Smart city: well-being city vs. surveillance city

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Abstract

The purpose of the article is to introduce the discourse around advanced technologies that can make a city a well-being city while also creating a surveillance city, an issue that is becoming important to smart city researchers. Researchers seek to answer the question: where is the line between well-being and surveillance? To answer this question, the article will explore Jeremy Bentham's and Michel Foucault's positions on panoptic thought, as well as Bentham's principle of greatest happiness and Janusz Czapinski's onion theory of happiness.

Urban interactions in the smart city era

The city is a natural environment for human life. Civilizations and cultures were born in cities. A city is an arena for meetings and the formation of relationships, the place where social behavior is realized, and the magnet that attracts people. In the past, the determinant of a city was its center, where the fusion of the spiritual and the corporeal occurred. The center gave the city an identity and symbolized what was common. In Greek civilization, it signified the ideal of public space – the agora. Italo Calvino, in his book *Invisible Cities*, considers the city in the context of spatial and narrative entanglements of identity. He refers to the stories spun by Marco Polo at the court of Kublai Khan, for whom a city was a place "that speaks – the city is a place, a way of existence in space that allows us to articulate our feelings and experiences related to that space" (Sławek, 1997, p. 19). Calvino considers urban structures in terms of memories, wishes, signs, and exchanges: "Cities, like dreams, are made of desires and fears, even if the thread of their discourse is

secret, their rules are absurd, their perspectives deceitful, and everything conceals something else" (Calvino, 1972, p. 44). He notes that the perception of the city depends on ourselves and the way we observe it: "If you pass through the (non)city, whistling, with your nose lifted in pursuit of the whistle, you get to know it from bottom to top: cornices, fluttering curtains, water jets. If you walk with your chin lowered to your chest, your gaze will be mired in the ground, in the gutters, in sewer openings, in fish bones, in discarded papers. It cannot be said that one image is more true than the other" (Calvino, 2022, p. 40).

Today, this perception of the city is alien to us. The development of communication technology has led to the loss of the city's original role as an arena for meetings and social contacts. The mythical, sacred space has been dominated by conflict with external reality. The symbol of the center has become a system of intersections and thoroughfares, which lose clarity, making the city a kind of maze, making it difficult for residents to move around in it. According to Anthony Giddens (Giddens, 2006), the modern

era has been replaced by postmodernity, in which it is increasingly difficult to discuss the coherence and harmony of spaces. Rather, these are a collection of loosely connected fragments within which people organize their individual territories (Dymnicka, 2008, p. 33). Cities, the most sophisticated constructs of human activity, are the main source of cognitive and cultural development and are currently undergoing a phase of transformation. Cities are beginning to be reborn. According to Michel Foucault (Foucault, 2005), "[...] the restlessness of our time is much more related to space than to time." Paradoxically, at a time when we are seeing a significant weakening of the role of (public) spaces, or at least their physical dimension, space is becoming increasingly important. The development of communication technology has not led to the domination of man in space. What is more, the reality in which he functions is increasingly resisting attempts to organize it, and cities are becoming not only spaces of buildings and streets, but also organisms pulsating with life through technological and virtual interactions. They are places where digital innovations intertwine with everyday existence, creating new ways of communicating, managing, and interacting. Modern cities resemble intelligent organisms that respond to the needs of their inhabitants. Data is collected from sensors, cameras, and a variety of other sources that form the digital fabric of the city, enabling the city to "see," "hear," and "feel." In the smart city, interactions gain a new dimension. Residents use apps to check parking availability, register violations, or order a cab. Infrastructure is gaining communication capabilities and becoming more interactive and adaptive so it can serve residents more effectively.

Smart cities are becoming not only places to live but also sources of inspiration. They are places where technology and people co-create the future, and every interaction can lead to change. Today's smart cities, constantly evolving and transforming, face a choice: a smart future or a digital dystopia, technology shaping space and supporting residents or surveillance destroying privacy? In an era where data means knowledge and algorithms are becoming the arbiters of our fate, these dilemmas are becoming bigger and more worrisome.

Smart city: an era of social well-being

In today's dynamic world, full of modern technology, the "smart city" concept is becoming not only a reality but also a promise of a new quality of life, the beginning of an era offering comfort and well-being for residents. This idea is the result of the spectacular metamorphosis that cities around the world have undergone in recent decades. From dusty streets and gray apartment blocks, cities have become sophisticated laboratories of innovation, living organisms, pulsing with the energy of digital life. However, smart cities have not always been synonymous with comfort and increased quality of life. Technology did not immediately become an ally of residents, and cities imbued with it, while impressive, often left people and their needs in the shadows. The continuing evolution of cities, however, reflects the changing needs of societies, technological advances, and environmental awareness, which has led to reevaluations in the understanding of the smart city. As a result, we can distinguish four generations of cities (Cohen, 2015) (Figure 1):

1. Smart city 1.0 – This stage encompassed a period of experimentation and fascination with new information and communication technologies that allowed for increased efficiency in city operations. It was identified with sensors and software algorithms integrated into the urban fabric (Kitchin, 2015), and paid homage to a "must have" philosophy, i.e., a vision of the city of the future controlled and driven by the private sector, in which the city's relationships and interactions with its residents would be lost.

2. Smart city 2.0 – This was an era in which data became the new standard, and the development of Big Data technologies and data analytics enabled a deeper understanding of urban dynamics and effective urban management. The Internet of Things (IoT) brought a new era of real-time monitoring and management of urban infrastructure, opening the door to infinite possibilities for optimizing and improving the quality of life for residents. Technology separated from the social aspect is soulless, which is why, as Rick Robinson points out, the future of cities requires cooperation between local governments and residents (Robinson, 2015). Only this synergy makes cities truly smart and forward-looking, becoming sources of inspiration and exciting prospects for urban development (Szołtysek, 2018).

3. Smart city 3.0 – This was a period that integrated different systems and services. Cities moved from isolated solutions to cohesive ecosystems in which residents actively participated in social life and decided the future of cities. Macroeconomic measures of a city's development were losing importance in favor of other, often difficult-to-capture

measures, such as creativity, innovation, democracy, happiness, degree of acceptance by the environment, or satisfaction with living in a city (Montgomery, 2015, p. 129). Smart city 3.0 marked a return to the human dimension of the city, aimed at building a civil society (Gehl, 2014, p. 3).

4. Smart city 4.0 – This is the latest iteration of cities of the future, where innovation is not the goal but the means to achieve it. This is a period marked by pursuing sustainable development goals and engaging residents in actively creating solutions. Smart city 4.0 draws a line between traditional cities and the future of integrated and innovative communities. It captures a vision of a city where technology becomes the foundation on which the enhancement of the quality of life, social well-being, and happiness of residents is built.
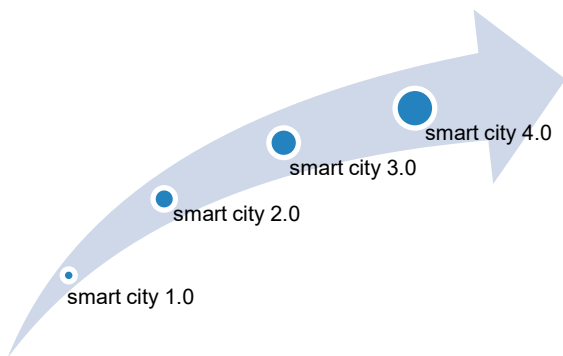
Figure 1. Evolution of urban development towards smart city 4.0

The smart city, which is the epicenter of human life, becomes a center where the harmonization of advanced technologies, social interaction, and sustainable development leads to the maximization of the well-being and happiness of residents. In this context, the smart city appears to be a natural incarnation, presented at the end of the 18th century by Jeremy Bentham, of the principle of the greatest happiness (Wodarczyk, 2014), where the pursuit of universal well-being and social satisfaction is the foundation of an ethical approach to shaping the future of urban communities. Similar to the philosophy of utilitarianism, where the moral value of actions is judged by their ability to maximize the happiness of the majority, the smart city aims to create conditions conducive to the full development of society. By eliminating the inconveniences of everyday life, building a participatory community, and promoting sustainable economic growth, the smart city seeks to create a space where every resident can derive maximum benefit from the city's urbanity.

In an effort to demonstrate the impact of the smart city on quality of life and happiness, we can refer to the onion theory of happiness developed by Janusz Czapiński (Czapiński, 2012), which consists of three layers: (1) will to live, (2) subjective well-being, and (3) partial satisfactions. The first layer is the deepest and least sensitive to external changes; it determines the overall level of happiness felt by a person. Its main function is to sustain the desire to live. The second layer corresponds to the consciously perceived sense of happiness, constructed on the basis of an individual's life balance. In other words, it is a summary of what provides the individual with satisfaction, what he has achieved, and what can still happen to him. The last layer includes momentary ups and downs that more or less determine the other layers. It includes experiences that trigger momentary joys resulting from current events.

Referring to the described theory of happiness, one would have to assume that the goal of the smart city is to strive for an increase in the quality of life in the city, which creates the basis for the individual's sense of happiness. It should be borne in mind that each person has his own preferences and needs and strives for different experiences to feel subjective happiness. Nevertheless, the basic premises of happiness formation are common and involve maximizing the conditions of long-term life and health (Banaszyk, 2019, p. 317). Therefore, smart cities create an urban environment that can enhance the well-being of residents and support the individual's will to live. Some of the key measures in this regard include:

(1) intelligent transportation systems that connect traffic participants with road infrastructure and information systems. The real-time information transmitted allows better planning of travel routes and facilitates the choice of means of transportation (especially for multimodal travel). They also allow traffic to be managed more effectively. In a smart city, thoughtful and effective traffic management meets the needs of various stakeholder groups that are users of urban infrastructure. It is also tantamount to making efficient use of space and creating viable alternatives to individual transportation.

(2) advanced monitoring systems, using sensors, cameras, and other tracking technologies to respond quickly to threats and prevent crime. In addition, intelligent alarm and emergency systems based on data analysis, provide the ability to immediately intervene in emergencies, thereby increasing residents' sense of security.

(3) innovative public health solutions, such as air pollution monitoring systems, the promotion of physical activity through the availability of recreational areas and bicycle paths, support for healthy lifestyles through education, and the provision of quality medical services.

From the perspective of the first layer of the theory of happiness, all activities of smart city authorities related to the creation of the urban environment are evaluated from the point of view of maximizing the chances of a long and healthy life, that is, in the context of forestalling negative impacts on the environment and quality of life. Therefore, smart cities are taking initiatives to expand and modernize infrastructure and implement projects aimed at increasing the safety and efficiency of flows, while minimizing CO_2 emissions and improving air quality. Among other things, air quality monitoring and emissions data collection systems are being implemented as well as investments in renewable energy. Sustainable forms of transportation are being promoted, helping to reduce negative environmental impacts and providing more health-friendly living conditions. In this context, one of the priorities of the smart city is the appropriate transformation of space, creating more comfortable conditions for alternative forms of mobility. This does not mean the complete elimination of individual vehicles, but rather a plan for their rational use. The solution is smart (sustainable) mobility, which means easier, safer, and more environmentally friendly travel.

Regarding the second layer of happiness theory – subjective well-being, the analysis and evaluation of smart city solutions is more complicated, as it concerns the subjective feelings of the individual. Even though each resident evaluates the way the city functions from the perspective of personal preferences, it can still be assumed that the common denominator is the desire to optimize the use of time and the availability of destinations in space. The task of the (smart) city is to optimize the time for city users in public spaces (Szołtysek, 2017, p. 286). Traffic management systems, smart traffic lights, and optimized traffic routes are key elements that reduce travel time and minimize delays. In addition, smart parking systems and mobile apps that provide information on public transportation facilitate efficient movement around the city.

Finally, there are partial satisfactions, which make up hedonistic happiness. These are a result of finding as much as possible from life's immediate pleasures. Partial satisfactions are completely individual, depending on each resident's tastes and expectations of the city's offerings. These can be fulfilled through the implementation of projects to personalize mobility services, offered by different operators and in line with user preferences, identified through advanced ICT technologies (So, Ann & Lee, 2020). Partial satisfactions also include aesthetic experiences and pleasant surprises. Here, we can point to, among other things, smart city lighting, which not only improves safety at night but also creates a pleasant aesthetic atmosphere, highlighting the architectural qualities of buildings and streets. In addition, smart urban elements, such as interactive art installations or green public spaces, can provide residents with pleasant surprises and additional aesthetic experiences during their daily travels through the city. Partial satisfaction is also measured by residents' participation in decision-making processes. Solutions based on digital technologies, such as platforms for civic participation, mobile apps for reporting problems, and quality-of-life monitoring systems, enable residents to actively participate in shaping the city's space, so they can consciously influence its development, report needs, and propose solutions. This fosters a sense of social belonging and a sense of well-being.

Smart cities are laboratories of innovation, where technology that improves the quality of urban life becomes an ally of residents. Smart cities, through intelligent transportation systems, efficient resource management, and the promotion of public participation, enable residents to enjoy convenient and tailored public services, resulting in increased comfort, safety, and satisfaction within the city.

While the smart city undoubtedly contributes to the well-being of its residents, ubiquitous sensors and mobile applications collect vast amounts of data that risk creating a surveillance city.

Surveillance city – the price of progress

Today's smart cities are increasingly complex and dynamic structures, and digital innovations are turning them into smart ecosystems capable of responding in real time to the needs of residents. With the dynamic development of smart cities, data collection and integration of advanced technologies are becoming integral parts of urban evolution. However, the development of (monitoring) technology, including sensor systems, CCTV cameras, and mobile applications, means that residents are constantly being watched and monitored.

Smart cities use modern technology to collect data, analyze it, and then use it for more informed

decision-making. Using ICT technologies, Internet of Things, or Industry 4.0 tools, modern cities such as Zurich, Oslo, Canberra, Copenhagen, Lausanne (according to the Smart City Index 2023, these are the most intelligent cities in the world) (IMD, 2023) and many others, including Polish ones, e.g., Warsaw and Krakow, are striving to improve the quality of life, competitiveness, and parameters of sustainable development. To this end, they are introducing innovations, the scope of which is relatively broad and includes the following projects, among others:

- completely innovative projects, based on autonomous mobility systems and on-demand vehicles (e.g., Mazdar);
- ones aimed at eliminating combustion vehicles within a certain time horizon and replacing them with electric ones, by expanding the network of charging stations and implementing Park & Ride systems (Amsterdam, among others);
- those related to the construction of bicycle infrastructure, bicycle stations (bike-sharing), offering on-demand car services (car-sharing);
- ones that reorganize last-mile delivery of goods using electric vans or delivery bicycles;
- those implementing ICT technologies to collect and transmit traffic information in real-time, enabling the purchase of public transportation tickets via apps;
- those in the field of dynamic parking fee systems, allowing for increased efficiency in parking space management;
- those related to smart street lighting, adjusting the intensity of light according to street traffic;
- some that use AI in smart grid systems to analyze energy consumption data, forecast energy needs, and optimize energy distribution in real-time.

The essence of all innovation projects lies in the collection and analysis of data at various levels, creating an information network that intertwines the entire city and improves its efficiency. Data is like the pulsating heart of the smart city, driving its development and innovation. However, with the growing demand for data comes growing concerns about residents' privacy, creating a delicate balance between technological advances and the protection of individual rights. The questions arise: How do we achieve this balancing act? How do we reconcile the discrepancies between the aspirations of smart cities and the expectations of their residents? Paradoxically, as public expectations for improved quality of life and environmental sustainability grow, so do privacy concerns. The research

underscores this dichotomy, revealing a social dilemma between the desire for greater convenience and concerns about protecting personal information (Zullo, 2022). Public expectations and concerns are clearly outlined. On the one hand, there is the desire to create a safe and healthy living environment, while on the other, there is the fear of possible privacy violations and data manipulation (Sanchez, 2021). This dilemma is becoming apparent in more and more aspects of daily life, where the demand for technological conveniences is balanced by the fear of losing control over one's personal data.

Foucault found the panopticon (from the original ideas of Bentham, the English utilitarian philosopher) to be a useful metaphor for the reality around us. At the end of the 18th century, he wanted to create an ideal prison, an emanation of liberal Western thought, allowing guards to observe inmates without them knowing they were being watched. The panopticon plan was inspired by the idea of freedom and a belief in the rationality of the individual. Bentham hoped that through self-discipline and a sense of constant control, it would be possible to rehabilitate even the most dangerous criminals (Bentham, 1971). The project reflected power relations based only on architectural solutions and optics: visible – invisible (Nowel-Śmigaj, 2012, p. 28). In his book *Discipline and Punish: The Birth of the Prison*, Foucault argues that knowledge is power, and all regulatory restrictions are a manifestation of power, permeating all spheres of residents' lives, making the city a utopian model of a perfectly governed civitas, in which there is no individuality of the individual (Foucault, 2022).

In smart cities, one is always being watched. Sensors, cameras, and other devices monitor almost every aspect of urban life, from traffic to energy consumption in buildings. Apps collect data on our shopping habits, transportation preferences, and even our health habits. CCTV cameras surround everyone, detecting crimes and preventing terrorist attacks simply because a camera is at the right time, in the right place, recording the right event. These vast resources of information certainly improve the efficiency of the city's operations, but does this justify the existence of an invasive and overextended surveillance system in the city? Possibly, but only if we are able to give up our sense of privacy in favor of security and convenience. In this case, living in a panopticon could be comfortable. One could even forget about constant monitoring. While this may seem a bit Orwellian (Orwell, 2022), this is the quasi-reality we are already dealing with.

The digitalization of urban spaces (and beyond) means that city dwellers are being tracked even in the execution of daily activities. This is made apparent, for example, by the actions of technology giants such as Amazon, whose Alexa voice assistant, while offering convenience to users, also collects a range of information about them to personalize services. In this case, the appeal of technological convenience, over privacy, prevails. The same is true for the use of online applications, where "convenience" dominates over privacy concerns and data control. Thus, we residents give tacit consent to surveillance and data collection.

Operating in smart cities, which are, as already mentioned, laboratories of innovation, residents have become accustomed to two highly invasive forms of perceived omniscience: (1) cameras located at intersections and other public spaces and (2) private cameras in neighborhoods. The thicket of technological conveniences and ubiquitous monitoring makes surveillance commonplace, and the individual is increasingly unaware of it. According to Bentham's theory, observation acts as a deterrent, contributing to individuals' vigilance when they are observed. In this case, awareness of the presence of cameras can act as a preventive element, reducing the risk of committing crimes. However, when the surveillance is not continuous or when criminals are unaware of the monitoring, there is the potential for illegal activities to continue, supporting the theory that there are consequences for a lack of continuous surveillance. From the perspective of Bentham's theory, the effect of cameras on the behavior of urban residents appears to be observational. People adapt to their presence, reacting to the awareness of monitoring or the lack of it, and this determines their behavior. Nonetheless, the paradox of omniscience, in which surveillance can be both a deterrent and an enabler, requires society to consider the balance between a sense of security and the protection of privacy.

In today's smart cities, omniscience is no longer just the result of conscious surveillance, but the result of automatization. State-of-the-art metropolises are becoming veritable Panopticolis, with cameras and facial identification systems monitoring traffic and other public spaces with a growing impact on our daily lives. Intersection monitoring systems that record the behavior of drivers and pedestrians, sectional speed measurements, license plate recognition systems, such as in city parking lots, and audio monitoring that identifies dangerous situations on the roads are just some of the tools affecting

our daily lives. These systems not only record our actions but can result in penalties for non-compliant behavior, such as running red lights. Automated surveillance systems are becoming an integral part of the urban landscape. They can be seen as tools that control the behavior of urban residents and affect their safety but also their privacy and freedom. Therefore, a thoughtful approach is needed to introduce new monitoring technologies that serve the interests of society while preserving individual privacy and freedom.

To summarize, there is a great danger that smart cities equipped with cameras, wiretaps, and digital methods of tracking the flow of information will become an emanation of Bentham and Facoult's panopticon idea from more than 200 years ago, one that envisioned domination through collective observation and social normalization. In the context of the growing smartness of the city and the development of densely populated public spaces, the question of the relationship with ubiquitous surveillance arises. The development of technological sophistication and specialization of surveillance systems should prompt both smart city authorities and residents to reflect and consider how these systems will affect our perception of public spaces, whether they will continue to remain accessible to all or become arenas of surveillance and social control. An Orwellian system is already effectively at work in many Chinese cities, which boast some of the most advanced and ubiquitous surveillance systems in the world. China is estimated to have more than 170 million surveillance cameras, linked to facial, voice, motion, and behavioral recognition systems (Newsweek, 2017). More than 1100 biometric facial recognition cameras have been installed in Shanghai alone (Janus, 2021, p. 167). These systems are not only used to ensure security but also to assess the social credibility of citizens, conditioning access to various services and privileges.

Well-being city and surveillance city – two sides of the same smart city

The smart city represents a fascinating amalgamation of two opposing concepts: a place of social well-being, dominated by the desire to increase the comfort and satisfaction of residents, and surveillance modeled on the panopticon of Foucault and Bentham.

On the one hand, the development of technology is a key factor in improving the quality of life in the city, enabling innovative solutions in mobility,

infrastructure, communication, and resource management. Thanks to modern technologies, we can optimize public transportation systems, improving accessibility and efficiency. This translates into convenience and time savings for residents. Smart lighting and energy management systems save resources and reduce emissions, creating a more sustainable urban environment. On the other hand, with advances in technology come concerns about surveillance and invasion of privacy, which relates to the concept of the panopticon. As monitoring systems and data collection expand, there is a risk of abuse and violations of individual rights, which can lead to a loss of a sense of privacy and freedom. In such a smart city, an Orwellian Big Brother is watching everyone and everywhere.

The clash of these two concepts raises the question of the balance between control and freedom, surveillance and social well-being. Is it possible to create a smart city that provides effective management and surveillance while respecting individual privacy and dignity? The conflict seems apparent, as there is certainly room for symbiosis between social welfare and surveillance. Smart cities should be places where technology serves residents and improves the quality of life and efficiency of urban services, while at the same time taking care to protect the data and privacy of individuals. It is important to emphasize the enormous benefits of innovative solutions used in smart cities. The Internet of Things, AI, Big Data, Blockchain, and other advanced technologies make cities more sustainable, effective, and friendly to residents. These technologies undoubtedly improve transport, energy, and waste management systems, bringing benefits to residents and improving their quality of life. Moreover, a smart city can contribute to increased civic participation and greater social participation. Thanks to modern digital platforms and tools, residents can more actively participate in decision-making processes, report problems, and propose solutions, which leads to the construction of more open and democratic communities.

In democratic systems, there is a clear boundary between welfare and control that is crucial to observe. This is made apparent by ancient cities that were bastions of democracy, where civil rights and freedoms were the foundation that protected the individual from excessive surveillance. Cities, where data is used exclusively to improve the quality of life and respect individual freedom, are well-being cities, but those where the boundary has been crossed become surveillance cities, which pose a threat to democracy.

Acknowledgments

References

1. BANASZYK, P. (2019) Logistics city goals and decision criteria from the point of view of the happiness theory. *Przedsiębiorczość i Zarządzanie* 19, 11, 3, pp. 313–323 (in Polish).
2. BENTHAM, J. (1971) *Panopticon*. Dublin.
3. CALVINO, I. (1972) *Invisible Cities*. Giulio Einaudi (in Italian).
4. CALVINO, I. (2022) *Invisible Cities*. Vintage (in English).
5. COHEN, B. (2015) *The 3 generation of smart city*. [Online]. Available from: https://www.fastcompany.com/3047795/the-3-generations-of-smart-cities [Accessed: January 25, 2024].
6. CZAPIŃSKI, J. (2012) Ekonomia szczęścia i psychologia bogactwa. *Nauka* 1, pp. 51–88.
7. DYMNICKA, M. (2008) Fragmentation of the public space – An attempt at recomposition. *Studia Regionalne i Lokalne* 3 (33), pp. 33–52 (in Polish).
8. FOUCAULT, M. (2005) Inne przestrzenie. Translated by A. Rejniak-Majewska, *Teksty Drugie* 6 (96) (in Polish).
9. FOUCAULT, M. (2022) *Discipline and Punish: The Birth of the Prison*. Penguin Books.
10. GEHL, J. (2014) *Miasta dla ludzi*. Kraków: Wydawnictwo RAM.
11. GIDDENS, A. (2006) *Nowoczesność i tożsamość*. Translated by A. Sulżycka, Warszawa: PWN (in Polish).
12. IMD (2023) *Smart city Index Report 2023*. [Online]. Available from: https://imd.cld.bz/IMD-Smart-City-Index-Report-20231/6/ [Accessed: February 16, 2024].
13. JANUS, D. (2021) Smart city in China: sustainable or surveyed. *Sprawy Międzynarodowe* 74 (1), pp. 154–174, doi: 10.35757/SM.2021.74.1.04.
14. KITCHIN, R. (2015) Making sense of smart cities: addressing present shortcomings. *Cambridge Journal of Regions, Economy and Society* 8 (1), pp. 131–136, doi: 10.1093/cjres/rsu027.
15. MONTGOMERY, C. (2015) *Miasto szczęśliwe*. Translated by Tesznar T. Kraków: Wysoki Zamek (in Polih).
16. Newsweek (2017) *Oko Wielkiego Brat. Chińczycy zbudowali niesamowity system monitoringu*. [Online]. Available from: https://www.newsweek.pl/swiat/chinski-system-monitoringu-oko-wielkiego-brata-170-mln-kamer/hb6fmzm [Accessed: February 16, 2024].
17. NOWEL-ŚMIGAJ, A. (2012) Panopticon versus oligopticon. Is guarded means reserved? *Architektura Czasopismo Techniczne, Architecture Technical Transactions* 109 (1), pp. 27–37.
18. ORWELL, G. (2022) *Rok 1984*. Rebis.
19. ROBINSON, R. (2015) *Reclaiming the "Smart" agenda for fair human outcomes enabled by technology*. [Online]. Available from: https://theurbantechnologist.com/2015/03/20/reclaiming-the-smart-agenda-for-fair-human-outcomes-enabled -by-technology [Accessed: May 03, 2018].
20. SANCHEZ, K. (2021) *Survey depicts residents' perceptions on smart cities and data privacy*. [Online] 08 June. Available from: https://longbeach.gov/smartcity/news/data-privacy-survey [Accessed: February 15, 2024].

21. Sᴌᴀᴡᴇᴋ, T. (1997) Akro/nekro/polis: wyobrażenia miejskiej przestrzeni. In: A. Zeidler-Janiszewska (ed.) *Pisanie miasta – czytanie miasta*, pp. 11–40. Poznań: Wydawnictwo Fundacji Humaniora.

22. Sᴏ, J., Aɴɴ, H. & Lᴇᴇ, C. (2020) Defining Smart Mobility Service Levels via Text Mining. *Sustainability* 12 (21), 9293, doi: 10.3390/su12219293.

23. Sᴢᴏᴌᴛʏsᴇᴋ, J. (2017) Urban logistics facing demands of increasing smartness of smart city. In: R. Matwiejczuk & I. Pisz (Eds). *Logistyka w naukach o zarządzaniu, część I*. Zeszyty Naukowe *Przedsiębiorczość i Zarządzanie* XVIII, 8, 1, pp. 283–296, Wydawnictwo Społecznej Akademii Nauk, Łódź, Warszawa (in Polish).

24. Sᴢᴏᴌᴛʏsᴇᴋ, J. (2018) Kiedy wymienić władze miasta. *Miasta idei. Miesięcznik Samorządowy*. Dodatek do Gazety Wyborczej, 26.01.2018, pp. 7–8.

25. Wᴌᴏᴅᴀʀᴄᴢʏᴋ, K. (2014) Economics in relation to happiness. *Ruch Prawniczy, Ekonomiczny i Socjologiczny* 76 (4), pp. 347–363 (in Polish).

26. Zᴜʟʟᴏ, P. (2022) Smart cities – making the Investment. [Online]. Available from: https://scag.ca.gov/sites/main/files/file-attachments/etc-082522agn03-presentation.pdf?1661487042 [Accessed: February 14, 2024].

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