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Against the Smart City: A Pamphlet by Adam Greenfield, New York: Do Projects, 2013

In recent years, the topic of smart cities has appeared more and more in the Internet and popular science publications, but also has become an important topic for scientific research. Although the term 'smart city' is interesting, due to the difficulty in defining its meaning, it is a field of broad academic discourse. Bruce Sterling simply defined 'smart' as: "a snazzy political label used by a modern alliance of leftist urbanites and tech industrialists. To deem yourself 'smart' is to make the NIMBYites and market-force people look stupid."[1]

The smart city became a ruling term for urban management despite certain arguments against smart cities, as it is against the informal character of a city, it subjects the city to corporations, and it reproduces social and urban inequalities. Other scholars, however, state that either the smart cities critics do not understand the functioning of power in the management process of an intelligent city, or they do not refer to its entrepreneurship modality

[1] B. Sterling, "Stop Saying 'Smart Cities'", *The Atlantic*, 12.02.2018, www.theatlantic.com/technology/archive/2018/02/stupid-cities/553052 [accessed: 7.05.2022].

in urban management. Some even treat the smart city as an "urban embodiment of a society of control."[2] Such mechanisms of societies of control can be found in Gilles Deleuzes' essay from 1992, as a continuous invigilation by means of transaction registers, mobile location spying and other information enabling a person's identification.[3] For Maroš Krivý a smart city has been places "in cybernetic intelligent frames and expresses its subjectivity in data and environmental and behavioral – over individual (penetrating a city with sensor networks) and infra-individual categories (making citizens its sensor networks)."[4]

The whole idea of an intelligent city came to be in the late 80s of the 20th century, when IT experts began researching methods of incorporating computing intelligence in the urban environment. "The simple human-computer interaction became socially integrated and spatially conditioned, because objects and everyday-use spaces were connected by computer network."[5] The momentum for the Smart City idea started in the year 2000, when projects such as levelling out almost 700 mountains in preparation of constructing Lanzhou city in the Chinese province of Gansu came to life. The city of Lavasa (India), designed by multimillionaire Ajuta Gulabchanda in 2001, was to be built from scratch as one of the first intelligent cities in the world.[6]

The bibliography of the subjects continues to grow every day. One of the outstanding publications on the topic of intelligent cities is considered Adam Greenfields' work *Against the Smart City*, published in New York in 2013.

The author is the founder and the CEO of the New York company Urbanscale, which specializes in designing urban systems. In the years 2008–2010 he worked at Nokia as one of the specialists designing services and user interface. He worked as the head architect of information at Tokyo's Razorfish consulting agency. He is also the author of many publications, such as *Everyware: The dawning age of ubiquitous computing* (2006), *Urban computing and its discontents* (2007, co-author Mark Shepard). He was also a lecturer at

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2 M. Krivý, "Towards a critique of cybernetic urbanism: The smart city and the society of control", *Planning Theory*, vol. 17, no. 1, 2018, p. 8.

3 G. Deleuze, "Postscript on the Societies of Control", *MIT Press*, vol. 59, Winter 1992, pp. 3–7.

4 M. Krivý, *op. cit.*, p. 9.

5 A. Greenfield, M. Shepard, *Urban Computing and Its Discontents*, New York: The Architectural League of New York, 2007.

6 M.M. Euklidiadas, "Smart Cities That Failed Along The Way", *Tomorrow City*, 26.11.2019, https://tomorrow.city/a/smart-cities-that-failed-along-the-way [accessed: 4.05.2022].

Harvard University Graduate School of Design and Berkman Center for Internet & Society, Columbia's Graduate School of Architecture, Planning and Preservation, Office of Privacy Commissioner of Canada, Korea Advanced Institute of Science and Technology, École Nationale Supérieure d'Arts et Métiers, MIT Media Lab, Royal Society of London.[7]

The aim of Greenfields' publication was to emphasise certain aspects of the smart city programme, which are a concern, and to identify opportunities for its development. In chapter '0', understood as the introduction, the author mentions that the discussion of the matter is extremely difficult. He writes how he has been painstakingly collecting internet material since 2011 and getting acquainted with interviews and promotional materials of many development and IT companies, which gave him a picture of how corporations and developers imagined the city of the 21st century at that time. He believes that we are currently in the moment of history when cities, both in form and experience, are under a lot of pressure from new networked information processing technologies. That is, what can condition the functioning of the city is situated in an invisible and elusive cyber layer of information, which surrounds the city.

In his work, divided into fourteen short chapters, Greenfield focused on presenting three key smart city concepts: Songdo City, a $20–40 billion investment for a city of 500,000 built on reclaimed land on the Yellow Sea in South Korea; Masdar 'eco city' in Abu Dhabi, UAE, which was advertised as a future home for 40 thousand residents and a workplace for 50 thousand commuter workers; and last but not least PlanIT Valley, a $10 billion development project located in Porto, Portugal.

All these above-mentioned smart cities were designed from scratch, and their concepts and solutions gave an important push for discussions on what a smart city should be, what kind of cities we need, and what level of technology we want to achieve in our society. So far, a general standard for a smart city has not been created because each of the cities discussed has a different specificity.

Greenfield exclaims that the main objective of all smart city concepts was to centralise data gathering from every available device and its processing in order "to permit the 'optimization' of all the flows of matter, energy and information that constitute a great urban place."[8] He also underlines the fascination of various cyber techniques and solutions driven by IT corporations such

7 *Against the smart city: A pamphlet* by Adam Greenfield, Part I of *The city is here for you to use*, New York City: Do projects, 2013, p. 110.

8 *Ibid.*, p. 12.

as IBM, CISCO, Siemens, and companies such as Samsung, Intel, Philips, Hitachi, which translates into a race of city managers to create ever bolder concepts of smart cities. Herman van den Bosch also repeatedly emphasised that the role of IT in the development of cities is indisputable, although not in the way most big tech companies imagine.[9]

The other aspect emphasised by the author is the relative comfort of creating smart cities *ab initio* – from scratch in open spaces, without the need to take into consideration pre-existing infrastructure or other claims from owned properties with the ability to process gigantic volumes of data, gathered from sensors embedded in objects, surfaces, spaces, as an ideal base for experimenting and development. Cities such as Masdar or Plan IT Valley are being presented as huge laboratories and places to engineer models for smart city functioning, seemingly transferable anywhere.

In the following short chapters, the author discovers successive processes of the physical reality of these places (e.g. *The smart city unfolds in generic time chapter*). Greenfield makes it clear that the narrative about the technologically advanced city and the whole discussion around it was created mainly by IT companies, which are the main beneficiaries of the process and thanks to which they develop. Let us take the CISCO company as an example and their involvement in Songdo. CISCO claims that combining technologies can reduce infrastructure maintenance costs. IBM uses a similar strategy, which believes that thanks to using the right tools to analyse data, better decisions will be made when operating smart cities (reducing the time and safety of commuting to work or reducing pollution in cities). Greenfield also recalls Siemens' representatives statements that cities of the future will be equipped with countless autonomous and intelligent IT systems, which will gather data and knowledge of user habits and energy consumption and will provide optimal service. The goal of such a smart city is to optimally regulate and control resources using autonomous information systems, aspiring to objectivity, unity, and perfect knowledge that are not available anywhere. Such statements regarding far-reaching surveillance are extremely disturbing and raise social concerns.

The smart city vision, promoted by companies such as IBM, Siemens or CISCO Systems, aims for achieving comfort of living and safety. A proposed self-learning city computer would allow moving parts of the city to operate at very good efficiency, without wasting too much energy. However,

[9] H. Bosch, *Smart City Tales, In search of the inclusive city: 24 short essays by Herman van den Bosch*, 2018, www.dropbox.com/s/c9f1v4od86ibaa3/2018%2007%2030%20Smart%20City%20Tales.pdf?dl=0 [accessed: 11.05.2022].

society is not ready for such a far-reaching presence of technology in life because for many people, it remains difficult to understand, not to mention the cost. With the exception of China, where demographic pressure due to rural exodus requires a huge number of new cities, it seems that turning a city into a smart city is more coherent than building it from scratch. Founded in 2001 in the middle of the desert and costing $200 billion Ordos city (PlanIT Valley was supposed to cost only 5% of that amount), it won the title of 'the greatest ghost town on earth.' In 2016, only 100,000 people lived there, although it was designed for a million inhabitants. It was not until 2019 that satellite images showed vehicles parked next to endless rows of houses designed with a higher than average quality in the country and are therefore too expensive for the local population. And those who are able to afford it prefer to move to nearby cities, such as Baotou, rather than a deserted metropolis in the middle of nothing. Ordos is considered one of the youngest modern cities, with the largest number of its facilities and shopping centres remaining empty or closed. As the author concludes, they did not even have to suffer the agony of American malls because the ones in Ordos never opened.[10]

Greenfield points to problems with maintenance and constant replacement and upgrade of equipment and sensors. In a technical sense, it is impossible to design a smart city forever. Smart cities in the technological sense cannot be designed forever. They will undergo constant transformations, being a set of changing technologies, so they should provide residents with the ability to adapt to new functions as their needs develop. According to Greenfield, "there is little need to invest in the comprehensive instrumentation of the urban fabric with sensors, device controllers or informational displays when people themselves are already equipped with something that can act in all of these roles."[11]

The author also indicates inconsistencies in the planning of discussed smart cities, which reflect the formal order of a medium-sized American town from the mid-20th century. Asian smart city visions are new constructions on non-urban ground. They often do not identify specific technologies, but use general terms. Cities are geographically defined for different social backgrounds and their inhabitants. Human life develops on various levels, so everyone should be able to use them at any time (e.g. studying or physical activities). The city itself should have the ability to develop and adapt at every stage of development.

Cities are dynamic organisms that tend to grow or to fall over millennia, centuries, or at least decades. Designating a new city is a key decision that can

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10 M.N. Euklidiadas, *op. cit*.

11 A. Greenfield, *op. cit*., p. 43.

decide the future of the project, and starting a new one in the middle of nowhere is rarely a good idea. Examples are Smart Cities that did not meet the expectations placed on them, such as Lavasa (India), PlanIT Valley (Portugal), Ordos (China), or Santander (Spain), because they did not develop organically and in accordance with the needs of citizens.[12]

One of the other issues analysed by Adam Greenfield is the rhetoric of seamlessness where users live unaware of the web. This ignorance makes their lives more comfortable. However, everything has its price because the technology that is supposed to help them can be unreliable, making them powerless in the event of a failure of the iris scanner or a failure of a security gate preventing them from entering their homes or work areas. The author brings in Mark Weiser's experience, who was perceived as a visionary and computer pioneer in Silicon Valley. His concepts influenced many of the world's leading corporations, including IBM, Siemens, Microsoft, claiming that the problems of everyday life will be alleviated by the operation of 'powerful technologies.'

Greenfield is bold in expressing his dissatisfaction with the actions of the companies mentioned above, which constantly and almost exclusively focus on the abstract performance of smart cities. In his words "positioning efficiency as the only index of value available to us overlooks the many simple pleasures afforded by city life that would be utterly unimproved by any optimization, and might well be destroyed in the attempt."[13] The author believes that an open discussion is needed to determine what the city's inhabitant expects? Should efficiency be the only measure to assess urban processes? For what purpose and for whose benefits?

Currently, it seems that there is a phase of verification of the assumptions of the global trend of transition to the so-called smart cities with innovative technologies. This is characterized by diffuse, local citizen resistance to smart city programmes in both large cities like Toronto and New York and small cities like Ross, CA, near San Francisco, with fewer than 2,500 residents.[14]

While reading *Against the Smart City*, we ask ourselves: what kind of place a smart city is? It seems that the collection and processing of information is the basis for corporations, which see the role of a citizen as a provider of data only (Chapter: *The smart city's systems are deployed for the sole benefit of administrators*).

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[12] M.N. Euklidiadas, *op. cit*.

[13] A. Greenfield, *op. cit*., p. 51.

[14] S. Wachter, "What's Fueling the Smart City Backlash?", *Knowledge at Wharton*, 24.09.2019, https://knowledge.wharton.upenn.edu/article/whats-behind-backlash-smart-cities [accessed: 5.05.2022].

Greenfield's work also includes references to political involvement (neoliberalism understood as a political philosophy), security priorities, capital flows, and tax issues. The examples of Masdar City or Songdo show their location in relation to airports. This is mainly aimed at improving the flow of capital, which is also to be served by reduced local taxes or even their absence (as in the case of Masdar). The author draws attention to the privatization of such cities, writing that: "It's hard to imagine a robustly autonomous community, or a public sphere in any traditional sense, taking root in the soil of a municipality that is owned and operated as a business in the way these places are,"[15] and the examples cited here treat cities in this way.

There are also references to the subordination of smart cities to political influence. Even though IT corporations emphasise pretended technological neutrality, they value the concentration of power (according to the author, companies like Microsoft believe that centralization is necessary for implementation citizen-centric governance in the smart city). The author expresses concern about the permanent surveillance in such 'smart' cities and the lack of anything resembling the traditional public sphere in the cited examples. Widespead video surveillance based on real-time monitoring can lead to privacy restrictions, hence it raised many doubts from the beginning. It deprives citizens of privacy and anonymity. Concerns about the invasion of privacy in today's digital age and unbridled growth threatening the public interest have been compounded by the erosion of trust between residents, city administration, and private companies running 'smart' projects. Tracking people in places such as shopping malls undermines the privilege of anonymity in public spaces.[16] Unfortunately, this element of urban intelligence is beginning to enter the daily life of residents more and more boldly. San Francisco in May 2019 banned the use of facial recognition software by police and other government agencies for fear of potential abuse. Other cities followed suit, such as Somerville near Cambridge, Massachusetts, and Oakland, California. In fact, according to a New York Times report, the California legislature is considering a bill that would propose a state-wide ban on the technology. Cambridge and Brooklyn, in Massachusetts are two other towns considering similar actions.[17]

Greenfield argues that smart cities have little to do with cities and are mainly associated with modernist urban features of the 20th century. Such cities are designed and marketed as consumer products aimed at a specific audience. Greenfield emphasizes that no designer can anticipate all the potential

[15] A. Greenfield, *op. cit.*, p. 59.

[16] S. Wachter, *op. cit.*

[17] *Ibidem*.

uses for which things created by them can be used in the distant future. IT corporations treat cities like machines: The PlanIT Valley plans, as well as the New Songdo plans, do not correspond to the collective knowledge we already have about how urban space actually works. An example here is the strategy of the Songdo developers, which boiled down to recreating "the skyline vistas of New York, the strolling walks of Boston, the reflections of Venice, the kinetic energies of Wall Street, the pocket parks of London [...] the stunning impact of Sydney's Opera House, the street Paris153 scenes of and Soho, the polish of Park Avenue."[18] In other words, they sell the purest falsehood. Similarly, Ajit Gulabchand's desire was to create a spectacular 'New Portofino' in Lavasa, architecturally based on Portofino in Italy, famous for its natural beauty, but far away from any trade routes.[19]

The attractiveness of the city is the result of a long process of organic growth, driven by people's diversity, ambitions, mostly unrecognizable desires, interests, power, and money. Moreover, when looking at designing smart cities, it is vital to take into consideration different customs, local traditions, and the culture of local inhabitants. In the assumptions of a smart city, residents should have a wide range of opportunities to participate in infrastructure management. Their knowledge and their needs could be appropriately used to improve living conditions by responding to their needs, e.g., energy consumption or better mobility within the city.

The author continues the topic in the next chapter (*The smart city replicates in tone, tenor, form and substance most if not all of the blunders we associate with the discredited high-modernist urban planning techniques of the twentieth century*), claiming that the final elaborate plans of places like Songdo, Masdar, and PlanIT Valley reflect what their creators (not residents) would like to see in existing cities. In this part of the publication, the author refers to specific examples and urban visions of Ebenezer Howard, Georges-Eugène Haussmann, and Le Corbusier in order to identify the historical context. Greenfield is extremely critical of the legacy of CIAM and the Athens Charter, comparing it to supposedly smart cities designed in a similar way. In this context, Greenfield also provocatively refers to the failed Pruitt-Igoe modernist project in St. Luis, which was finally blown up.

The conclusion of the book comes in the last chapter (*The same set of technical potentials that give rise to the smart city can be turned to more responsive ends*). The main narrative of the chapter is permeated with arguments of distrust

[18] A. Greenfield, *op. cit.*, p. 69.
[19] M.N. Euklidiadas, *op. cit.*

towards smart cities, especially in the context of an alliance of corporations that are unable to take care of all the needs of their residents. He describes the processes that support the development of smart cities; starting with simple things like the use of smartphones through the IoT, digitization, automation and the more complex ones such as artificial intelligence.

Those interested in exploring the topic of intelligent cities will find Greenfield's book *Against the smart city* an important publication. In an extremely interesting and colourful way, it shows the intertwining of public life and information technology in modern smart cities. The work is an in-depth analysis of hundreds of various advertisements, commercial brochures, reports, and articles. These form the basis of Greenfield's analysis and thus his conclusion about the role of technology in smart cities. He reflects on the possibilities and benefits of its best implementation, and at the same time shows in which cases it threatens us. Greenfield's book organises this knowledge in terms of technology security or privacy and freedom in public space. As an invitation to a debate of what is expected and required of smart cities, he presents three case studies of Songdo, Masdar, and PlanIT Valley. At the same time, the work underscores the role played by powerful international corporations such as: IBM, Siemens, CISCO, followed by Samsung, Philips, or Hitachi. It is a huge business for them, and their modern smart devices have the ability to gather information about smart city users.

According to Greenfield, there are already many imitators of Songdo, Masdar, and PlanIT Valley projects and the technologies tested in those cities are seen in privatized housing estates, shopping malls, and public spaces. We are at such a stage of history that technologies are an important element of our lives, collecting, processing, and sending information on the basis of which various social and political activities are undertaken. From smartphones in our pockets and cameras on lampposts to sensors in canals, sidewalks, and bike stations, the modern city is permeated with networked information technology. In his conclusion, Writing about the smart city marketing game, Greenfield reminds us that cities are primarily people who shape their city from scratch with their character, subjectivity, independence, and their own intelligence.

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