

THE SARS-CoV-2 CORONAVIRUS PANDEMIC AND THE CITY'S SPATIAL POLICY DIRECTIONS

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1. Introduction

The COVID-19 pandemic and its social and economic impacts have highlighted a number of previously underestimated or neglected issues connected with the functioning of contemporary cities. The scale and strength of the effect of a pandemic on urban life and development depends on a number of factors, including those linked to the size, functions, location, and the quality of development policies and the effectiveness of their implementation. Included in the category of development policies is spatial policy, which is a function of strategic choices regarding socio-economic development in spatial terms. The implementation programmes and the projects carried out within their framework directly affect the direction and forms of spatial development of cities and their functional and spatial structure.

Development policies are implemented in specific contexts:

- socio-economic (needs, resources, development potential, priorities, opportunities),
- political (short- and long-term objectives, sequence of actions, costs vs. benefits, distribution of costs and benefits among different social groups, priority thematic areas, areas requiring intervention, priority areas for development),
- spatial (existing development, location of functions, relationship between areas with specific functions, location of greenfield sites and their qualities and constraints in terms of performing specific functions, transport links).

Global fashions and trends in urban development are also an important factor shaping spatial policy. Their relevance to the specific situation of a particular city, their applicability to development programming, or their usefulness

in operationalising activities varies. Observation of urban activities and their effects on spatial development has both cognitive and practical value, providing information on the potential effects of the following types of decisions:

- programming (development strategy, implementation programmes, implementation projects),
- planning (studies of land use conditions and directions, local development plans),
- management (priority thematic areas and sites to be developed, sequence and ways of achieving objectives).

The problems experienced by cities in relation to the COVID-19 pandemic are not the first instance of infectious diseases affecting urban centres. Cities have been facing pandemics for hundreds of years. In addition, in the recent decades, new infectious diseases have been emerging at an increasing scale and in growing numbers. Examples include the Ebola virus, severe acute respiratory syndrome (SARS), avian flu, or Middle East respiratory syndrome (MERS). These diseases have had serious socio-economic consequences worldwide. They have also become one of the driving forces and, at the same time, an incentive and an opportunity to introduce new thinking about ways of developing cities that would increase their resilience to such threats. Crisis preparedness or 'readiness' is therefore becoming a key investment today, as its cost appears to be small compared to the possible consequences of further pandemics (Lee et al., 2020).

The majority of the global population resides in cities, and it is primarily urban areas which are affected by outbreaks of emerging infectious diseases (e.g. COVID-19 – Wuhan, China) or their rapid spread (e.g. the SARS outbreaks in 2003, the Zika virus disease in the Americas). According to UN data, approximately 95% of COVID-19 cases have been reported in urban areas, and the pandemic has clearly affected more than 1,500 cities worldwide (Afrin et al., 2020; Lee et al., 2020).

The future of cities in Poland can be forecast based on international experience. COVID-19 has allowed us to view the future of urban areas not only from the individual perspective of specific cities, but from the perspective of the 'urban community of the twenty-first century'. The pandemic has demonstrated that cities, despite their different histories and development models, have much in common. Similar problems afflict the inhabitants of most metropolises, even though they are at different levels of civilisational development.

The purpose of this paper is to discuss the issue of urban spatial policy in the context of the new conditions stemming from the COVID-19 pandemic. It discusses the impact of the pandemic on changes in these policies, as well as anticipated development trends resulting from the experience of urban functioning in the COVID-19 era.

As mentioned above, spatial policy is not an autonomous policy in the sense of abstracting, when formulating it, from multidimensional social, economic, and spatial conditions. Spatial policy is the result of an integrated

approach to development programming and planning, and its coherence and effectiveness depends on the applied instruments, which nowadays go beyond the traditional spatial planning tools. Therefore, this chapter devotes considerable attention not only to the spatial dimension of development, but also to the issues and problems the diagnosis of which is essential for the formulation of public policies, including spatial policy.

2. Epidemics and urban development

Infectious diseases have affected the functioning and development of cities for hundreds of years. The largest epidemics of the past were caused by the bacterium *Yersinia pestis*, which caused the bubonic plague, and *variola*, the smallpox virus, both characteristic of the pre-industrial period. In the nineteenth century, the most serious was the cholera epidemic caused by the cholera bacillus (*Vibrio cholerae*) and, after the First World War, the so-called Spanish flu, which swept across Europe, Asia, Africa, and North America and, according to official figures, claimed at least 20 million lives, although some researchers put the death toll at 50–100 million (Johnson, Mueller, 2002).

Prior to the coronavirus pandemic, cities struggled with the challenges of infectious diseases at different historical times. Going far back, we do not find many examples of holistic spatial policies, but rather examples of engineering-based interventions linked to technical infrastructure. Epidemics of infectious diseases, in addition to their tragic effects on the life and health of the population, often became important catalysts for urban change.

Examples of the impact of infectious diseases on the functioning of urbanised areas in the past are provided by Africa, among others. The low level of civilisational development of African countries has always translated into poor urban living conditions. This was mainly associated with deficiencies in technical infrastructure (especially water and sanitation facilities) and low levels of social infrastructure development. The spatial development of the cities was hardly planned or controlled. Successive outbreaks of infectious diseases, due to their scale and cost, led to changes in the approach of metropolitan countries to the situation in the colonies (Cobbinah et al., 2020).

According to P.B. Cobbinah et al. (2020), in the British Crown colonies, land use planning (or rather the ways in which land use decisions were made) was gradually institutionalised and placed in legal frames. This came in response to the emergencies associated with the cholera and bubonic plague epidemics that affected urban centres, including Nairobi and Lagos. The institutionalisation and legal regulation of urban planning allowed for the development of instruments that enabled interventions in the slums (sometimes simply their liquidation or the regulation of development rules or the introduction of basic technical infrastructure). These interventions were designed to serve urban renewal in what is now South Africa (1927) and Nigeria (1928).

In francophone Africa, spatial planning went beyond sanitation to include health security (health facilities and residential hygiene). It is important to note, however, that planning activities in both cases were largely interventionist in nature. Often, they did not translate nor were linked to the formulation of future objectives of city-wide spatial policies (if such policies were developed, which was rarely the case). Experiences from the cities of the British or French colonies were not applied to cities in other countries on the continent. Ebola, cholera, and malaria did not change planning practices there. Today, the SARS-CoV-2 coronavirus is as much, if not more, a threat to the population of African cities as it is to the population of cities on other continents. However, in the case of the former, we know much less about the scale, course, and victims of the pandemic, and the opportunities for intervention are incomparably smaller.

The introduction of spatial planning by the colonisers in selected African countries was a success in the absence of previous regulations. On this note, it is worth pointing to an important political, social, and economic aspect of spatial planning. In colonial times, the task of spatial planning was not just to improve the functionality of cities (understood today also as resilience to the emergence of epidemics). Resilience, if considered important at all, was seen in this way mainly for economic reasons. This is because urban planning was primarily an instrument for shaping the structure of cities according to the needs of the colonisers and in order to culturally and structurally isolate the natives from the newcomers from metropolitan states. Creation of urban space in line with these principles led to socio-economic segregation in the cities of Ghana, Congo, and Nigeria and contributed to the development of racial segregation under apartheid in southern Africa (Cobbinah et al., 2020).

Moving to the geographically closer area of Europe, one should begin by noting that, although European cities were not free of epidemics, the political, social, and economic context of crises linked to the emergence of infectious diseases was different from that on other continents. A pragmatic approach was evident in the response of European city authorities to infectious diseases, i.e. a realistic assessment of the risks and costs of an outbreak, the identification of options for responding to the risks and consequences of an epidemic, and the selection of solutions or countermeasures that could be applied as quickly as possible. This pragmatism consequently manifested itself in public interventions that introduced changes to the space, although these were not always related to 'pure' spatial planning. Planning procedures had always been time-consuming and complicated. Under epidemic conditions, there was no buffer time that allowed spatial plans to be calmly processed.

Some infectious disease epidemics inspired new urban solutions. The cholera epidemic of the nineteenth century led to improvements in urban sanitation systems (modernisation, expansion, construction). The outbreak of respiratory infections in the cities of industrial-era Europe led to the enactment of new housing regulations (healthy housing environments). Residents

of overcrowded nineteenth-century London struggled with epidemics of dysentery, typhoid fever, and cholera. A key government decision in the fight against these diseases was the construction of the city's sewerage system. In August 1858, the Parliament approved a project to rebuild the municipal sewerage network. Over the following 16 years, 130 km of sewers were built to carry wastewater to the eastern districts of London. Pumping stations were set up in the lower boroughs. After the completion of the first stages of the project, the incidence of disease fell significantly, and the effects of subsequent epidemics were not as severe. The later epidemics, even if they broke out, did not spread to other districts of the city (Olejniczak, 2017).

The period of the development of industrial centres was in many cases a time of deteriorating living conditions in these cities. Spot interventions carried out in selected areas did not lead to the overall improvement of living conditions. The intervention areas were components of urban structures that continued to be characterised by dysfunctionality. Many industrial cities underwent decades-long spatial transformations. Changes that were visible and perceptible to residents only began to appear in the era of post-industrial cities.

An intervention unique in its scale, duration, and effects, and combining planning elements with a whole range of objectives, was the redevelopment of Paris between 1852 and 1870 (the Great Parisian Redevelopment, Haussmann's general redevelopment of Paris). One of the problems of eighteenth-century Paris were the densely populated central districts with their medieval layout of narrow streets, lack of sewerage and running water. Poverty-stricken population groups lived there in poor sanitary conditions. The redevelopment of Paris was not, of course, motivated primarily by sanitary reasons and a will to improve the living standards of these population groups; instead, the first projects to transform the city were a response to the difficult situation caused by cholera epidemics. A major cholera outbreak occurred in 1832 in the central districts of Paris and killed an estimated 20,000–30,000 people, mostly poor residents. A second wave of the epidemic swept through the city in 1849, killing nearly 20,000 Parisians. At this time, due to the lack of sewage systems, all pollutants, including poisonous chemicals used in the burials of cholera victims, found their way into the Seine, which was the city's source of drinking water. Narrow streets with overcrowded and soggy dwellings further encouraged the spread of the disease.

Living conditions in the city were factored into discourses on how Paris was supposed to change. As part of the redevelopment, much of the medieval buildings were demolished, the city's sewerage system was rebuilt, new parks and gardens were opened, and new streets, boulevards, and public buildings were created. In order to control sanitation problems, the number of municipal fountains was increased (from 200 in 1830 to almost 2,000 in 1848), so that the amount of water available to the population increased from 30 to 100 litres per person. Another success of the measures taken was the construction of a water supply network to provide drinking water to homes and