Is a post-dystopian urban future possible? Alternative scenarios for Bytom

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Abstract. This article follows the argument that urban dystopia is reserved not only for the sphere of the fictional but also as a state of reality that academic methods can capture and describe. Taking the example of the city of Bytom, a traditional centre of coal mining in Southern Poland, the article discusses four spheres where the dystopian present is clearly visible – namely, the four elements that led Bytom to a socio-economic and spatial collapse: depopulation, social polarisation and ghettoisation, degradation of the urban fabric and mining damage. Apart from showing empirical evidence, the article critically considers the possibilities of a post-dystopian urban future for the city. A discussion of possible policy answers to these dystopian trends is based on two possible scenarios of how the urban future could look. First, the semi-dystopian option assumes that the expected direction and the results of current policies will lead to some improvement in the quality of the urban environment and the residents' quality of life. Second, the post-dystopian future is based on an optimistic scenario, which assumes that a post-dystopian future is possible. However, the desired salvation from the dystopian present will not come about through the search for new utopian visions. It will rely instead on the improvement and mitigation of some of the substantial social, economic and environmental problems that exist and continue to present an unbreakable social image.

Contents:

1. Introduction

The development of urban communities has always been affected by important upheavals in human development – namely, revolutions, changes in political borders, the collapse of totalitarian regimes, economic recessions and significant shifts in the territorial division of labour. The cities of Western Europe and North America, whose peak was in the period of the first industrial revolution, fell into economic and social crisis in the 1950s and 1960s (Thomas, 1988, 1990; Boyle, 2001; Rieniets, 2009; Herstad, 2017), and their effects have continued for decades (Markuse, 1989; Lever, 1991; Stoesz, 1992; McGraw, 2007; Vall, 2007; Wiechman & Pallagst, 2012). The turning point for many cities in the former socialist countries was the political shift at the turn of the 1990s and the collapse of an outdated economy (Andrusz et al., 1996; Stanilov, 2007; Mykhnenko & Turok, 2008; Mihaylov, 2020).

All these socio-spatial problems were most obvious in cities based on the development model shaped in the industrial society. In the era of industrial modernity, a conviction that urban industrial space carries everything that is progressive was established (Kulas, 2018), and many projects of the ideal city were associated with this (Ferriss, 1929; Le Corbusier, 1967; Epstein, 1973), including a revolutionary break with the existing tradition (Mihaylov & Ilchenko, 2023). The collapse of the main source of progressiveness (depletion of mined resources or technological backwardness) and failed attempts at functional diversification resulted in a reversal of roles: industrial cities became anti-utopian places. Some urban communities failed to develop alternatives to declining industries either quickly or at all. In Detroit, for example, in social perceptions, in movies and in art, "the imagined dystopian present of Detroit is grim, the image of Detroit as a city of ruins is even more so" (Chan, 2011: 58). There are other variations of the modern urban dystopia. If we limit our view only to the post-socialist context, we can distinguish urban districts based on the ethnic segregation of the Roma population, living in devastated space and extreme poverty (Georgieva et al., 2020; Filčák & Ficeri, 2021; Lancione, 2022). The most extreme example of a (post-)socialist dystopia from which there is no turning back is the landscape of the Ukrainian city of Prypiat, completely abandoned by its inhabitants during the evacuation after the accident at the nuclear power plant in Chernobyl (Borenstein, 2015). It is a techno-dystopian place (in line with Harvey, 2020) in which people do not associate their future. Today, the socialist urban dystopia is a product of tourist "consumption" (Farkic, 2020; Banaszkiewicz, 2023). If the economic and demographic collapse and the emergence of more and more ruins of post-industrial architecture are classic factors of cities falling into a dystopian trap, in Bytom, a city located in a large coal mining urban region in Southern Poland, the group of these factors also includes the catastrophic effects of mining activity (mining damage). Moreover, from the late 1980s to 2022, the city lost a third of its inhabitants. Bytom, which was a central city in the industrial period, became a dystopian case of a shrinking urban centre. The problems of Bytom have not become a symbol of dystopia and decline in Poland in a way comparable, for example, to Detroit. This does not mean, however, that these problems require less attention and urgent strategic interventions in "the most problematic city in the European Union" (Hetmańczyk, 2017: 245). Bytom has a paradoxical experience – its cultural strength, based on architectural richness and the concentration of influential cultural institutions, contrasts with its economic and environmental conditions (Wrana 2011).

The negative impact of economic and social factors was quickly reflected in the degradation of a large part of the landscape of Bytom. Although the contemporary direction of development of this urban area is the subject of intensive scientific research (Riley & Tkocz, 1999; Runge et al., 2003; Zuzańska-Żyśko, 2016), the transformation of Bytom as a target subject of research is less often the focus of interest for researchers. Most of them focus on diagnosing demographic and socio-economic trends and problems in its management (Krzysztofik et al., 2011; Bernt et al., 2014). Traditionally, much less attention is paid to the role of soft factors, especially local initiatives with alternative models of revitalisation and development, and these are the factors that have gradually changed the city's image in recent years. Despite this, positive steps taken in transforming urban economic and cultural space

are also increasingly noticed (Wrana, 2011; Mikrut-Majeranek, 2013; Hetmańczyk, 2017).

This article contributes to the issues of urban utopian/dystopian disjunction in two ways. First, it looks for a better elaboration of the term dystopia itself, which is traditionally seen as a futuristic fiction for human society as dark, poor, polluted and oppressed. Then, the accent is moved to the unused semantic potential of the dystopian concept, which may be conceptualised as a tool to describe, explain and predict policies of an actual, observed, undesired state of reality that significantly exceeds the norms of permissible problems of modern society.

2. From a futuristic fiction to a diagnosis of current reality

This article is grounded on the assumption that both the changing urban materiality and its social perceptions can be described by the application of the urban dystopia concept (MacLeod & Ward, 2002; Claeys, 2010; Blaim, 2017; Ladiana, 2017; Ceylan Baba, 2020; Konstan, 2021). In comparison with the "malleable and elastic concept" of utopia (Greene, 2011: 2), which is better problematised from the point of view of space–society relations (Meyerson, 1961; Bina et al., 2020; Pinder, 2002; Kallis & March, 2015; Wilson & Bayón, 2017; Sachs, 2021), the urban side of a dystopian perspective is somewhat less developed. That is why the theoretical foundations of the issue deserve more attention. After decades of underrating utopian thinking (Jacobi, 1999; Harvey, 2000), there is a growing appreciation recently that "spatial utopian politics has the potential to introduce a 'politics of the possible' to public debates by accommodating, rather than suppressing, the lack or underdevelopment of ideas." (Sachs, 2021: 707). Apart from the theoretical development of the dystopian concept, then, how is its research application useful? The answer to this question is partly found in the current academic debate.

Undertaking an exploration of the possibility of post-dystopian urban development means that the authors rely on the assumption that the current state of Bytom corresponds to the concept of dystopia. Despite a significant number of publications, this heterogeneous concept is rarely the subject of attempts at analytical and empirical scientific operationalisation. In addition, such an approach raises many controversial issues, including whether, like a utopia, a dystopia can be treated not only as an imaginary ideal in futuristic terms but also as a certain material state in the present time that can

be objectively measured. This is also related to the dilemma of whether, in the case of dystopias, and not only in the urban context, the search for hard "criteria" in order to characterise a dystopia makes any sense at all. However, we first have to look at the current academic insights into its essence and the main directions of grasping this complex concept. As the dark side of utopia, namely idealised reality, dystopia combines utopian elements, and vice versa (Mazurek, 2018). This observation provides a clear argument for the application of conceptual variations, including the notion of semi-dystopia.

Just as studies of the space of man and society would be incomplete if the latter were not examined in close relation to time, so certain events, objects and ideas on socio-spatial utopian/dystopian dialectics (Greene, 2011; Gill, 2020; Panagopoulos, 2020) would be useless if they are not placed on the time axis. Some interpret utopia as a phenomenon "where past and future produce the present" (Kallis & March, 2015: 362). This means that both utopia and dystopia can be treated as visions of the future city/society or as observed/diagnosed states of affairs. As for the first understanding of the concept, it is closer to anti-utopia. If "Dystopia, like utopia, is, therefore, a form of description of a fictitious society, usually set in the future" (Głażewski, 2010: 31), then why can such a description be denied to phenomena observed in the real world? Classic utopias were located in a retrospective or prospective time perspective, while postmodernity focuses on the present (Ponikowska-Cichoń, 2014).

As for the second understanding, it can also be caught up in excessive hyperbolisation. This is how images of dystopias are created, and, often reproduced and disseminated, become a factor that reinforces negative attitudes toward a dystopianised city. In realistic terms, dystopia is a concept that conveys a generalised picture of very advanced and cumulated negative, undesirable states. These include crises, recessions, ecological and technological disasters, accelerated urban decline, poor housing and sanitary conditions, lack of prospects for a large part of the population, and depopulation.

Beyond these fundamental dilemmas of theory, it is necessary to descend to a slightly deeper level of reflection on dystopia. This is necessary because we would like to focus on those aspects and contexts of application of the concept that are closest to the subject of our empirical study. We assume that dystopia has different faces and can reflect different "sectors" of the social structure.

In science, journalism and fiction, politically centred dystopia, which also implies some economic and social motifs, is one of the key

elements of dystopian discourse. It is characterised by the fear of excessive surveillance and limiting the individual's freedom of behaviour and choices as a result of the implementation of social engineering policy. Such visions are usually based on observed changes in social organisation and speculation about the possible negative consequences of their implementation. In turn, M. Harvey (2020) uses the term dystopia, viewing it as a fully possible scenario for the development of humanity, as a concept similar to the apocalypse.

Economic dystopia is a real and imagined state of society influenced by the experienced crises, recesses, bankruptcies and defaults. Combined with current uncertainties in the course of economic development, all these negative phenomena evoke pessimistic expectations about the future condition of humanity at various spatial scales. There are also expectations that the economic inequality – for example, between the Global North and the Global South or between the richest people and the rest – will intensify. While "inequality is a question of politics" (Zimmer, 2015: 13), appropriate social and policy tools can mitigate its extent. To gauge a picture of the current situation, socio-economic dystopia can be measured by the UN social statistics data, but it can also be seen in many rural and urban areas all around the globe, including in developed countries.

Social dystopia is intrinsically linked to the economic side of development. This phenomenon can be observed when assessing the social situation in a given place or a society. Then, we must remember that any utopian or dystopian interpretation/categorisation of individual places is always an abstract image, the content of which is influenced by the subject's point of view, which is always somewhat distorted. As in the classic definition of utopia, it is a "non-place" product of the human imagination. Kwiatkowska (2004: 55) treats dystopia as a "bad place" in which "a state of disturbance of the dynamic balance in the environment has occurred". A particular problem here is the growing social alienation, fuelled by the active impact of technological discoveries on inter-human relations. Because contemporary expanding cities are multifaceted, heterogenic structures, social dystopia is associated globally with the polarisation and segregation of "metropolitan slums" and "hyper ghettoes" (Ladiana, 2017), in which the exclusion of certain groups of people overlap in social and spatial terms. There are also a growing number of spaces in which the results achieved are the opposite to those intended, namely creating a dystopia through utopian goals.

In turn, demographic dystopia or "demodystopia" (Domingo, 2008) is a dystopian state that can be achieved in two quite opposite ways. First, as in the case of Bytom, the transition to post-industrialism relates to the loss of population, which is enforced by people escaping a city with fading economic potential and a largely degraded environment. The second way to demographic dystopia is overcrowding of urban areas, lack of space to build a healthy urban environment, and a high density of people and buildings, which can be observed in some cities and ghettoised neighbourhoods.

Environmental dystopia often serves as a caution for future generations if governments do not change their policy of "never ended growth" (Cheshmehzangi & Dawodu, 2019) and consumer behaviour remains unchanged. The experts' policy debates on the theme are centred around climate change and global warming, and, most recently, the intriguing concept of degrowth (Kallis & March, 2015; Sachs, 2021). When environmental dystopia represents a vision, it mobilises social energy to seek preventive measures to increase society's resilience and avoid such negative scenarios. Here, we have a manifestation of the dialectic between utopia and dystopia and the possibility of achieving an effect that is opposite to the pursued goals. For coal mining regions such as Upper Silesia, which includes Bytom, a special Just Transformation fund was created to reduce the social cost of the upcoming liquidation of the last operating mines.

And, finally, the relationship between dystopias and material spatial structures (especially large cities) shapes a vast field of research inquiry. From an urbanistic/city planning perspective, all the outlined "sectoral" facets of dystopia meet, making a complex symbiosis of all social problems nested in a concrete material space. In general, dystopia means an architectural surrounding that is full of hostility and restlessness, where nature is destroyed and the whole urban space is devastated by pollution; it is also chaotic, dirty and imbalanced (Al Zahrani et al., 2022: 94). Kwiatkowska distinguished several kinds of this phenomena that can be observed in urban development: demographic, geometrical-spatial, programmatic-functional, technological-physical, aesthetical and psychological-social. The phenomenon of urban dystopia is characterised by various symptoms, namely devastation and destruction of the environment by spontaneous and uncontrolled human activities (destruction of common property, hooliganism, aggression towards people and space, to name a few) or critical and repressive influences of the environment that can lead to apathy, alienation and atomisation (Kwiatkowska, 2004: 56).

3. Research framework

Dystopia, both in scientific literature and in art, is associated with places that are repulsive, gloomy, fallen, and people-unfriendly, with no future for humans and social life, in the material, ecological and mental-psychological sense. We strive to draw attention to the potential of the local urban community and look for hope in the possibility of leaving the state of dystopia, with particular emphasis on the will of local stakeholders to constantly fight against the dystopian present.

The aim of this article is a critical discussion of the main elements of the dystopian landscape, a discussion of the actions taken, and the scenarios for the development of the city of Bytom. An attempt has also been made to assess the appropriateness of these activities in post-dystopian development. The problems of the post-industrial and post-socialist transformation of this city have been shown using the concept of urban dystopias. This is the opposite of utopia, and is most often associated with a specific state – planned, predicted or dreamed – of certain places in the future (Mihaylov & Ilchenko, 2023).

In connection with this goal, we have attempted to answer several related research questions in this article. First, what caused Bytom to change its image from one of the richer and most architecturally outstanding cities in the Katowice conurbation, and even in Poland, to an image of a dystopian urban space? Second, what is the scope of actions taken by local authorities to revive Bytom as a city with high-quality public spaces, where it is worth living and working and where people can spend their free time pleasantly – and can these actions become a driving force for continuous development growth? Relied on the results of empirical studies, the answers to these questions were sought in the next two analytical parts of the article. Finally, we pose one question that generalises the previous two: Will salvation from the dystopian present come through utopian visions for the future, drawn on a grand scale, or could it result from the fatigue of the uneasy post-socialist and post-industrial transformation, as felt in fractional forms, single, short-sighted and non-integrated goals and activities?

To answer these question, the research scheme has the following logic. The general division of dystopian "sectors", discussed in the previous chapter, has been modified, taking into account the specificity and scale of the research unit (city) and the social, material and technical conditions (the crisis of the post-mining economy and depopulation). The research scope was limited to these four elements that led Bytom to a socio-economic and spatial collapse in the 1990s:

depopulation, social polarisation and ghettoisation, degradation of the urban fabric, and mining damage. A more detailed division reflects the specificity of the accumulated problems in Bytom. The problems of dystopia are presented from a dynamic perspective, taking into account current changes and the involvement of various urban policy actors in solving the most critical issues. The obtained results made it possible to eliminate subjective, and often also emotional, assessments about the future of the city of Bytom.

4. Materials and methods

The conducted analysis was based on several types of sources:
1. Selected documents of local and regional public institutions that outline strategic visions and choose directions for the city's future spatial and sustainable transformations and possible ways of mitigating the accumulated dystopian trends;
2. Studies, reports, expert opinions and projects of non-governmental and civic organisations, representatives of local civil society;
3. Selected statistical data on the development of the city and data presenting major demographic, social and economic problems that allow for an objective view of the state of local development.

The data was obtained from the Bytom City Hall, the 2021 National Census, archival maps of the State Monuments Protection Service and the municipal Monuments Conservator (Provincial Heritage Monuments Protection Office website) and archives, and geological maps of mining damage (Kowalski, 2015). An important source of information the website dedicated to the revitalisation of the city (Bytom, 2023).

The implementation of the research objective required the use of several main methods, typical primarily of qualitative approaches. In addition to the analysis of documents and opinions on the development problems of the city of Bytom, quantitative indicators regarding housing space, including infrastructural equipment, were used. Field research was also of key importance, allowing direct monitoring of the progress of changes in selected dystopian places in Bytom. Cartographic methods in the field of GIS were also employed, using the MapInfo software for the spatial presentation of selected crisis phenomena, namely areas covered by the revitalisation programme and the land depression as a result of mining activity.

5. Study area

The study area covers the city of Bytom, located in southern Poland in the Silesian Voivodeship (Figure 1). In the early 20th century, it was the largest urban centre in the area of the contemporary Katowice conurbation, becoming a symbol of decline and failed transformation less than 100 years later.

The most crucial factor in the success and, at a later stage, the decline of the city was the dynamics of coal mining in Upper Silesia from the end of the 18th century. This caused significant surface deformations and, consequently, mining damage and even the "collapse" of cities. In the interwar period, together with Zabrze and Gliwice, Bytom was part of the German Empire. In the period after World War II, Bytom was, next to Katowice and Zabrze, the largest mining town in Poland and one of the largest in Europe (Ziemba, 1956). In socialist times, Bytom was a place that attracted labour from all over Poland. At that time, there were seven

mines operating in the city. In 1970, these employed a total of 32,000 people (Melich, 1979: 595). In addition, there were two zinc and lead ore mines and two large steelworks. Many of the other plants in the city were closely related to mining. In formal terms, contemporary Bytom belongs spatially and administratively to the Górnośląsko-Zagłębiowska Metropolis (GZM). This (still) mining city is located north of the regional capital Katowice.

6. Dystopian elements of current urban development

The new, dystopian image of Bytom has been shaped over the last three decades, especially among the inhabitants of other cities. Bytom is stereotypically perceived as a "fallen city" (Madeja, 2015), a "cursed city" (Klimczyk, 2003), "the ugliest city in Poland", as being dominated by "dirt, devastation and decline" and even "a city without a future", associated by
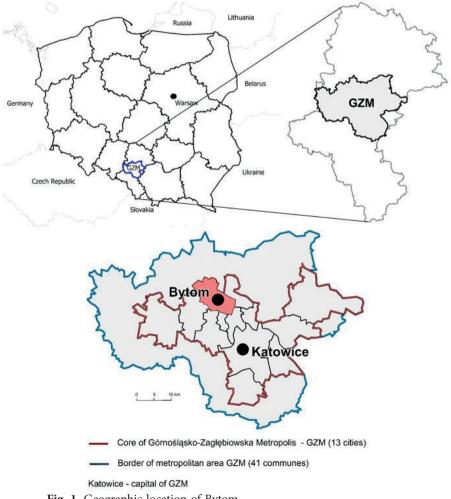

Fig. 1. Geographic location of Bytom
Source: Authors' own elaboration

some as being a place of "craters and cannibals" (Zasada, 2022). It should be emphasised that these are only a small sample of the stereotypes that create a psychological halo of dystopia around the city of Bytom. In a sense, this city became the antithesis of the main utopian concepts of the cities of the future, such as the resilient city, eco-city, low-carbon city, knowledge city or smart city (De Jong et al., 2015, after Roggema, 2017), which dictate the most important trends in urban thought at the beginning of the 21st century. In this chapter, however, we want to show whether stereotypes about an unfriendly city coincide with the city's financial situation and whether they can be measured to some extent. Even in the studies of practitioners, Bytom was described as "one of the most problematic cities in Europe", and the *Concept of Spatial Development of the Country 2030* classified it as having "areas of social, economic, spatial and environmental degradation" (*Strategia Rozwiązywania Problemów Społecznych Miasta Bytomia na lata 2015–2020,* 2015).

6.1. Depopulation

For many decades, Bytom has been recognised as having large depopulation problems, which are one of the main components of negative associations in the general perception of the city. The demodystopian condition is inextricably linked with the socio-political processes of the 20th century. Before World War II, Bytom had a large German population, as it had long been a part of the German Reich. As a result of the change of borders after World War II, Bytom, together with other cities, found itself within Poland.

Depopulation has been a problem for over 40 years and continues to worsen. From 1980 to 2022 (Fig. 2), when Bytom was one of the main centres in the industrial conurbation, the city lost as many as 84,000 residents. Several time-varying factors influenced these trends. During the socialist economy, Bytom was an important migration centre for people from all over Poland (Rykiel, 1989; Szajnowska-Wysocka, 1999), attractive because of well-paid work in mines, steelworks and several dozen large industrial plants in the mining, machinery, clothing and food sectors (Melich, 1979; Tkocz, 1998; Kłosowski et al., 2013) and a stable labour market. All this translated into an increase in population. However, the economic crisis associated with the post-socialist transformation directly affected the number of births, which fell systematically, and created significant social problems, followed by the migration of people abroad, especially to the Federal Republic of Germany.

The fall of the mining industry after 1990 and the progressive unattractiveness of the space have deepened the socio-demographic problems. The wealthier part of the population began migrating to other neighbouring cities and to other parts of the region, which was another reason for depopulation. It was mostly young, educated people with higher incomes who left, looking for a better quality of life and space to live. The largest number of people emigrated to nearby towns – most to Zabrze (13%) and Radzionków (11%), bordering Bytom (Sitek et al., 2015; Zuzańska-Żyśko & Dyszy, 2021).

In 2022, the city had almost 150,000 inhabitants. The population decline resulted from both the natural decrease (-8.7‰) and the negative migration
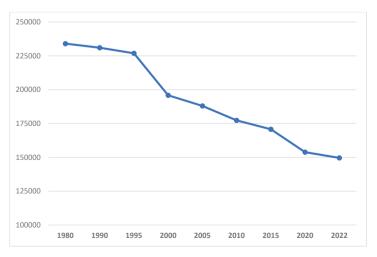

Fig. 2. Population dynamics in 1980–2022
Source: Authors' own elaboration based on Central Statistical Office website

balance. Population losses indicate that Bytom is the leader of depopulation not also in the region and the GZM, but also in the entire country (Szymańska & Wylon, 2019). Another pressing issue accelerating the demodystopian image is intensive demographic ageing. The number of inhabitants aged 65 and over is constantly growing and, in 2020, it amounted to 30.3 thousand, which is 20% of the city's population. Over 13% of them are over 70 (Central Statistical Office website).

6.2. Social polarisation and ghettoisation

The social dimension of urban dystopia is burdened with multifaceted problems, which include poverty, unemployment, disability, alcoholism and juvenile delinquency. In 2003, 9,000 families received social benefits, and the total number of members in these families was 25.7 thousand – about 15% of the city's inhabitants (*Program rewitalizacji społeczno-ekonomicznej ...*, 2004). Unemployment in some

mining districts is 40–50% (*Bytom, miasto wyzwań, n.d.*).

Current analyses of the housing situation point out that "Although it may be hard to imagine, there are still places in Bytom where there is no access to running hot water, central heating, where people use common toilets on the mezzanine. These are not conditions worthy of the 21st century" (*Co mi dadzą projekty Bytomskich Mieszkań?, n.d.*: 3). Similar conditions prevail in the 20th century workers' housing estates, including the Bobrek district, which is located far from the city centre. According to the residents, it is the worst district of the city (Sitek et al., 2015). It has become one of the worst ghettos not only in Bytom but also in the region and even in the whole country (Tkocz, 1994). Poverty remains at a high level here: every fourth person is affected by dysfunction or disability and the population with the lowest education or no education prevails.

In the "dystopian habitat", citizens do not find a place to fulfil their needs, which leads to the creation
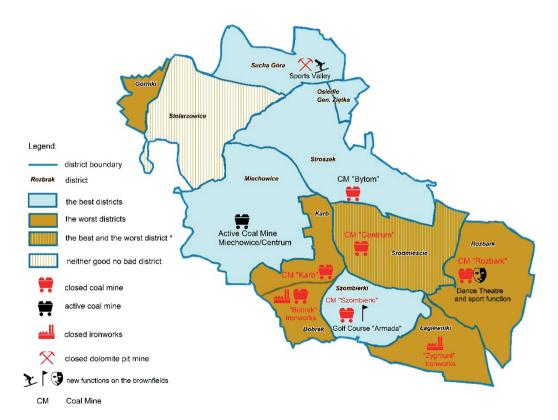

Fig. 3. The best and the worst districts in Bytom, according to Bytom's citizens and, in the background, the biggest industrial companies of the past.
(Half of respondents categorised the central part of the city (Śródmieście district) as "the best district" and the rest saw it as "the worst" one.)
Source: Adapted from: Sitek et al. 2015

of a "behavioural swamp" and the intensification of pathological phenomena (Kwiatkowska, 2004: 55). The problems of social exclusion intensified when residents who did not pay rent in their apartments in other parts of the city were resettled in the Bobrek district, as well as, for example, the resettlement of the Roma population, who came from partially demolished old multi-family houses built for mine workers in the Old Karb. Some residents labelled this move as deportation to the worst neighbourhood (Sitek et al., 2015). Such activities contributed to the deepening of social inequalities and spatial segregation and caused multidimensional conflicts, such as deepening social pathology and increasing the distance in socio-economic development. These problems, as well as depopulation, are also associated with many negative consequences, including the reduction of the number of children and young people in schools and the number of jobs (teachers, school staff) and the shrinking of the market for goods and services, which results in limiting some urban functions or increasing undeveloped housing resources (i.e. vacant properties).

Metallurgy has had a significant impact on air pollution and soil contamination. Due to its large area, the steelworks shaped the specific industrial landscape of the Bobrek and Łagiewniki districts (Fig. 3). The workers' colonies located here are currently the main source of social and spatial concern. The reasons for these troubles include the decapitalised, substandard housing resources, the low level of education and exclusion from the labour market. Considerable surface degradation, spoil heap and soil contamination also occurred in the Rozbark district.

6.3. Degradation of urban tissue

The high level of degradation of the housing stock in Bytom is a consequence of many overlapping factors. As much as 36% of dwellings were built before 1945, including those before 1918. Although this stock decreased by over 5,000 in the period 1988–2021, it still constitutes a large share of the housing. This causes further problems, as old, decapitalised buildings often still have a low infrastructural standard. According to the 2021 census, 34% of dwellings do not have central heating, another 9% do not have a bathroom, and 7% do not have a toilet. Although four thousand new apartments were built in the post-socialist period, this did not fundamentally change the situation. Still, 11% of all flats are vacant.

In current urban planning, much attention is paid to the low level of aesthetics of the city, especially its central public spaces (Fig. 4). A number of places centre are in a critical condition, especially the 19th and 20th century tenement buildings. A significant number of valuable objects were irretrievably destroyed. Others are degraded to a degree that calls into question their future existence. A significant part of residential buildings is characterised by poor infrastructural equipment. Furnace heating that generates so-called low emissions and deficiencies in sanitary infrastructure translate into a decrease in the residential attractiveness of some housing estates and districts. This is particularly noticeable in workers' colonies, which, due to their unique architecture, could become showcase housing spaces with outstanding cultural values. Meanwhile, they only meet social housing conditions, largely inhabited by people from dysfunctional social groups (Wrana, 2011).

An inseparable element of the dystopia in Bytom is the social and infrastructural contrasts between the city's districts. In the analysis of the housing situation, it is pointed out that, due to the wrong decisions of the authorities in some districts, helpless residents, dependent on social assistance, were placed in inappropriate accommodation. In addition, degraded buildings and their surroundings and the accumulation of social problems translate into a poor quality of life and a negative image of the entire district. It is believed that such districts in Bytom are Bobrek, Rozbark, Śródmieście and Kolonia Zgorzelec: "it is in these districts that projects will be implemented that will not only improve the appearance of buildings, but also help prevent social exclusion." (*Co mi dadzą projekty Bytomskich Mieszkań? n.d.*: 3).

6.4. Mining damage

Mining damage is one of the main determinants of the observed environmental dystopia in Bytom. Due to the geological layout and the location of coal seams in the very centre and in other densely built-up districts, the exploitation of this raw material was particularly difficult and expensive. During the socialist period, the central authorities did not consider the social costs and spatial consequences for the city's future. In the 1970s, Bytom had 10% of hard coal in Poland (Melich, 1979). At the same time, wasteful mining led to essential deformations of the surface or subsidence of the ground (Dulias, 2007; Machowski, 2022). Difficult geological conditions and intensive exploitation in the 1970s and 1980s

Fig. 4. Faces of Bytom's dystopia: left top – centre (2023); left bottom – Bobrek district (2023); right – neglected yard in the city centre (2022)
Source: Authors'

caused high-energy ground tremors and much damage to buildings. Several hundred buildings were demolished entirely or in part (Kowalski, 2015), including many old Art Nouveau tenement houses, churches, cultural monuments and schools. In fact, every district has the "stigma" of mining damage. It is most visible in the city centre, due to the high density of buildings (Fig. 5), including the historical centre, and in its north-western part and the Miechowice and Karb districts. In addition, there was also a permanent or temporary change in water relations, degradation of surface waters, underground waters and areas of natural value, and a change in the topography of the area (*Program Ochrony Środowiska dla Miasta Bytom na lata 2022–2030 z perspektywą do roku 2035*, 2022).

It is significant that hard coal mining in Bytom was carried out under almost the entire city. Mining in the protective pillar near the city centre was only completed in 2015 but, in the Karb and Miechowice districts, it is still carried out by the "Centrum" hard coal mine. This leads to further deformation and land subsidence. In the period 1949–2012, the city centre sank by 7 metres, and at the north-western border of the protective pillar by 4–6 metres (Kowalski, 2015). This is a highly urbanised and built-up area. On the other hand, deformations and depressions in the undeveloped area amount to 30 metres. Dulias (2007) estimated that Miechowice, only one of the hard coal mines, extracted 96.9 million m³ of coal and 9.9 million m³ of waste rock, which had to be deposited in the form of heaps. As a result, a void with a volume of 106.8 million m³ was formed under the city. It was estimated that during the 94-year period of the mine's operation, the mining area decreased by 7.2 metres.

This dystopian post-mining picture can be summed up with the claim that such actions pushed Bytom off the path of economic investment for over three decades. When other cities in the region were developing and attracting investors, Bytom struggled with the consequences of mining activities, namely land degradation, subsidence, collapsing buildings and social problems in the city centre and former metallurgical districts. In recent years, 2005–2015, the deformations have disappeared and are at the level of up to 3 cm. In retrospect, one can risk saying that the city of Bytom was simply "doomed" and devastated in the name of 'a higher good', namely securing more coal for the national economy and for export. Currently, in the era of universal democracy,
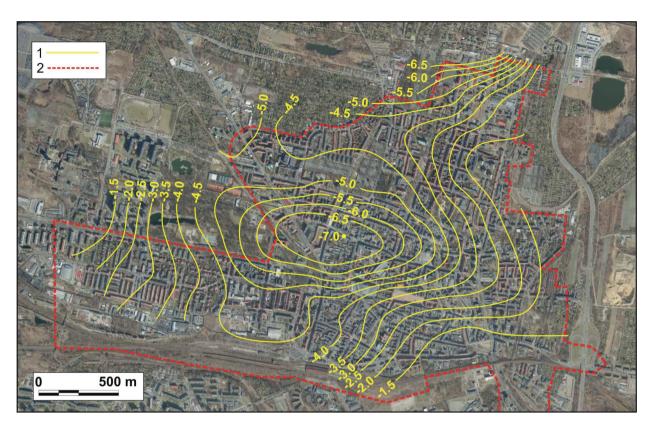
Fig. 5. Isolines of depressions of the protected area in the centre of Bytom in the period 1949–2012, in metres
1) contour lines of land depression; 2) border of the protected area.
Source: Adapted from Kowalski 2015.

7. Is there a clear vision for anti-dystopian policies?

Writing about problems in the search for a model for the future of Detroit, Chan (2011: 61) emphasised that "any present conception of Detroit is inherently linked to the image of this place as a dysfunctional city. Central to these interpretations is the notion that Detroit exists in an unnatural state and is not stable, but rather, awaiting an intervention." It is worth noting that this conclusion applies to a city that has been looking for its post-industrial face much longer than Bytom. As the analysis of the possibilities for post-dystopian revival shows, the multitude of problems in almost every aspect overwhelms the local community, which counts on significant external support (GZM, from the state budget or EU projects). It is the scale of the problems that makes thinking about the future uncertain. To plan this future, different visions, expectations and hopes coexist. Thinking and negotiating the future of Bytom has definitely more prosaic goals related

such behaviour seems completely unacceptable, and the next generations will feel the consequences.

to revitalisation, regeneration and increasing the socio-economic attractiveness of the city, which could break its post-socialist dystopian image in the long term. During our research, however, we could not identify such groundbreaking visions, implemented with great impetus. The main hope for the city's post-dystopian future is a comprehensive revitalisation programme.

In 2014, four strategic priority areas for the development of the city were formulated: the quality of the urban environment, the quality of the natural environment, the pro-development leisure offer, and entrepreneurship and innovation (*Strategia rozwoju miasta. Bytom 2020+*, 2014). The search for developmental alternatives takes place in times of "crisis and the unpopularity of the metanarratives of human social organization" (Mihaylov & Sala, 2022: 3). On the example of Bytom, this general tendency is confirmed by the conclusion of Kantor-Pietraga et al. (2014: 167) that "over the past two decades there has been no comprehensive view that would take into account the city's situation in a holistic approach". In the face of multifaceted problems, the city was left to itself. However, this is changing – the municipal strategy is declared by "a system of cooperation between public and private institutions,

organisations and local communities" (*Strategia Rozwiązywania Problemów Społecznych Miasta Bytom na lata 2015-2020*).

In recent years, the formal declarations and actions of the city authorities show that revitalisation is the area of intervention that combines the effects of all spheres of the urban dystopia. Namely, revitalisation is perceived as the magic word that is believed to improve the negative aura of the city space. In this spirit, the local authorities recognise that "the key issue for Bytom, struggling with its post-mining heritage, is the revitalisation and development of post-mining areas, where new jobs, investment areas, public and recreational spaces should be created" (*Bytom: raport o stanie miasta 2020*, 2021: 34).

7.1. How to stop the population outflow?

Effective contending of dystopian population trends requires not only a correct diagnosis of the existing problems and their causes but also the forming of various development scenarios. The basis for planning the demographic dimension of the post-dystopian future is the forecast, according to which, by 2050, the number of inhabitants is estimated to decrease to 117,000. Comparing this data in a long-term perspective, it can be said that this would be the lowest value since 1925. On average, the number of inhabitants in the city is expected to decrease by about 1.25 to 1.63 thousand per year. To illustrate the phenomenon's scale, it could be said that if there are 2.4 people per flat in Bytom, the number of flats released would be around 530–690 per year (Sitek et al., 2015). The forecast of the Central Statistical Office assumes stabilisation of the migration loss at the level of about 680 people a year after 2030.

This extremely unfavourable demographics is the consequence of a combination of various economic, technogenic and social prerequisites, as well as errors in the management of dystopian phenomena. Some researchers pointed out that the city management model consisted of the prominent role of the local authorities and the limited role of, although numerous, very weak stakeholders representing mainly social organisations. The lack of actors playing a more serious role, especially at the economic level, resulted in a limitation in understanding the interests of other entities participating in urban life. In any case, these interactions were weak in solving the fundamental problems of the city (Krzysztofik, 2013).

Attracting and retaining people in an urban community also depends on other factors.

According to one of the priorities of the Strategy for Solving Social Problems of the City of Bytom for 2015–2020, Bytom is to be an "important centre of culture", with institutions such as the Silesian Opera, the Rozbark Dance Theatre, and the State Ballet School (Mikrut-Majeranek, 2013). This is not an empty statement because Bytom still has not only highly developed cultural functions at the metropolitan level, but it is this culture that has also become a factor that has changed the fallen places, creating urban islands of utopia. The change in the function of post-industrial objects plays a major role in the pursued "humanisation" of the city. For example, a climbing wall was built on the chimney of the former Rozbark Coal Mine (*Rozbark – tu się dzieje*, 2020), and a golf course in the area of the former Szombierki mine (Zuzańska-Żyśko, 2016).

7.2. How to deal with the social problems?

This aspect of the dystopian state of the city is perhaps the most dependent not only on top-down policies implemented but also on the attitude of the inhabitants and their active participation in the search for alternatives to negative trends. The gradual resolution of problems in the social sphere depends on both aspects. An important question arises: to what extent has dystopia resulted from errors in the policies and actions of local stakeholders? Bernt et al. (2014: 11) suggests that "problems related to shrinkage were recognised, but the possibility of local agency was exclude". As a result of this view, many actors developed a feeling of hopelessness and denial, which reinforced existing disadvantages. Thus, the author stressed, the dominant perception was that Bytom could only be saved by large-scale new industrial investments, and as long as these did not occur, further decline seemed inevitable (*Ibid.*).

Most of the actions taken by the authorities to improve the situation are targeted at the most vulnerable social groups. For example, one of the new programmes is addressed to seniors and involves replacing larger apartments with smaller ones located in city centres. Another project – "Dwelling for a start" – is addressed to young people. It transforms business premises into flats for people under 35 years of age. In the 2010s, the Social Integration Centre project was implemented. This project was aimed at rebuilding the ability to work independently and fulfil social roles, and targets people at risk of poverty and social exclusion and their immediate environment (mainly family members). A historic building in the city centre was renovated for the project.

Supporting entrepreneurship includes various initiatives implemented by the Bytom Investment Development Agency. In addition, Bytom is open to new investments from the Just Transition Fund, which creates the opportunity to renew the labour market, develop new functions, adapt technology to current standards and, as a result, to improve the quality of life. Despite this, there are some concerns about the price of social policy pursued for the purposes of sustainable development and the decarbonisation of the economy. Notably, the still operating Bobrek-Piekary mine employs approximately 2,200 workers and is scheduled for closure in 2040. It is expected that by 2030, nearly 1,000 employees will leave the Bobrek-Piekary hard coal mine (*Terytorialny Plan Sprawiedliwej Transformacji Województwa Śląskiego 2030*, 2022).

The strategic documents of the city from the early 2000s focused on the growing number of socially and economically passive inhabitants, who are oriented towards obtaining support from social welfare institutions (*Program rewitalizacji społeczno-ekonomicznej ...*, 2004). Under the heading "Key challenges in the development of Bytom", the same problems were identified in the city's strategy adopted in 2014 (*Strategia rozwoju miasta. Bytom 2020+*, 2014). Therefore, the solution to social problems of such high intensity was attempted by

using only the standard tools of social policy. This did not significantly slow down the level of poverty or improve access to housing resources. This conclusion also applies to the policies that aimed for professional and social reintegration of people excluded and at risk of social exclusion, which brought poor results.

7.3. How are dystopian places in the city being revitalised?

Specific problems in the management of the degradation of urban tissue include a large number of flats in industrial plants that no longer exist or are managed by the Company for Mines Restructuring. Bytom still has a lot of flats that are owned by factories. They are located in all districts of the city. In 2021, there were as many as 3.4 thousand of them, which means that as many as 22 apartments per 1,000 inhabitants are owned by the workplace. In large Polish cities – Warsaw, Łódź, Poznań, Wrocław or Kraków – the phenomenon is ten times smaller. This is a challenging problem because many flats are of a low standard, have depreciated, and require major renovations. The urban revitalisation programme provides a partial answer to these challenges. In the city, revitalisation

Fig. 6. An example of successful visual revitalisation in the city's centre Bytom – a valuable building before and after revitalisation.
Source: Authors'.

is understood in broad terms, as a process whose final results are to improve the quality of life of residents through the implementation of various types of activities in space – both huge investments and small transformations of the immediate vicinity – and to ensure the residents are involved (*Plan działania dla obszaru pilotażowego, n.d.*: 3).

Along with other cities of traditional industry in Poland (Wałbrzych and Łódź), Bytom has been included in a special recovery programme aimed at minimising problems related to industry restructuring, the so-called Strategic Intervention Area. A pilot initiative called "Bytom odNowa – innovative housing projects and development of social initiatives" is being carried out. By 2023, the effect is to be the revitalisation of 23 hectares of urban areas (Figs. 6 and 7), residential buildings, the adaptation of selected buildings to new functions, the renovation of social housing and the regeneration of the city's main street (*Bytom, miasto wyzwań*, 2019).

The revitalisation programme of 2016 covered an area inhabited by 29% of the city's inhabitants – amounting to over 43,000 people (*Obszarowy zakres rewitalizacji,* n.d.). The area purposed for revitalisation constitutes almost 12% of the city's area. It consists of six inhabited and nine uninhabited sub-areas (mostly post-industrial), where measures are implemented to contribute to counteracting negative social phenomena. Four of them form a compact area in the city centre: Śródmieście, Śródmieście Północ, Śródmieście Zachód and Rozbark (Figure 8). Together they cover an area of 360 hectares (Action Plan, 2020). The revitalisation programme also covered the two post-metallurgical districts of Bobrek and Kolonia Zgorzelec, located far from the city centre, and post-industrial and residential areas of the former Zygmunt Steelworks. The scale of environmental, spatial and social degradation is so high that it should cover a larger area. Unfortunately, the Revitalisation Act does not allow for such an opportunity (*Ustawa o rewitalizacji*, 2015).

Each of the districts covered by the programme requires a lot of help in terms of degraded post-industrial space and is characterised by multifaceted social concerns. The downtown revitalisation area covers a group of 13,000 residents. Furthermore, this area includes heavily depreciated, often historic tenement houses belonging to the city, which are in communal ownership. The centre still has serious problems with property vacancies. In the area designated for regeneration in the city centre, there are over 300 vacant commercial spaces and over 100

Fig. 7. A nontrivial example of revitalisation – playground that replaced the demolished old building, Katowicka Street (a project completed in 2022).
Source: Authors'.

residential units. In addition, at least 23 completely empty buildings were indicated. Although the space shows signs of point renovation – streets or parts thereof, historic tenement houses or courtyards – the scale of underinvestment in the centre and other districts is extremely large, and the financial needs and social support for the population are enormous.

Social issues and the postulate of protecting the material environment intersect in the activities aimed at the renewal of the urban fabric. Both of these aspects are highly interdependent. Works related to the modernisation of heating systems in the city centre, thermal insulation of buildings of public institutions, including educational and religious ones, and some residential buildings are being carried out. As far as construction is concerned, an investment offer for unoccupied buildings was prepared in the centre – "Vacant houses for domesticating", and a non-cash sale of premises in exchange for renovation services was offered. In turn, in the Rozbark district and the central part of the city, the space is being renovated under many new initiatives. Together

with renovating buildings and introducing small architectural elements, there are also less trivial interventions aimed at humanising degraded spaces. One of the more interesting undertakings is the Rozbark Bytom Dance and Movement Theatre on the site of a former mine that closed in 2004. In turn, since 2011, thanks to EU subsidies, this area has changed its function from mining to cultural. Currently, the theatre cooperates with rehabilitation centres, nursing homes, hospitals and therapy workshops.

7.4. How to counteract the mining damage

In the past, as suggested by many analyses (Dulias, 2007; Krzysztofik et al., 2012), the only development goal of the waste economy was to extract more coal, disregarding the environmental costs and the living conditions for future generations. In the case of damage on such a large scale as in Bytom, this development factor should be assessed and planned with some scepticism. The future cannot
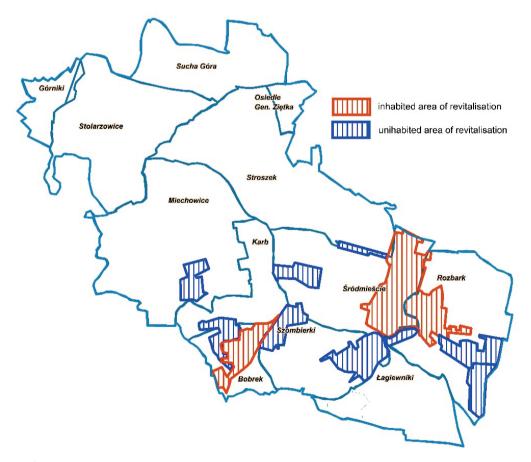

Fig. 8. Revitalisation area in Bytom
Source: Authors' own elaboration based on http://bytomodnowa.pl/rewitalizacja-miasta and https://sitplan.um.bytom.pl/?profile=5454 (Accessed 07 May 2023).

be planned with the belief that mining damage can be completely "fixed", as this would be impossible, but that this dystopian element is inscribed in local life and cannot be completely eliminated. The central question, therefore, is to what extent the environmental, social and economic impacts of this phenomenon can be mitigated and slowed down.

Repairing mining damage is a complex legal, engineering and financial issue. Until 2020, a total of three entities conducted mining activities in the city. Each of them takes significant responsibility for minimising or repairing mining damage. For example, the "Bobrek-Piekary" mine co-financed the costs of draining septic tanks and maintaining the sewage pumping station. It also developed the rectification and repair of the building of one of the loyal churches – the Holy Cross Parish Church in Miechowice. In addition, this company paid compensation for the repair and predictive maintenance of educational, service and commercial buildings (*Bytom: raport o stanie miasta*, 2021). If specialist supervision and observations of construction facilities have been carried out so far by specialists from external institutions, these tasks are already performed on behalf of the company.

The activities of local institutions did not prevent the technical degradation of the housing stock, which is not only subject to natural wear and tear, but also exposed to mining damage. In the analyses of this issue, it was emphasised that "the city accepted the primacy of the need to maintain the extraction carried out in its area by mining plants over the requirements for surface protection, even if the extraction was carried out in violation of the concession conditions" (*Strategia Rozwiązywania Problemów Społecznych Miasta Bytomia na lata 2015–2020*, 2015: 18).

8. Conclusion: a post-dystopian or semi-dystopian future?

Shetty and Reid (2014) stressed that population loss, economic decline and restructuring, and abandonment and vacancy are common for old industrial cities in both the US and Europe. However, the combination of factors accelerating these processes differs in that they occurred at different times and at different rates. What these local communities have in common is the parallel coexistence of different visions of where their cities are heading and what strategic direction of development must be chosen. This universal dilemma is particularly acute for those post-industrial cities that have failed to reverse the

negative trends for many years, achieving only partial successes.

As a result of the implemented revitalisation projects, to paraphrase Harvey (2000), "places of hope" appeared for the urban community. Such "places of hope" in – according to many – a still hopeless city are usually single objects or small urban complexes, around which new public places and cultural centres have emerged. This study drew attention not so much to dystopia as an imaginary reality by artists, painters or writers, but also as a social stereotype and phenomenon experienced in real life, resulting from human errors and strategic negligence. Slowly, revitalisation activities are already bringing positive aesthetic and functional effects, affecting the safety and quality of urban space. Thus, even if the favourable processes are accelerated, external stereotypes about an unfriendly and degraded city will most likely be valid for much longer. This proves that efforts to get out of the closed circle of collapse and partial successes are not yet noticed by the inhabitants of other cities and regions widely enough to want to live there or take advantage of its cultural and tourist offer.

Despite the initiatives used as an antidote to the dystopian post-socialist phase are beginning to bring some positive effects, Bytom is still far from the stage of development already achieved by post-industrial places that have undergone successful transformation, such as Pittsburgh, Duisburg, Katowice or other cities. There is still a lack of momentum in the visions of the city's development, which remains strongly dependent on the consequences of many years of monofunctionality. The observed minimalism in looking to the future (Mihaylov & Sala 2022) in a city with great cultural potential and impressive architecture is understandable, however, because the budget and various funds are allocated primarily to mitigating the effects of the material and social damage suffered. This means that the scale of the problems forces actors to focus on gradually eliminating a longer list of threats than on thinking about "offensive" actions.

The main theoretical challenge for this study was whether an urban dystopia could be an observable state of the present that is measurable through various quantitative and qualitative indicators. We can talk about dystopia when extremely unfavourable conditions persist long term and significantly outweigh single negative phenomena in other cities and societies. The dystopian present image of the post-industrial city is a complex mix of all the basic dimensions of this phenomenon: depopulation, social polarisation and ghettoisation,

degradation of urban tissue and mining damage. Thus, the article showed how utopian/dystopian studies go beyond fictional perspectives by attempting to diagnose current reality and overcome its dark sides with alternative visions and policies. Summing up the current policies of getting Bytom out of the problematic situation, we can highlight three possible scenarios of post-crisis development.

The semi-dystopian scenario is grounded on a realistic vision assuming that the expected directions and results of current policies will lead to some improvement in the quality of the urban environment and the inhabitants' quality of life. The increasing number of plans, visions and strategies at the local, regional or EU level gives the impression of increased concern for the future of the (still) mining city. Some of the assumptions of these strategies translate into specific actions that improve selected aspects of the dystopian landscape. These activities can mitigate and slow down the urban dystopia, but they are not able to stop the processes – namely the mining damage – and eliminate the consequences of overexploitation of non-renewable sources. Furthermore, most of these plans represent a set of relatively standard solutions rather than a clear and groundbreaking vision of post-dystopian revival.

The post-dystopian future is anticipated on the basis of an optimistic vision, which assumes that a post-dystopian future is possible. However, for now, such an optimistic scenario is mainly based on faith in the adequately selected direction of further transformation and public policies that enable inclusion in the decision-making process of various social entities. This scenario could happen with the support of metropolitan, regional, national, and European institutions. Thanks to such a multistakeholder model of financing and managing the urban issues, with clear external support, it is possible to direct funds to new investments that could support the diversification of activities based on new technologies and networks of connections, and the creation of jobs in IT, culture and sports. Utopian elements appear in the policy of using vacant buildings in order to curb depopulation trends. This means further efforts to "supply" the city with new and better-educated residents who could settle in Bytom, "attracted" by the low prices of dwellings as a result of the appropriate policy of the city.

We posed the question of whether salvation from the dystopian present could come through the search for new utopian visions. The answer is rather unequivocal. If utopia is "an ideal answer to an imperfect reality" (Zweiffel, 2008), then surely few people in today's Bytom hope for a turn in planning the city's development towards a utopian concept. One of the reasons for this sceptical conclusion is the large scale of serious challenges; the other, that Bytom is part of a large urban region with many competitors, including very well-developing cities such as Katowice, Gliwice and Tychy (Zuzańska-Żyśko, 2021). The dreaming/planning of the future of the (dystopian) city falls within times of liquid modernity (Bauman 2000). In conditions of multi-subjectivity in development planning, there is a polyphony of possibilities for urban communities to choose their own way of future making. As Ponikowska-Cichoń (2014) pointed out, defining the world around us becomes meaningless and these are the appropriate conditions opening space for utopias, daydreams, dreams and the creation of ideals. Thus, there is no one certain model or ideal city, nor just one way for post-dystopian policies. Especially relevant to the described situation turned out to be the semi-dystopian concept, which reflects the landscape of Bytom as shaped in the years of intensified policy interventions. Empirical examples have shown that the policies that intervene in the spheres of the dystopian state of the urban community and its space are ambiguous. This is an argument to say that the semi-dystopian scenario is the most likely. It also reflects the complex social geography of the city and deepening spatial contrasts in the quality of life and the attractiveness of public infrastructure. The "main perpetrators" of the dystopian image of Bytom's space are several "bad" districts and streets with neglected or completely abandoned buildings in the central part of the city. At the same time, some other districts, such as modernist block housing estates from the 1970s and 1980s, are not inferior in appearance or infrastructural development to districts of a similar origin in other Polish and Central European cities. Based on the currently observed situation, a post-dystopian future seems achievable, but the most likely semi-dystopian future reflects a space that connects both "normal" and repulsive places.

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