. Michael Larice and Elizabeth Macdonald (Abingdon, Oxon: Routledge, 2013), 215–226.
[377] Cânâ Bilsel, "Yeni Dünya Düzeninde Çözülen Kentler Karşısında 'Kamusal Alan' Odaklı Kentsel Tasarım," 26.
[378] Stephen Graham and Simon Marvin, *Splintering Urbanism: Networked Infrastructures, Technological Mobilities and the Urban Condition* (1st ed.; London: Routledge, 2001), https://doi.org/10.4324/9780203452202.

new way of relating.[379] With its membership systems and ubiquitous advertisements, this increasingly commercialized space is turning into a shopping mall.

There is a great difference between the contexts of Arendt's and Habermas' public spheres and the contemporary public sphere, which has been going beyond spatial, political, and sensorial experiences. Today's emerging public sphere, which is also defined as the "digital public sphere," "networked public sphere," or "the electronic agora"[380] as Mitchell describes it, brings along some unique features. Firstly, the principle of publicity, one of the most fundamental principles of the public sphere, is transformed into anonymity in the virtual public sphere.[381] The openness and transparency advocated by the principle of publicity have given way to the freedom associated with anonymity in the virtual public sphere. This understanding of freedom brings an individual-oriented perspective in contrast to the collective awareness and sensitivity in the physical public sphere. In this space, the individual has the opportunity to become whoever he or she wants, to exist in any number, and to use any language. This idea of freedom often does not work as smoothly as in theory. For example, a person who shares an opinion on X (formerly Twitter) that may not be accepted by most of the current users may suddenly become a target, and their presence on that platform may be terminated. On the other hand, an opinion from a well-known individual can become widely accepted and so gain more significance than one from a regular user.[382] This is an extremely powerful privilege and can be quite concerning depending on the intended use. An individual may prefer to use this power to advocate for a good cause and be the voice of those who do not

[379] Ryan Scavnicky, "The Metaverse IRL: Why Another Look at Las Vegas Helps Us Understand How Most Virtual Environments Fall Short," *The Architect's Newspaper*, December 28, 2022, https://www.archpaper.com/2022/12/why-its-time-to-return-to-vegas/, Accessed August 20, 2024.
[380] William J. Mitchell, *City of Bits: Space, Place, and the Infobahn*, 8.
[381] Cemre Edip Yalçın, *Klasik Kamusal Alandan Sanal Kamusal Alana; Demokrasi ve İnsan Hakları İdeali için Normatif bir Değerlendirme* (İstanbul: Onikilevha, 2022) as cited in Çetin, *Şahlar, Piyonlar ve [Meta]Kent*.
[382] Alexey Salikov, "Hannah Arendt, Jürgen Habermas, and Rethinking the Public Sphere in the Age of Social Media," 91.

have the necessary means or to influence public opinion, incite people to enmity, and make a personal profit. This situation is closely related to the blurring of public and private spheres.[383] Highly connected public spheres allowed for the private spheres to be publicized. Anyone can now make incredibly personal statements on social media and other platforms without any filter for public concern. If those statements come from a public figure or a politician, it could lead to public unrest and polarization in society.

Secondly, the concept of public space includes the principles of togetherness, partnership, and collectivity, and this togetherness takes place in a space that exists independently of the subject and is perceived in the same way by everyone. On the other hand, in the virtual public space, this interface is different for everyone. This difference can be caused either by the algorithm, i.e., the algorithm can bring up items that are compatible with everyone's interests, and thus the illusion of a subjective public space curated for each individual emerges. In contrast to the physical public sphere, there are individualized public spheres where society cannot be objectively monitored and therefore cannot be accurately inferred and, as a result, consensus is unlikely to be reached. The other possible reason for the difference may be the connection to and experience of this virtual public sphere. Although this scenario assumes that we now exist in the virtual world, the physical foundations (the human being herself, a smart device, an internet connection, etc.) are still in the equation. The inequality of these foundations leads to the inequality of the virtual public sphere, which we can consider as an extension of the former. Possible situations such as not having a smart device, enough equipment, proper internet connection, or enough digital literacy, etc., take away the most basic principle of the public space, which is the human's right to be there. The concept of a singular "Internet" has fragmented into multiple "internets," shaped by software's filtering

[383] Ibid.

powers, where elite transnational groups experience a faster, interactive, and relatively empowering version that appears democratic and meritocratic to them.[384]

Another difference in the virtual public space is that it lacks the responsibility of being physically together. We can think of the physical public space as a stage, and every being it contains is in view of other beings, and this being in view provides a kind of orchestration of the space. Jane Jacobs' idea of "eyes on the street" is one of the foundations of this idea. Public space brings with it a responsibility not only toward humans but also toward animals, plants, insects, water, atmosphere. Cities that impose this situation as a smart city approach under the argument of being extra safe with the CCTV cameras they use in every public space are becoming more and more common. However, as discussed in Chapter 2.2.3, this approach has various challenges, such as unauthorized data collection, biased profiling, and exclusion of marginalized groups while trying to ensure security. However, as Broeckmann claims, neither presence nor visibility alone can offer the possibility of engaging in public life now that a feeling of active presence and involvement in public affairs has been supplanted by symbolical representation, mediated participation, and the equation of consumerism with democracy.[385]

According to Benkler, the ease of effectively communicating in the public sphere "allows individuals to reorient themselves from passive readers and listeners to potential speakers and participants in a conversation."[386] People now have a ground for creating their own voices, making them heard, and connecting with like-minded people all around the world. They can create their own micro-communities across the globe that are not bounded by space and time. This opportunity also allows for the possibility of not necessarily being bound to one's identity. The right to the public sphere brings along the right to anonymity and de-anonymity with itself. So, the

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[384] Stephen Graham, *The Cybercities Reader*, 325.
[385] Andreas Broeckmann, "Public Spheres and Network Interfaces," 380.
[386] Yochai Benkler, *The Wealth of Networks: How Social Production Transforms Markets and Freedom* (New Haven: Yale University Press, 2006), 213.

identity of the traditional public sphere does not necessarily correspond to the identity of the new alternative public sphere. On the one hand, it allows for more diversity by letting in a wider spectrum of people and opinions. On the other hand, it tends to contribute to the fragmentation of public discourse.[387] Social media, or the virtual public sphere, enables the emergence of parallel communities, some of which may adopt extreme views and refuse to communicate with those from other groups.[388] Given that the algorithm used in social media and others alike is developed in such a way to curate the content based on the user's internet history, the individual is majorly exposed to views similar to hers that eventually create a skewed understanding of the impact of the particular view and a biased image of the rest of the society. This situation exacerbates the isolation, fragmentation, and polarization further, both on social and spatial levels, as the members of these groups are consistently exposed to the content supporting their thoughts and arguments.

As technological advancements continue to digitize the public sphere, there is a growing tendency for technology giants to play a dominant role in shaping it. Taxi, car-sharing, bicycle and electric scooter, food delivery, accommodation, and GPS applications are mostly dominated by a single company (Uber, Airbnb, CityMapper, etc.). The spatial reading of this situation suggests the presence of several potential challenges. First of all, there seems to be a process that gradually shapes public space in a way that may lead to greater uniformity, potentially diminishing its heterogeneous character. The dominance of the same companies in urban space means that the way space is used is also becoming uniform. Moreover, since the main motivation of these companies is to ensure the continuity of customers and capital, urban space is often only an intermediary. The main purpose is not to experience the space and relate to the things that make up the space but to use that

[387] Alexey Salikov, "Hannah Arendt, Jürgen Habermas, and Rethinking the Public Sphere in the Age of Social Media," 90.
[388] Terje Rasmussen, *The Internet Soapbox: Perspectives on a Changing Public Sphere* (Oslo: Universitetsforlaget, 2016), 74.

specific product within the space. It is also possible to read this as the re-imperialization and the growing totalitarianism towards the public space today, as Çetin describes it.[389]

### 5.2.1 Hybrid Space

The premise that data-driven activities are essentially political and molded by various types of socially constructed knowledge underpins approaching smart city-related difficulties and concerns via the perspective of problematization.[390] Public space is to be considered a hybrid space which is the product of the alliances between physical entities and digital information-communication networks, of architectural-urban and media space. Therefore, designing the relationship between the physical and digital public domain is becoming the challenge in architecture's role of defining and materializing spaces for social interaction: investigating the relationship and interconnection of the "soft" city with its finite material counterpart, the living environment, speculating about interfaces between the "virtual" and the material urban world, and designing hybrid (analog-digital) communicational spaces.[391]

The emerging concept of "soft urbanism" is concerned with the challenge of designing the relationship between the physical and digital public domain. It is involved with information/communication processes in public space, as well as the soft aspects that underpin and modify urban sprawl: invisible networks that act as attractors, transforming traditional urban structures, interweaving, ripping open and cutting through the urban tissue, and requiring interfaces.[392] It is thus not about

[389] Murat Çetin, *Şahlar, Piyonlar ve [Meta]Kent*.
[390] Damion J. Bunders and Krisztina Varró, "Problematizing Data-Driven Urban Practices: Insights from Five Dutch 'Smart Cities,'" *Cities* 93 (2019): 145–52, https://doi.org/10.1016/j.cities.2019.05.004, 146.
[391] Hybrid Space Lab, "Soft Urbanism," https://hybridspacelab.net/project/soft-urbanism/, Accessed November 5, 2023.
[392] Ibid.

designating locations, but about establishing frameworks for self-organization processes. The interventions will focus on expanding infrastructures rather than control and determination.[393]

The shift in the discourse paved the way for emerging theories. One that was formalized by Keller Easterling conceptualizes the shifts in the ways in which architectural and urban space are produced with the formulation of the "active form" and "object form." The active form is an entity that determines and produces the physical bits of our cities. Looking at the active form, according to Easterling, is a way to "untune" our eyes from buildings and discuss infrastructure performativity from a political and spatial standpoint, providing a unique understanding of the complexities involved in the relationship between the urban fabric and telecommunications.[394] She questions the rigid nature of the "object form" that is in a completed state, not offering a possibility of evolution that will accompany the needs and demands of the time. Active form, in other words, is a challenge that is directed towards our design mechanism as well as organizational and political model. Where "object form" refers to more traditional, physical products of design, "active form" refers to infrastructures in which information is carried in activity: not a building with kinetic components but a system of relations unfolding across time. She turns our attention to the importance of infrastructure space performance—laws, regulations, optimizations in the production of space—and the power that resides in working with or on active form. This is urban software that is performed in urban space, not on computer hardware.[395]

Addressing architecture and urbanism through the means of "soft" dynamics is not a new paradigm. Many architects and urbanists have worked on the formulation of

[393] Ibid.
[394] Selena Savic, "Exploring the Identities of Digital Processes in an Architectonic Context – Part 2," January 8, 2018, http://digicult.it/news/esplorare-le-identita-dei-processi-digitali-contesto-architettonico-parte-2/, Accessed October 20, 2023.
[395] Ibid.

interesting conceptions, initiating thought-provocative discussions with their seminal works. For instance, N. John Habraken developed an interesting approach, claiming that by separating structure and infill, a participative and flexible design could be achieved. He devised a "plug and play" system, in which the architect provides the hardware (structure) and then sits back and watches while users design their immediate living environment. The architect, under Habraken's paradigm, created a system that the residents would adapt and respond to. It is a multi-time scale interactive architecture that is driven by the user.[396]

Similarly, given a masterplan brief, Christopher Alexander, the architect behind the Oregon Experiment, would construct a mathematical, grammatical pattern language rather than buildings. Alexander proposed a radical new way to construct best-fit yet coherent settings for a wide community of stakeholders in the Oregon Experiment, one that would enable the entire group to make decisions in real-time rather than being governed by a rigorous, unique, and solitary masterplan. Alexander's Pattern Language would be the adaptable glue that kept a campus-scale project together as it grew. These patterns provide users with a solid foundation on which to make their design decisions. Each individual and group of individuals will be able to develop their own unique environments, but always inside the morphological framework established by the patterns.[397]

According to Indy Johar, the most critical narrative today is the shift from the command-and-control approach of the industrial age to the distributed, shared, intelligent, and networked ecosystems of the information age.[398] He believes that architecture is going to become more and more powerful as we move away from the idea of management and toward creating conditions for behavioral nudges, self-

[396] Carlo Ratti and Matthew Claudel, *Open-Source Architecture* (New York: W.W. Norton, 2015), 31.
[397] Ibid, 48.
[398] Rory Hyde, "The Civic Entrepreneur Indy Johar 00:/," *Future Practice: Conversations from the Edge of Architecture* (London: Routledge, 2012).

organization, and a deep influence on systems and the method of building systems, the "architecture of systems" as opposed to the "architecture of brick buildings."[399]

## 5.3 Participatory Planning: Right to Transform Urban Space

This evolved, transformed, reproduced, or redefined space is under the constant influence of technological advancements, depoliticization mechanisms, and different modes of interaction. While it is being transformed from a tangible, collective realm into a hybrid or predominantly virtual domain, control and agency over these spaces shift increasingly towards central authorities, private corporations, and data-driven decision-making. This can go so far as to jeopardize citizens and communities in making their voices heard to affect the design, governance, and functionality of the very spaces they inhabit. Addressing this problem necessitates an understanding of planning processes and their relation to technological, governance, and spatial underpinnings. Shifting the focus from spaces as products to spaces as processes of negotiation and co-creation, participatory planning recenters the dialogue on the right to shape urban space, the essential component of the right to the city. Participatory spatial practices challenge the conventional ways of planning by reasserting the role of citizens as co-creators and decision-makers in the urban fabric.

To begin with, in the 1960s, a rise in community consciousness and social responsibility gave birth to a movement that established community design centers in the United States and the United Kingdom, inspired by Paul Davidoff's advocacy model, where design and planning professionals rejected traditional practices, opposed urban redevelopment, championed the rights of the poor, and developed methods to foster citizen participation in shaping their environments.[400]

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[399] Ibid, 50.
[400] Henry Sanoff, "Multiple Views of Participatory Design," *METU Journal of Faculty of Architecture* 23, no. 2 (2006): 131–143; also cited in Mohammad Nasim Alhanoush Alkhalaf,

### 5.3.1 Principles for Participatory Planning

The direct involvement of citizens in planning processes has been one of the challenging subjects in current urban planning theory. In conventional planning methods like Blueprint or Master Plan, the planner and the governing bodies are the ultimate rulers.[401] In this approach, the government typically hires skilled professionals to pinpoint a range of problems and provide comprehensive solutions based on practical planning principles.[402] The procedure is not open to the public, who may participate and express their concerns. Instead, certain political and technical authorities make the choices for them, putting the needs of the public, the economy, or healthcare first. This understanding was characteristic of modernist planning. Modernism's functionalist trend in urban planning required the need for a rigorous and schematic spatial separation of the four functions of living, working, recreation, and transportation. This CIAM "functionalism," it is said, led to further loss of the whole body of the city and the emergence of lifeless, monofunctional zones following the revolutionary transformation of cities caused by industrialization and the devastation of the Second World War.[403]

The campus revolutions of the late 1960s fostered the emergence of radical social and political movements, cultivating a liberal humanism perspective across all disciplines. As a result, one can see how social and humanist matters such as urban renewal, affordable housing for middle-class families, and social planning are starting to dominate the discourse. Early modernist architecture and urbanism's highly constructed, systematic, and logical concerns shifted to the influence of

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*Towards an Inclusive Theory of Participation in Architecture and Urbanism* (master's thesis, Middle East Technical University, 2023).

[401] Peter Hall and Mark Tewdwr-Jones, *Urban and Regional Planning*, 6th ed. (New York: Routledge, 2019), https://doi.org/10.4324/9781351261883.

[402] Marcus B. Lane, "Public Participation in Planning: An Intellectual History," *Australian Geographer* 36, no. 3 (November 2005): 283–99, https://doi.org/10.1080/00049180500325694.

[403] Daniel Weiss, Gregor Harbusch, and Bruno Maurer, "CIAM 4 and the 'Unanimous' Origins of Modernist Urban Planning," February 7, 2015, https://www.archdaily.com/596081/ciam-4-and-the-unanimous-origins-of-modernist-urban-planning, Accessed June 15, 2023.

design on the social structure. Moreover, the idea of deliberative democracy has been incorporated into planning theory, citizen participation in planning has gained attention, and the validity of planning agencies' technocratic decision-making has been questioned.[404] The issue of the citizen as a builder and user has become an increasingly prevalent topic of conversation. In recent literature, "right to the city" and "citizen participation" became growing in importance as novel opportunities were made possible by technological advancements.

Citizens' desire to influence, change, and transform the environment in which they live, especially when they cannot take part in an official and institutional process, leads to the formation of initiatives that they realize on their own. Some initiatives and think tanks, for instance, are formed to revitalize the cities, reclaim the lost vibrancy, and increase collective activity. The Playable City movement is one of them, in which the founders aim for "an affectionate re-appropriation of public places to get back city-center life from our bunker-high-rise isolation."[405] Different versions of the Playable City project can be found in Melbourne, Tokyo, Tel Aviv, London, São Paulo, and Austin, Texas.[406] Through acupuncture interventions, these initiatives aim to have a broader impact on the neighborhood and city levels. Even though the long-term benefits of these small-scale, community-initiated projects are questionable, what they clearly present is the demand for a community presence on the streets. This approach is called "Tactical Urbanism," also known as DIY Urbanism, Planning-by-Doing, Urban Acupuncture, or Urban Prototyping, refers to a city, organizational, and/or citizen-led approach to neighborhood building that uses

[404] Susan S. Fainstein, "Spatial Justice and Planning" [« Justice spatiale et aménagement urbain », trans. Philippe Gervais-Lambony], *Justice Spatiale | Spatial Justice* 1 (September 2009), http://www.jssj.org, 2.
[405] Claudio Marinho, quoted in Julian Baggini, "Playable Cities: The City That Plays Together, Stays Together," *The Guardian*, September 4, 2014, https://www.theguardian.com/cities/2014/sep/04/playable-cities-the-city-that-plays-together-stays-together, Accessed June 15, 2023.
[406] Ibid.

short-term, low-cost, and scalable interventions to catalyze long-term change.[407] They advocate for a community interest rather than an individual interest.

On the other hand, participatory planning recognizes the citizen as an active agent of the process. However, there is no single method of participation, and it does not mean the same thing for everyone in every context; therefore, it is a challenging phenomenon both in terms of its discourse and its practice. According to Joseph Schumpeter, citizen participation cannot be regarded as a core aspect of democracy since voting for leaders during election seasons is its main purpose.[408] This point of view contends that democracy is only a mechanism, that participation has a narrow purpose, such as voting, and that broad public involvement jeopardizes the system's operation since it is difficult to balance the conflicting interests of so many people.[409] On the other hand, Jean-Jacques Rousseau, who created a political theory based on the ideal society in response to the problems facing the urban population in the 18th century, emphasized the concept of active (expressive) involvement. Rousseau asserts in *Du Contrat Social* that "the individual participation of each citizen in political decision-making is essential and vitally important to the functioning of the state laid the foundation for theories on the role of participation in modern democracies."[410]

At this point, especially in the context of spatial justice, scale becomes an important input. Planning is sensitive to scale because jurisdictional boundaries usually restrict the scope of planning decisions to relatively smaller areas.[411] Fainstein gives the example of a gated community, in which a resident's decision to oppose the

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[407] Tactical Urbanist's Guide, "What is Tactical Urbanism?" http://tacticalurbanismguide.com/about/, Accessed June 15, 2023.
[408] Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper & Row, 1962), 1883–1950.
[409] Ebru Kamacı, "A Novel Discussion on Urban Planning Practice: Citizen Participation," *ICONARP International Journal of Architecture and Planning* 2, no. 1 (2014): 1-19, https://iconarp.ktun.edu.tr/index.php/iconarp/article/view/43.
[410] Jean-Jacques Rousseau, *The Social Contract*, Penguin Great Ideas (Harlow, England: Penguin Books, 2004).
[411] Fainstein, "Spatial Justice and Planning," 3.

municipality's plan to build recreational facilities may be democratic and equitable within the context of the community, but it may be undemocratic and unfair within the larger context.[412] A collaborative or communicative planning approach could possibly argue that the ideal solution would be for different views to come together, discuss, exchange ideas, and find a common path, which involves a certain level of compromise.

However, fair planning does not always require a homogenous distribution. What Soja describes as practical segregation and Fainstein analyses in terms of diversity is not unfair or divisive, but rather democratic, when segregation is done directly or indirectly of their own volition, depending on the preferences or lifestyles of the segregated people. Similarly, Young supports porous borders and advocates for a differentiated solidarity that would let communities voluntarily come together.[413] People have the right to defend themselves against others who do not respect their way of life. The crucial thing is that people are not treated differently or excluded because of attributes like gender or race.[414] In highly diverse cities such as London and New York, some ethnic communities tend to cluster in certain places. This is often due to a desire to be surrounded by people with whom they can speak their mother tongue and with whom they can practice their religious and cultural activities. However, when these neighborhoods receive less investment from the state and are provided with fewer transport, education, cultural, sports, and other recreational facilities, we see inequitable planning. The opposite, i.e., investing too much and providing new employment and recreational opportunities, will also lead to an inequitable outcome, as it carries the danger of gentrification.

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[412] Ibid.
[413] Fainstein, "Spatial Justice and Planning"; Iris Marion Young, *Inclusion and Democracy* (Oxford: Oxford University Press, 2002; online ed., Oxford Academic, 1 November 2003), https://doi.org/10.1093/0198297556.001.0001, 216.
[414] Fainstein, "Spatial Justice and Planning," 11.

Conventional methods of city planning and administration are becoming outmoded as a result of smart technology and the lifestyle and culture they provide. Now with smart technologies and globally connected platforms at hand, the expectations from the citizens have also significantly changed. As it has spread to the grassroots more and more, technology has gone beyond being a tool managed by governments and companies and has given power to citizens. Citizens, who use their right to change the environment they live in with approaches such as tactical urbanism and DIY urbanism, continue to develop different methods by using the possibilities of technology. "Urban hacking", for instance, suggests a shift away from centralized urban planning toward a more inclusive method of city-making that produces new varieties of public spaces by using social and digital media platforms. Here, the term "hacking" denotes the fun, creative, cooperative, and occasionally transgressive ways of behavior present in different hacker cultures, but this time used in a positive way in the context of civics.[415] It proposes a shift from "city as governance" to "city as enabler."[416] Its practices can be exemplified by some public space projects integrating smart technologies as interfaces for interaction. Plug-in devices for polling, conveying information, or just having fun are becoming anomalous yet blended tools within a public space. However, the concern for a larger-scale impact is still relevant. Its power to shift the ways in which we perceive, design, and govern our cities and create an impactful systemic change is questionable. On the other hand, even though it is a minor intervention, it opens up three-faceted thinking: affordances of smart technologies, qualities of public space, and a governmental structure that can allow for a degree of independence and flexibility.

As opposed to self-initiated civic engagement, which is a bottom-up voluntary activity, citizen and community engagement relate to initiatives that an institution,

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[415] Martijn de Waal and Michiel de Lange, "Introduction—The Hacker, the City and Their Institutions: From Grassroots Urbanism to Systemic Change," in *The Hackable City: Digital Media and Collaborative City-Making in the Network Society*, ed. Michiel de Lange and Martijn de Waal (2019), 1–22, https://doi.org/10.1007/978-981-13-2694-3, 1.
[416] Ibid.

e.g., the government, should pursue in order to promote cooperation while addressing issues of public interest.[417] While citizen engagement focuses on engaging individuals through interaction and conversation, community engagement aims to work with identified groups to address their collective well-being.[418]

### 5.3.2 The Case of the Istanbul Taksim Urban Design Competition

The public space serves as the physical manifestation of politics and supports the exercise of urban rights and justice. Not only can this space facilitate political mobilizations, but its role in political practices also positions it as crucial in the shift from technocracy to democracy. Designing and planning this dynamic space, which is charged with social, cultural, economic, political, and historical values far surpassing the basic concepts of "open space" or "public access"—is inherently difficult with democratic values in mind. Meanwhile, those in power often seek ways to depoliticize and sanitize this space through technocratic approaches. As a result, participatory planning and similar methodologies discussed earlier are gaining importance in this critical place. Taksim serves as a distinctive case study for exploring urban rights and justice within this complex, multi-actor environment. The context has a social, cultural, and historical structure that influences both the space and the society inhabiting it. Throughout its history, this place, which has stood out with its political significance, has been striving to adapt to the smart city trend introduced by the changing local governance. Nevertheless, they made it clear that its intention is to employ this trend not only for a technocratic agenda but also to promote social justice and foster a more inclusive urban environment. The Taksim Urban Design Competition has emerged as a product of this approach. The competition provides a concrete example of participatory urban planning in the

[417] Anastasiu, "Unpacking the Smart City through the Lens of the Right to the City: A Taxonomy as a Way Forward in Participatory City-Making," 249.
[418] Ibid.

context of social, political, and spatial contestation. Examining this competition highlights how public space can become a focal point for debates on governance, justice, and the right to shape the city, and provides a lens through which to explore the broader challenges of implementing participatory urbanism in contexts marked by power asymmetries, socio-political tensions, and rapid urbanization.

**The Background: Gezi Manifesto**

The Taksim Urban Design Competition for the renovation of Taksim Square stands at a very important point both in terms of the context it addresses, its symbolic value as a public space carrying the struggle for the right to the city in the historical process, and the method and functioning of the competition, with an understanding of participation that is aware of new technologies. The competition is quite appropriate to exemplify the tripartite understanding of the thesis: digital technologies of a smart city addressing the use of the digital platform as a channel of information and communication throughout the entire competition process, as well as the final stage of public voting; governance, pointing to the reasons behind the failure of the implementation, even though it started with the right motivation and process; and urban space, the values that distinguish the square from other public spaces. Due to its historical process and the recent Gezi protests, understanding Taksim is essential for understanding the competition process and evaluating it from the perspective of the right to the city.

In the early nineteenth century, Taksim, surrounded by the Artillery Barracks and a number of military buildings, became an urban nexus connecting the newly developing areas of the north to the old city via the Grande Rue de Péra (today's Istiklal Street).[419] After the foundation of the Republic, Taksim was deemed suitable

[419] Bülent Batuman, "Everywhere Is Taksim: The Politics of Public Space from Nation-Building to Neoliberal Islamism and Beyond," *Journal of Urban History* 41, no. 5 (2015): 881-907, https://doi.org/10.1177/0096144214566966, 884.

for the ceremonial area planned to be organized in the city, and a monument was planned to be built as a start.[420] According to Batuman, there are two stages in Taksim's transformation into its current character. The first stage was the transformation of the open area, which was previously used as a drill field, into a square with the Independence Monument, which was erected in 1928 at the corner of the open area and symbolized the newborn nation-state.[421] The second stage was the demolition of the Artillery Barracks in 1940 and the expansion of the square to the east in line with Henri Prost's plan, and its meeting with İnönü Esplanade, now known as Gezi Park.[422] In the areas designed under the general frameworks of Park No. 1 and Park No. 2, Prost designed a ceremonial square, and the İnönü Esplanade (Gezi Park) as a recreational hub in connection with the Park No. 2. Gezi Park was designed as an extension of Taksim Square, incorporating terraces and green spaces, serving symbolic purposes, embodying the modern, secular identity of the Republic[423] (Figure 10). As Akpınar states, Prost's plan has a greater meaning not only as a physical restructuring of the city but also as a tool that carries the secularization and modernization goals of the nation-state to the urban space. Accordingly, through its *espaces libres*, roadways, and emphasis on pre-Ottoman Greco-Roman ties, the plan addressed themes of youth, gender equality, and secularization, serving as a powerful political tool to implement the nation-state's legal, administrative, and cultural reforms in Istanbul's urban landscape.[424]

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[420] Doğan Hasol, "Taksim nasıl merkez oldu?" *İst Dergi*, July 21, 2020, https://www.istdergi.com/sehir/mimari/taksim-nasil-merkez-oldu, Accessed July 8, 2024.
[421] Bülent Batuman, "Everywhere Is Taksim: The Politics of Public Space from Nation-Building to Neoliberal Islamism and Beyond," 885.
[422] Ibid.
[423] F. Cânâ Bilsel. "Espaces Libres: Parks, Promenades, Public Squares...", in *From the Imperial Capital to the Republican Modern City Henri Prost s Planning of Istanbul 1936-51*, 349-380. İstanbul: İstanbul Araştırmaları Enstitüsü, 2010.
[424] İpek Akpınar, "İstanbul'u (yeniden) inşa etmek: 1937 Henri Prost Planı," in *Dipnot*, ed. (Ankara: ODTÜ Mimarlık Fakültesi Yayınları, 2010), 107–124.

Figure 10 Aerial view of Taksim Square and Gezi Park in the late 1950s. Retrieved from https://x.com/EskiTurkiyeFoto/status/1074681667737006080?lang=ar

Over time, with the privileges granted to the private sector, the square and its surroundings begin to host different structures.[425] The area around Taksim Square and Gezi Park was transformed into a hotel district, and its characteristic of being a public cultural focus began to be damaged by moving away from the human scale. However, Taksim somehow retained its collective memory and continued to exist as a space of struggle, protest, and vocalization. Beginning with the uprising at the Artillery Barracks at the beginning of the 20th century, the erection of the Bayonet Statue after the 1960 coup, the protest demonstration known as "Bloody Sunday" (Kanlı Pazar) in 1969, and the public meeting at 1 May Labour Day in 1977, when a shooting killed 41 people, Taksim Square became a place of political

[425] Canan Ganiç and İpek Akpınar, "Kentsel Kuratörlük: Taksim Üzerinden Katılımcı Mimarlık Modeli," *Mimarlık Dergisi*, no. 427 (2022): 30.

representation.[426] During the AKP's reign, Taksim Square was shaped not only by city-center gentrification but also by Türkiye's political scene in the 2000s, as the AKP, amidst conflicts with state powers like the military and judiciary, adopted a liberal agenda to expand democratic rights, symbolically opening Taksim for May Day parades in 2010—only to ban such gatherings again by 2013 under the pretext of construction.[427] The 2013 Gezi Park Protests occurred in the aftermath of such a historical background.

With the intention of reorganizing Taksim, the authorities of the time started to work rapidly with two different projects that emerged as a result of a completely closed process. The plan for the pedestrianization of Taksim was immediately put into practice; the project for the reconstruction of the Artillery Barracks in Gezi Park, which would include a shopping mall, hotel, and residences, was taken to the High Council for the Protection of Cultural and Natural Heritage, despite the rejection of the Istanbul Regional Board for the Protection of Cultural Assets No. 2, and the board rejected the decision of the regional board and authorized the project.[428] In a sense, this project was the final blow to Taksim, whose face had been slowly changing for years. The reconstruction of the Artillery Barracks, intended to include a shopping mall, was promoted as a way to "recover history" and restore Istanbul's Ottoman heritage, with its onion domes, horseshoe arches, and "Islamic" motifs repurposed to embody a new political symbolism over seventy years after the original demolition.[429]

When the trees in Gezi Park started to be cut down as part of the project, an unpredictable resistance was sparked. This resistance, which started with an

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[426] Ibid.
[427] Bülent Batuman, "Everywhere Is Taksim: The Politics of Public Space from Nation-Building to Neoliberal Islamism and Beyond," 894.
[428] Tayfur, "Gezi Parkı'nın Geçmişi."
[429] Can Bilsel, "The Crisis in Conservation: Istanbul's Gezi Park between Restoration and Resistance," *Journal of the Society of Architectural Historians* 76, no. 2 (June 2017): 141–145, https://doi.org/10.1525/jsah.2017.76.2.141, 143.

environmentalist concern to protect an urban park, spread first to Istanbul and then to other cities of Türkiye. While the resistance camped in the park for two weeks and kept vigil, protesters in other parts of the country demonstrated for days to prevent the demolition. The Gezi Park Protests have developed not only as a resistance against the planned project but also as an attitude against the policies pursued by the current regime and the methods and language it used to do so. While freedom of expression had recently been jeopardized by lawsuits against journalists, university students, and lawyers, the prospect of the destruction of one of Türkiye's most socio-politically important public spaces pushed people to defend their urban rights. After weeks of resistance, the project was abandoned, and Taksim was left to its own devices for years. With the changing local administration, the issue of reorganizing Taksim came back to the agenda. However, any intervention in this highly controversial area, which has a sensitive place in the public memory, had to be different from the methods that have been customary until now.

**The Urban Design Competition**

Especially after the 2019 local elections won by the opposition Republican People's Party, the discourses of "participatory governance" and "participatory planning" were promoted with the help of digital technologies. The scenarios encountered at the point where these discourses, which contain a very positive narrative, move from theory to practice are a lesson for the next initiatives. One of the most prominent of these initiatives was the Taksim Square Urban Design Competition. The competition is part of a series of competitions organized by the Istanbul Metropolitan Municipality under the slogan "Istanbul Rejoins Its Public Spaces," which includes Kadıköy, Salacak, and Bakırköy along with Taksim.

Istanbul Metropolitan Municipality announced the Taksim Urban Design Competition on March 2, 2020 with the slogan "Taksim is Yours, Decision is Yours" for the redesign of Taksim Square. The project draws attention to the complex infrastructure network of Taksim Square and the problems it brings and emphasizes

the need to produce contemporary solutions. The design proposals were expected to be handled with a coherent and holistic approach at all scales together with the superstructure decisions to be presented. In addition, the projects were also expected to produce lighting proposals, urban furniture and solutions for climatic conditions such as wind and sun, which can ensure night use and safety with a design approach that responds to the 24-hour usage habits of the square; pedestrian and traffic solutions that strengthen the connections of the square, which is the nodal point of an important transport network, with public transport supported, metro lines and stations; develop proposals that re-evaluate the potential of cultural centers, public buildings, educational institutions and tourism structures in the area of influence of the square and enrich urban life; consider the symbolic value of Taksim Square and its role in public communication; prefer permanent and strong urban landscape approaches with local and compatible plant species suitable for the identity of the area in landscaping arrangements and produce public green spaces.[430]

In addition to emphasizing and expecting the public space value of Taksim Square and the importance of its location within the city, the competition specifications also emphasize the values that give Taksim its unique character. It is underlined that what makes Taksim different is its historical layers and its quality of being "a place for everyone and everything." Since the foundation of the Republic, the symbolic and representational aspects of the city have been emphasized, in which the governments have shown power through the space in every period. Although no reference is made to the Gezi Park Protests of the recent past, the main objectives of the designs for the competition are aimed to "include the disadvantaged segments of society and defer social, cultural, and class distinctions" and "take into account concepts such as urban

[430] Konkur İstanbul, "Taksim," https://konkur.istanbul/taksim/, Accessed April 26, 2024.

identity, sense of place, historical background and collective memory," as stated in the competition specification.[431]

The competition is important not only in terms of its subject and context but also in terms of its process and method. Unlike the usual practice of architectural and urban design competitions in Türkiye, a participatory approach was followed in both the preparation and evaluation process. In order to bring stakeholders together during the preliminary preparation process of the competition, for the purposes of information transfer and sharing, the "Junction Stop" (Kavuşma Durağı)—designed by IND [Inter.National.Design] as a temporary lightweight structure—was placed in Taksim Square to be used during the competition process. The lower part of the structure, which consists of two amphitheaters facing each other on the upper side, is intended to be used for the exhibition related to the competition. A number of questionnaires, workshops, symposiums, and panels were conducted to collect opinions and views during the preliminary preparation process.

In the evaluation process, a multiple selection system was adopted, and a three-stage method was followed in which the jury, local administration, and the citizens had an equal say.[432] Firstly, the jury selected three equivalent projects from 146 submitted projects. After the colloquium, these three projects were exhibited at the Eurasia Show and Art Centre in Yenikapı for a week, and the public and stakeholders were informed about the projects with visuals, explanations, and presentations prepared by the authors of the projects in a temporary communication center.[433] The projects and videos were made public and shared on the internet. In addition, exhibition installations describing these three projects were set up in Taksim. Afterward, the inhabitants of Istanbul participated in the voting for these three projects on the

[431] Translated by author; İstanbul Büyükşehir Belediyesi, Kültür Varlıkları Daire Başkanlığı, and İstanbul Planlama Ajansı, Konkur İstanbul, Taksim Kentsel Tasarım Yarışması, *Şartname*, March 24, 2020, 5.
[432] Ganiç and Akpınar, "Kentsel Kuratörlük: Taksim Üzerinden Katılımcı Mimarlık Modeli."
[433] Ibid.

mobile application with their Turkish ID numbers. This process was carried out under the control of the City Council.

First of all, this competition is valuable because it creates a participatory process by using jury evaluation and public voting together. The redesign of Taksim Square, which has such an important place in the history of both Istanbul and Türkiye, according to the project determined only as a result of the jury evaluation, would be an injustice to the will of the users who essentially make the square a square. On the other hand, submitting the project to public voting in a "majority democracy" method would ignore the sensitivity of the disciplines of urban design, architecture, and sociology in this process that requires a multi-layered understanding. This process can also be considered as an experimental attempt to examine whether it is possible for different groups to come together and reach a decision around common values for the production of a space that can ensure the coexistence of different groups.[434] Therefore, the combination of these two approaches is crucial in the context of this competition.

Although this process was a positive initiative in itself, it also attracted some justified criticisms. First of all, the fact that the right of the people of Istanbul to have their say on the reorganization of Taksim Square was limited to choosing among the three projects selected by the jury led to the questioning of whether the process was a fully participatory process. In Arnstein's gradation scheme, we can say that this process corresponds to the tokenism step. This process, which devalues expert opinions by reducing participation to an act of selection, has remained a populist approach rather than an inclusive one, even though it was set out with good intentions.[435]

Another issue is that the whole process is primarily carried out in virtual space. Recent research suggests that conventional participation methods such as public

[434] Ganiç and Akpınar, "Kentsel Kuratörlük: Taksim Üzerinden Katılımcı Mimarlık Modeli."
[435] Yiğit Acar, "Popülizm ve Katılımcılık: Türkiye'de Son Dönem Deneyimleri," *Mimarlık Dergisi* 427 (2022): 13.

focus groups, conferences, town hall gatherings, public hearings, and public surveys, which we have been used to since the 1960s, are inadequate in today's context.[436] Time and budget constraints during the policy-making process, low citizen enthusiasm, a lack of citizen expertise, or challenges involving less articulate and socioeconomically disadvantaged groups in the process[437] are claimed to undermine this process. Advanced digital tools enrich the participatory process and make it much easier for those who can access them. However, when these tools go beyond being a facilitator and become the process itself, they pave the way for the negative consequences mentioned in the chapter above (lack of inclusivity, easy control and manipulation of virtual public space, etc.). In the case of the Taksim Square Urban Design Competition, the transfer of the discussion to the virtual and discursive public sphere through online platforms and social media, both during the exchange of ideas, information, evaluation, and post-competition discussion stages, and the reduction of the presence in the physical public sphere to a secondary position and a representative dimension, has paved the way for the involvement of only interested people in the process with the guidance of the algorithm, rather than utilizing the potential of raising awareness and integrating the citizens who use the space on a daily basis into the process. Looking at the ratio of the number of participants to the number of people living in Istanbul, it is seen that the digital approach, which was expected to increase participation, did not yield the expected result (Table 6). The limited participation in this process, which will shape the future of Taksim Square—a site of historical and symbolic significance and a heavily frequented urban space—cannot be attributed solely to the presence of a digital threshold. The fact that the three projects submitted to the voting do not meet the expectations or the lack of belief in the realization of the result of the competition can also be shown among the

[436] Reinout Kleinhans, Maarten Van Ham, and Jennifer Evans-Cowley, "Using Social Media and Mobile Technologies to Foster Engagement and Self-Organization in Participatory Urban Planning and Neighbourhood Governance," *Planning Practice & Research* 30, no. 3 (2015): 237-247.
[437] Irvin & Stansbury, 2004; Roberts, 2004; Shipley & Utz, 2012; Ertiö, 2015

reasons.[438] Moreover, the fact that the language of the media used to present the projects was the professional language of the discipline (professional terms in architectural drawings and textual descriptions) undermined the understandability of the process for people outside the profession[439] and, therefore, prevented it from being a more inclusive process.

Table 6 Taksim Square Urban Design Competition Statistics

| **The first three projects that received equivalent awards from the jury** | **Number of votes[440]** |
|---|---|
| Project No. 15 | 86.597 votes |
| Project No. 19 | 77.592 votes |
| Project No. 16 | 45.539 votes |
| **Total** | **209.728 votes** |
| Population of Istanbul in 2020 | 15.462.452 people[441] |

The projects that came to the fore in the competition designed for an area with such a layered historical and socio-cultural background seem to be hesitant to address this basis in terms of both design and discourse. Firstly, an overall review of the finalist projects reveals a tendency to respond to the square's current undefined and concrete state. In order to do this, the participants mostly preferred to construct the square as a continuation of Gezi Park and integrate greenery (around concepts such as "freedom of movement," "urban commons," etc.). In a different approach, reproducing the urban fabric with buildings that will hold the borders of the square is also among the suggestions (as in the project "Re-Taksim"). Another tendency is

[438] Gülden Akıncı Kurtuldu, "Taksim Kentsel Tasarım Yarışması: Kamusal Belleğe Müdahalede Katılımcı(Sız) Bir Yaklaşım," *Marmara Üniversitesi Sanat ve Tasarım Dergisi* 14, no. 2 (2023): 22–47, https://doi.org/10.29228/sanat.27.
[439] Ganiç and Akpınar, "Kentsel Kuratörlük: Taksim Üzerinden Katılımcı Mimarlık Modeli."
[440] Arkitera, "İstanbul Meydanları İçin Oylama Tamamlandı," *Arkitera*, July 20, 2020, https://www.arkitera.com/haber/istanbul-meydanlari-icin-oylama-tamamlandi/.
[441] Turkish Statistical Institute, "Adrese Dayalı Nüfus Kayıt Sistemi Sonuçları, 2020," last modified February 4, 2021.

to construct the square as a cultural and artistic focus by offering various activities. The reference to the socio-political value of Taksim, which has been the scene of ideological interactions in the historical process, has either been deliberately left out of the issue (as in the project "Re-Taksim") or distanced by preferring to leave it in the past with a museum structure (as in the projects "Obruk," "Urban Commons," and Project No.16).

Among the three projects that received equivalent awards from the jury, the authors of the project number 15 (*Taksim Collective*) (Figure 11), which received the highest number of votes in the public voting, stated that they aim to remove barriers and increase connections in order to protect Taksim by respecting its memory and carry it into the future.[442] In this direction, a phased project design with as little construction intervention as possible, a flexible design approach that can be shaped according to different needs, increasing the connection of Taksim and Gezi Park with the city through a bicycle and pedestrian bridge, and a Taksim Collective platform that will include the project process, transformation phases, and management of Taksim and Gezi for participatory planning have come to the fore.[443] The Taksim Collective, which differentiates and highlights the project, is important as an alternative to an imposing design practice by observing the right to the city and as an approach in which the citizens have a say in all processes in Taksim Square. It can be said that the bridge, which starts from Maçka Park and crosses over Gezi Park to reach the square, does not fully serve the rich and dynamic public space scenario that is currently being built on the ground.

[442] Bi_özet, "Taksim Kentsel Tasarım Yarışması – beoffice: '…bariyerleri kaldırmayı, bağlantıları artırmayı öneriyoruz,'" October 27, 2020, https://bi-ozet.com/2020/10/27/taksim-kentsel-tasarim-yarismasi-beoffice-bariyerleri-kaldirmayi-baglantilari-artirmayi-oneriyoruz/, Accessed August 10, 2024.
[443] Ibid.

Figure 11 Project No. 15 Taksim Collective (Team Representative: Şerif Süveydan), Retrieved from https://worldarchitecture.org/article-links/evhnv/taksim-urban-design-competition-by-taksim-collecti

Project number 19 (*Obruk*) (Figure 12), which came second in the public vote, draws attention to the diverse socio-cultural structure of the city. In order to emphasize and encourage this structure, instead of "high art" as a method of expression, they propose "street art" in which all segments of society can participate.[444] Although the underground art culture proposed as an alternative to AKM's institutional stance is valuable for the square in terms of inclusiveness, the way the idea is put forward is controversial. Translating references such as multi-layered structure, art focus, and underground culture in a very literal way, the idea of the sinkhole is to open a slit in the square and take this promised focus underground. This rather ambitious and remarkable proposal leads to the question of whether the competition method has an impact on the design. The fact that the final stage of the competition is a public vote and that most of the voters do not have professional language, display techniques,

[444] "Eşdeğer Ödül – Taksim Kentsel Tasarım Yarışması," Arkitera, January 14, 2021, https://www.arkitera.com/proje/esdeger-odul-taksim-kentsel-tasarim-yarismasi-2/, Accessed July 29, 2024.

and a deep historical and theoretical background may lead designers to produce projects with a strong visual aspect in order to appeal to a wider audience; the same questioning can be made for the bridge in the Taksim Collective project, which won the first place in the voting.

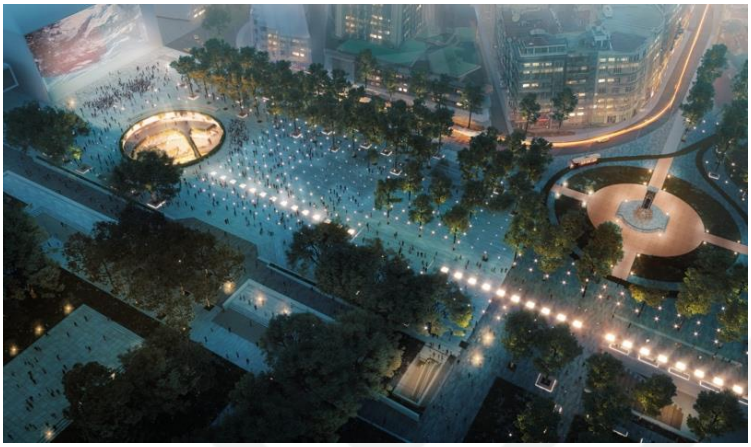

Figure 12 Project No. 19 Obruk (Team Leader: Kutlu İnanç Bal), Retrieved from https://www.2x1architects.com/portfolio-item/taksim-obruk/

The primary concern of the third project numbered 16 (Figure 13), was to make the square, which had become undefined and deserted due to the undergrounding of the road with the Taksim pedestrianization project, more defined by bringing the road back above ground and to make this route that feeds the square functional again. The designers, who considered the square as a public meeting area, imagined socio-cultural activities such as various celebrations, ceremonies, concerts, and rallies in this area.[445] The only reference to the history and character of Taksim Square is found in the proposal to transform the dysfunctional underground car passage into the Taksim Memory Museum. However, as mentioned above, instead of strengthening

[445] "Eşdeğer Ödül – Taksim Kentsel Tasarım Yarışması," Arkitera, September 24, 2020, https://www.arkitera.com/proje/esdeger-odul-taksim-kentsel-tasarim-yarismasi/, Accessed July 29, 2024.

the character of the square, a museum structure serves to express that it is a thing of the past.

Figure 13 Project No. 16 (Team Leader: Bünyamin Derman), Retrieved from https://www.arkitera.com/proje/esdeger-odul-taksim-kentsel-tasarim-yarismasi/

One of the projects that offered a different approach to the problem was *Participatory Action*, which won an honorable mention (Figure 14). The project first recognizes the dynamics of Taksim and seeks ways to channel this energy for negotiation and reconciliation.[446] In a sense, this search does not aim for a middle-ground solution required by "appealing to everyone" but for differences to exist and dialog as they are. With reference to the Gezi Park Protests, the project also explores the potential of using technology as a tool to enhance and channel democracy and interprets the relationship between physical and virtual space as symbiotic. The architects envision making the right to the city possible through the socio-political and socio-ecological interactions that will emerge from this relationship. In this direction, rather than conventional and static urban design practices, in order to

[446] Openact Architecture, "Participatory Action," https://openact.eu/filter/works/PARTICIPATORY-ACTION, Accessed August 10, 2024.

create a constantly evolving, dynamic fiction, it emphasizes "the designer as a 'facilitator' that enables a design mechanism that is a framework of interactive tools for different conditions of urban space."[447] In other words, the project envisions a hybrid space where virtual space is in constant collaboration with physical space. The proposal of a hybrid space where physical and virtual space are not alternatives to each other but exist by feeding each other at the same time is a meaningful proposal to think about the right to the city in Taksim Square through a new generation of public space understanding.

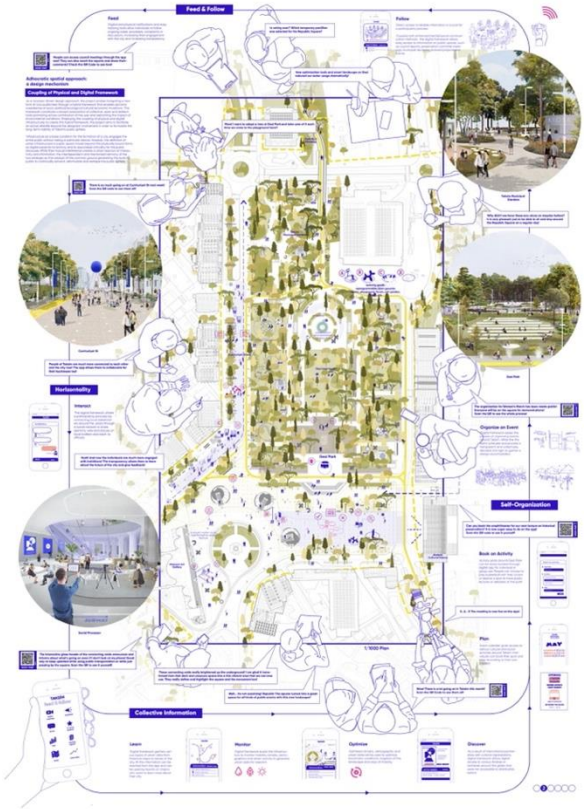


Figure 14 Participatory Action (Team Leader: Zuhal Kol), Retrieved from https://openact.eu/filter/works/PARTICIPATORY-ACTION

[447] Ibid.

**Reimagining Possibilities**

Although the common tendency in the projects to consider Taksim Square as an extension of Gezi Park and to expand the greenery is a subject of criticism, the competition is valuable because it opens a discussion on the character, role, and function of public space and the mission of the actors who shape it. The ability of public space—especially one with a significant political history such as Taksim Square—to preserve this identity while at the same time being the backdrop of daily life and accommodating different daily practices requires a more holistic perspective. In this context, considering the dynamics of the current epoch, beyond the conventional methods of architecture and urban design disciplines, there is a need for approaches that can re-create the public space every time, allowing it to exist in both the physical and virtual realm, and ensure that relationships exist on a more horizontal plane. Rather than designing every corner of the square, the project *Participatory Action* introduces a creative approach by using digital technology to establish a dynamic interplay between physical and virtual public spaces, allowing them to shape and enhance one another.

While the combination of jury evaluation and public voting is suitable for a participatory process, its effectiveness and efficiency hinge on the design of the process itself. Public participation in the Taksim Square Competition unfolded in two stages: first, in the preliminary phase, where ideas, demands, and criticisms were collected, and second, in the final phase, where the project to be executed was determined using a multiple-choice method. However, introducing a more varied approach can enhance public participation and mitigate populist tendencies. Therefore, it would have been more effective to continue the process beyond a public vote by initiating a second design round that incorporates feedback received (Figure 15). Although the project selected through the competition and the public voting has not been implemented yet, the process offers two key insights. First, it raises the question of whether the project selected by both the jury and the public as a participatory approach represents the best qualitative alternative for the future of

Taksim Square. Second, despite being a promising initiative for Istanbul and Türkiye, the competition did not give way to the implementation of the selected urban design project, ultimately highlighting the need to examine the reasons behind its failure. The fact that the process ended in this way raises the question of whether the source of the spatial problems is trying to solve through a participatory process is really hidden in the scale we are dealing with.[448] Spatial design is just one aspect that defines a square. Values such as democracy, freedom of expression, tolerance for diverse backgrounds, and respect for social memory demand a perspective that goes beyond mere design. Certainly, public involvement is a crucial element in reimagining Taksim. However, the point at which the public is involved in the process may be a point at which it can generate more value. Being involved at the very last stage, when the outcome will be determined according to the majority decision, restricts the will of the people and may prevent a healthy outcome due to the danger of populism. Therefore, the competition stands as a shallow implementation of participation. For this reason, a cross-scale and interdisciplinary approach should be adopted.

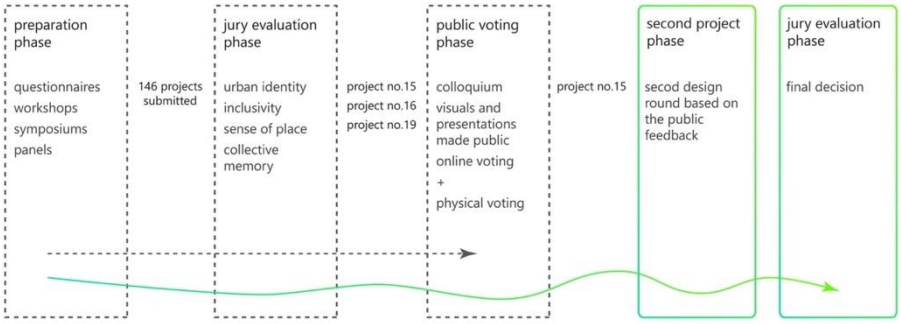


Figure 15 Taksim Urban Design Competition Process

[448] Yaşar Adnan Adanalı, "Taksim ve Ötesinde Katılımcı Tasarım Süreçlerine Dair Bir İçgörü Yazısı," *Mekanda Adalet Derneği*, November 4, 2020, https://mekandaadalet.org/en/taksim-ve-otesinde-katilimci-tasarim-sureclerine-dair-bir-icgoru-yazisi/, Accessed August 10, 2024.

The participatory planning analysis of the Taksim Urban Design Competition as a case study provided concrete evidence of the potential and challenges of such practices. This competition demonstrated how participatory processes can promote democratic engagement and re-imagine urban spaces but also highlighted the complexity of balancing different stakeholder interests. However, it must also be questioned whether these processes can effectively counter the larger forces of commodification and depoliticization shaping urban development. The case study highlighted the dual nature of transformation: while participatory approaches offer promise, they are often constrained by existing power structures and economic imperatives. In conclusion, it is emphasized that the right to shape urban space is not only a matter of participation but also of addressing the broader socio-political and economic systems that govern urban life. The findings underscore the urgent need for a re-politicized urban agenda that prioritizes justice, inclusivity, and sustainability while acknowledging the complex and hybrid nature of contemporary urban spaces. In this context, some of the steps to be taken include increasing public, non-privatized, and inclusive public spaces within the city, encouraging neighborhood-level initiatives that enable local communities to autonomously identify and solve urban problems, and institutionalizing participatory practices to transform governance mechanisms so that they can be scaled up.

The chapter has demonstrated how urban space can be transformed into a tool of depoliticization through technocratic discourses and practices. At the same time, it is also clear that urban space is no longer a fixed and purely physical entity but is constantly being redefined through technological, social, and power dynamics. It has increasingly become evident that while public space offers opportunities for connectivity and innovation, its growing commodification and digitalization may also contribute to inequalities and spatial exclusion. At this point, one of the main arguments of the chapter was the need to consider public space as a hybrid space that combines physical, digital, and social spaces and the need to adapt to the dynamics of this hybrid space (Figure 16). This perspective grounds itself within the wider discussion: the right to the city and the underlying dynamics of urban governance

and spatial reconfigurations. As discussed throughout the chapter, urban space transformation transcends physical and aesthetic changes; it embodies complex political processes that highlight the power dynamics inherent in urban governance. Public space as a site of contestation and participation embodies the challenges and possibilities of reclaiming urban life from technocratic and market-driven forces. This chapter has shown that spatial interventions—including participatory urban design competitions—can provide mechanisms through which collective agency is reinscribed into urban planning processes. Thus, disputes regarding urban space—whether through policy, self-initiative, or planning—expose the critical issues of modern urban governance: who possesses the authority to influence the city, and under what circumstances?

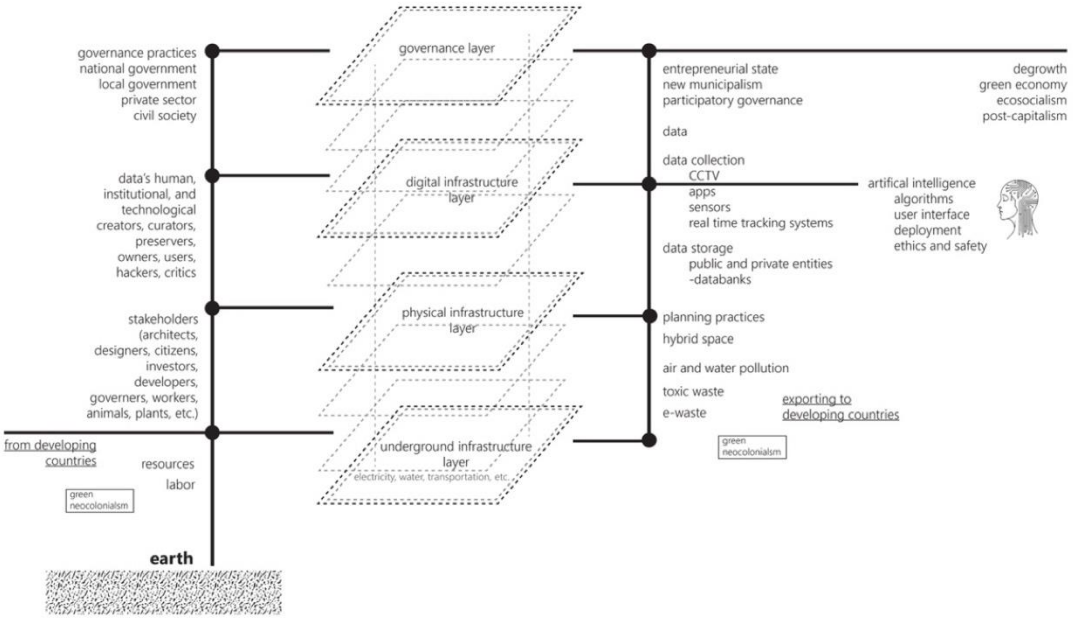


Figure 16 Anatomy of a Smart City

# CHAPTER 6

# CONCLUSION

The thesis sets out with the idea of examining the right to the city in the context of smart cities. Here, the smart city is not considered independent from the sustainable city and adopts three key attributes: smart technologies, a governance mechanism based on a balanced public-private partnership, and a well-functioning urban space. It then evolves and unfolds as it critically discusses the intersections of the right to the city with the rise of smart cities, considering the challenges arising from mechanisms of depoliticization. The right to the city, which advocates for an urban space that is inclusive, participatory, oriented toward social justice, and empowering for citizens, shows a direct tension with many developments within the smart city model. The central argument of the thesis is that depoliticization is the primary challenge to realizing the right to the city within the smart city frameworks. In fact, the main criticism of the thesis lies not in the purpose but in the implementation. Despite numerous international reports, treaties, and summits, evaluations suggest that states and corporations often struggle to fully address the issues regarding social, spatial, and environmental justice. As a result, while "sustainable development" embodies a potential to explore more deeply the power dynamics between nations, which some now frame as "green neocolonialism," the smart city model could seek ways to empower the citizens, ensure urban justice, and achieve the right to the city using the possibilities of digital technology.

The depoliticization mechanisms discussed in the thesis are investigated on two levels. First is depoliticization through urban governance, which describes how smart cities use technocratic discourse as a justification for the decisions they make and, through governance mechanisms, increasingly create digital and technocratic systems that remove the political aspect of urban living. Here, data-driven decision-making processes, an effect of efficiency and profit, often command governance

structures and are largely unaccountable to the citizens. As the Barcelona example clearly shows, this results in a constant conflict between market-driven forces, and human-centric forces. This understanding, which has increased in scale under the influence of neoliberal dynamics, calls for a reformulation of the roles of the state and the private sector. The changing role of the state, whether a facilitator, creating space for the private sector for growth, an entrepreneur, establishing collaborative relationships with the private sector and directing growth trends, or a co-creator with the citizens, manifests the level of equitable and just city understanding. On the one hand, the reliance on digital technologies in governance tends to reinforce control in the hands of private corporations and technocratic authorities by depleting active channels for public deliberation and weakening democratic oversight. On the other hand, this situation raises concerns, suggesting that citizens in this process have become progressively passive recipients of services instead of being active actors in shaping urban environments. However, the public sector is emerging as a creator rather than a counterbalance. The entrepreneurial state concept and examples of municipal leadership demonstrate that public institutions can lead transformative urban projects when backed by resources and vision. Participatory governance has arisen as a valuable approach to democratizing urban decision-making, emphasizing citizen engagement in shaping their environments. Participatory platforms, including the likes of Decidim, emerge as an endeavor seeking to realign smart city governance with democratic principles to counter technocratic trends in cities. However, such initiatives are far from easy to realize within the overall context of neoliberal profit-oriented urban practices that continue to dominate the global smart city agenda.

These governance strategies, while often promoted as enhancing efficiency and responsiveness, substitute technological solutions for the harder work of responding to community needs and bolstering democratic control. In light of these discussions, the thesis argues for the necessity of a systemic transition and explores alternative scenarios. It discovers that the green economy approach stands out as a viable option as it has the potential to transform and adapt to the existing system. On the other hand, degrowth understanding offers a more radical shift as it questions the climate

transition and smart transition approaches, calls out green-washed practices, encourages active citizen involvement, and advocates for the well-being of all living beings. While the integration of these approaches into mainstream governance is challenging, especially given global capital and political inertia, the thesis envisions that publicly led smart city affordances will allow for a smoother transition.

The second dimension, depoliticization through spatial practices, zooms in on the way smart city initiatives transform public space and, in so doing, rethink the relationship of citizens to the urban environment. In this regard, this dimension considers the role of spatial depoliticization: the ways in which traditional public spaces, once sites of protest and congregation and public discourse, are reshaped by smart city technologies that often commodify, surveil, or otherwise restrict these spaces. The shift to "smart" public spaces—implanted with surveillance technologies and digital interfaces—means changes in the nature of public involvement and the possibility of free, spontaneous democratic interaction. As public spaces transform—virtualized, privatized, and commodified—they may no longer remain open and free environments where citizens can come together with oppositional expression, organize, and act in a way that approves of urban characteristics. This shift further reduces the availability of politically charged spaces in the urban environment and, while doing so, marginalizes the kinds of interactions that render cities socially and politically vibrant. At the same time, the virtualization of the physical space with digital technologies is as much a revolution in social relations as it is technological. As Robins puts it, reduced distance and "intimacy and immediacy of communication" foster "virtual communitarianism," which is not independent from market and political interests.[449] The thesis argues that the approach to virtual space as an independent phenomenon and its evaluation as an objective canvas from a technocratic point of view is one of the biggest

[449] Kevin Robins and Frank Webster, *Times of the Technoculture: From the Information Society to the Virtual Life* (London: Routledge, 1999), 219.

obstacles to this communitarian utopia. Therefore, it is critical in the quest for the right to the city that the virtual public space enabled by digital technologies works as a complement to the urban space rather than as a separate or alternative to it while considering public space as a hybrid space that combines physical, digital, and social spaces and adapting to the dynamics of it.

Furthermore, the participatory planning analysis conducted on the Taksim Urban Design Competition serves as an illustrative case study, revealing both the potential benefits and challenges inherent in such methodologies. This competition illustrated how participatory processes can foster democratic involvement and reimagine urban environments while simultaneously bringing to light the difficulties in balancing diverse stakeholder interests. Nonetheless, it is crucial to examine whether these processes can truly combat the broader forces of commodification and depoliticization that influence urban development. The case study underscored the dual nature of transformation: although participatory methods present promising opportunities, they frequently face limitations imposed by established power dynamics and economic pressures. The right to shape urban space encompasses not only participation but also the need to confront the overarching socio-political and economic frameworks that control urban existence. The findings highlight an urgent demand for a re-politicized urban agenda that emphasizes justice, inclusivity, and sustainability, recognizing the intricate and multifaceted character of urban environments. In this regard, key actions to undertake include fostering more public, non-privatized, and inclusive spaces throughout the city, promoting grassroots initiatives that empower local communities to autonomously define and address urban challenges, and institutionalizing participatory practices to transform governance frameworks to facilitate scaling up.

The thesis offers several contributions to the literature through a critical examination of the right to the city within smart cities while addressing social, spatial, and environmental justice issues in this framework. This research builds upon existing literature by re-evaluating the right to the city in the context of modern technological transformations and presents a critical position on the depoliticized nature of smart

city strategies. It contributes to the state-of-the-art by addressing the gap between theories of urban justice and the paradigm of the smart city via an analysis of the power dynamics of the smart city under the framework of governance and the ever-changing and transforming concept of publicness under the framework of urban space in order to reveal the challenges faced by the smart city. It provides insight into policy and practice, stressing the potential of a greater extent of citizen participation in shaping smart city initiatives and urban space. The thesis emphasizes the importance of re-politicizing urban decision-making by highlighting participatory planning processes and demonstrating alternative governance strategies using case studies like Barcelona and Taksim. Moreover, the study develops methodological approaches by incorporating comparative analysis and adapting theoretical frameworks, such as Castree's conceptualization of commodification for depoliticization mechanisms and Arnstein's ladder of citizen participation for extended participatory dimensions.

The thesis envisages avenues for future studies that can deepen and extend the discourse on the right to the city, urban justice, and sustainability. A significant area for further exploration lies in integrating the toolset of the disciplines of architecture and urban design within the framework of degrowth principles. Beyond the practices of retrofitting and adaptive reuse, the research could challenge the extractive paradigms of contemporary urbanization, practices of urban living, and consumer behavior. In other words, it is critical to focus on the root of the problem rather than treating its repercussions. Moreover, the ability of participatory governance and planning practices and bottom-up approaches, which can form a counter to depoliticization mechanisms, to scale and create a systemic impact has emerged as one of the biggest challenges. For this reason, it is critical that these practices are embedded within the institutional structure at the local government level.

The right to the city from a post-Anthropocene perspective could also offer an opportunity for redefining urban justice beyond human-centric paradigms. Future research may address the ways in which such a right might be extended to include all living beings, such as plants, animals, and ecosystems, and hence rethink cities as

multispecies habitats. This would contest ingrained ideas of urban development by calling for practices of spatial and governance conduct centered on ecological balance, biodiversity, and mutual coexistence. This perspective can also lead us to a broader question: What kind of justice can we talk about in the city of the future? The expressions in today's discourses on justice are quite different from the expressions of the past. There is a much more rigorous mindset about ensuring equal rights, freedoms, and opportunities for all religions, languages, races, and genders. In fact, we are witnessing initiatives, both in terms of discourse and actions, to ensure social, spatial, and environmental justice for not only humans but also for non-human beings. It is debatable to what extent these concerns are currently being put into practice and how fairly they are being implemented, but it is clear that they hold promise. But what could be a step further, how far can we expand the boundaries of justice? How can artificial intelligence, which is one of the most crucial issues of today and very probably of the future, find a place in this debate?

The position of artificial intelligence as an object or a subject brings about different expansions. The object position legitimizes its use as a tool, its service to humans and other living beings, its questioning and modification when necessary, or its complete elimination. There is an acceptance of the superiority of humans and other living beings. However, we are gradually witnessing a blurring of the boundaries between object and subject as they gradually merge rather than remaining distinctly separate. The fact that it is replacing human beings at an ever-increasing pace shows that we are using it for our own benefit while at the same time accepting its superiority. Soon, we will reach a point where we rely on it for our very survival, as it becomes so deeply embedded in the global system that extracting it would threaten the very existence of life on Earth. So, what would it be like to consider artificial intelligence as a subject rather than a tool or an object? We can actually see the first

steps of this with the robot Sophia.[450] We are moving towards a future where different artificial intelligence systems become subjects are recognized by states, and even granted citizenship. Giving citizenship to an AI system means putting it in the same position as the human species in the eyes of the state. The right to vote independently, the right to benefit from state facilities, and the right to own property are just a few of the benefits of this position. So, what kind of justice can we talk about here? If equality and majority democracy are our compass, there should be no conflict in theory. Because equality requires that the same rights be granted to those in the same position without requiring any background knowledge. But if we are talking about justice, we need to build a system of rights that recognizes the differences between humans, animals, nature, and artificial intelligence.

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## CURRICULUM VITAE

Surname, Name: Tosun, Selin

### EDUCATION

| Degree | Institution | Year of Graduation |
|---|---|---|
| MArch | AA School of Architecture, Housing&Urbanism | 2018 |
| BArch | METU Architecture | 2016 |
| High School | Kırkkonaklar Anadolu High School, Ankara | 2011 |

### WORK EXPERIENCE

| Position | Institution | Year |
|---|---|---|
| Research Assistant | METU, Department of Architecture | 2021- |
| Architect | Yazgan Design Architecture | 2018-2021 |

### FOREIGN LANGUAGES

English (Advanced)

### PUBLICATIONS

1. Tosun, Selin. "Citizen's Shaping Power in the City in the Digital Age." In *Architecture for Next Generation EU Cities: Challenges, Key Drivers and Research Trends*, edited by Ernesto Antonini and Jacopo Gaspari, 63–74. Milano: Franco Angeli, 2022.

2. Tosun, Selin. "Rethinking Resilience through Learning Environments in a Digitized Era." In *Repurposing Places for Social and Environmental Resilience Conference*, edited by Anastasia Karandinou, 205–6. Counterarchitecture, in collaboration with UEL and Arup, 2023.

3. Bilsel, Cânâ, Zeynep Mennan, Aydan Balamir, Murat Çetin, Mustafa Eren Bük, and Selin Tosun. "Antakya'nın İyileşmesi İçin Sürdürülebilir ve Dirençli Tasarım Senaryoları." *Arredamento* 363 (2024): 55–58.