PROBLEMY EKOROZWOJU – PROBLEMS OF SUSTAINABLE DEVELOPMENT
2013, vol. 8, no 2, 39-48

Towards the Sustainability of Urban Development

O zrównoważony rozwój miast

Wiesław Sztumski

42-200 Częstochowa, ul. Okólna 89F
E-mail: ws34@op.pl

Abstract

The paper concerns the social ecology of the city. It shows the different types of threats which metropolitan environment creates for citizens: lifestyle, social dissonance, security, management, enslavement, architectural weariness, identity, aesthetics, artificiality, self-government and democracy. Modern cities having certain advantages are also the source of evil. Stopping their further development is impossible, but one must strive to transform them into cities which are really for people. This is a huge challenge for a variety of specialists, also for philosophers. One can realize it, if one harmonizes the structure of the city with its functions and if one respect in the same measure the economic, social and ecological criteria by planning the further development of the cities.

Key words: city, urbanization, social ecology of the city, sustainable development, difficulties of life in the city

Streszczenie

Artykuł dotyczy kwestii ekologii społecznej miasta. Ukazuje różne rodzaje zagrożeń, jakie środowisko wielkomiejskie stwarza dla mieszczan w zakresie stylu życia, dysonansu społecznego, bezpieczeństwa, zarządzania, zniewolenia, znużenia architektonicznego, tożsamości, estetyki, sztuczności, samorządności i demokracji. Współczesne miasta oprócz posiadania pewnych zalet są także źródłem zła. Nie da się powstrzymać ich dalszej rozbudowy, ale można i trzeba podjąć wysiłki na rzecz przekształcania ich w miasta dla ludzi. Jest to ogromne wyzwanie dla różnych specjalistów, również dla filozofów. Można mu sprostać w wyniku doprowadzenia do harmonii struktury i funkcji miasta i przestrzegania w równej mierze kryteriów ekonomicznych, społecznych i ekologicznych przy planowaniu dalszego rozwoju miast.

Słowa kluczowe: miasto, ekologia społeczna, urbanizacja, rozwój zrównoważony

Introduction

In the twentieth century humanity came into a new stage of the development of the civilization connected among other things with the rapid transformation into the urban society. This is proved by two facts. Firstly, according to data from different sources about half world's population live now in cities, while still a hundred years ago the inhabitants of cities were less than 5%. The cities occupied only little area under villages still up to middle of the 19th century; now the number of cities is comparable with the number of villages. About 200,000 people move each day to cities in the world – that is as if a new city such as Santiago de Chile were coming. Europe and North America are already far going urbanized. But in South America or Asia the urbanization progressed so rapidly, that for instance megacities in China each year increased to around more than ten million inhabitants. The tendency to pull in cities and the increasing urbanizing cannot be stopped because cultural, industrial and economic transformations as well as the political movements in the future are inconceivable without further development of the cities. Secondly, the border between the city and the country blurs itself to a

certain extent. Now, owing to modern means of transport and communication one can live everywhere in a small village far from a city and nevertheless live like in a city. So, in fact, nearly all inhabitants of developed countries live in more or less urbanized areas and build the urban society. City – I'm talking here about a large city of over a million inhabitants – is today a highly complex system, and the life in it creates very complicated local and global problems, which cannot be solved in a simple way; not only urban planners, but many specialists from other areas ought to engage in their solution.

The subject of sustainable urban development has two aspects. The first refers to the development of the city in view of its interaction with its environment, and the second concerns the development of the city as a relatively isolated system independently of its environment. The first is the object of interest in a growing number of specialists. Their researches concentrate on the problem how to develop the cities in the future without violating the balance with their environment and what to do that the cities develop without the damage of its environment.

The second aspect concerns the development of the city from the point of view of the interactions between its components, i.e. between residents, between residents and urban infrastructure, and between other elements of city. That is also multidiscipline research object, and its goal is to make the city friendly for its residents so that it should be worth to live in it. Both aspects of contemporary urban development are the biggest global and interdisciplinary challenges. Ecology is a science about the relationship between the artificial environment, i.e. the urban structure and people in which they live, and the natural environment in which the city and its residents operate. It deals with the functioning and development of the city due to the ecological requirements. The city is a formation that is artificially constructed by humans and introduced into the natural environment as something foreign. It is not an object neutral for the environment in which it is located. Developing urban organism is in a sense a parasite on the natural environment – it feeds on its components and devastates them, because it is a specific ecosystem, where there is a significant advantage of destroyers over the producers. It is an acquisitive body, which devours its region, consumes its water and food resources, pollutes the air, and generates huge amounts of waste (Die Stadt der…, 2009). A towner represents for different reasons a specific kind of human being in the contemporary consumer society – the wasteful or prodigal man (*homo prodigus*). City inhabitants in contrary to other localities use many more waters, energy and other goods. This is proved by the fact that only 25 large megacities manages up to 15% of the products manufactured by the global economy. In fact, large cities are centers where rapidly grow the consumption of all material and spiritual goods, since the demand for trendy products is a lot more in the cities than in the so-called *province*. And the townspeople – especially the richer – are fashionable first and foremost. Cities produce also more waste, toxins, pollutants, and carbon dioxide. Progressing spontaneous urban expansion combined with excessive devastation of the environment and its resources disturbs more and more the balance between cities and their natural environment.

What is a city?

Probably cities exist more than eight thousand years[1]. However there is still no complete theory of the city. Therefore, it is difficult to find a satisfactory and universally applicable definition of the city. The city is normally understood as a dense housing area, which is inhabited almost exclusively by the people, which are busy in other sectors than agriculture, mainly in the service sector.

Characteristic features of the city are:

- Dense housing area (mostly high-rise).
- Significant concentration of inhabitants.
- Huge concentration of public institutions, manufacturing and service companies.
- Residual agricultural areas.
- Highly developed technical and communication infrastructure.
- A specific lifestyle.

Exceptions are cities, which do not fulfill these conditions; for example those that were given urban rights long ago by the kings and such, which were recognized as cities for indefinite political or administrative reasons.

The area of the city and the number of its inhabitants are not limited or strictly determined. There are different types of cities, depending on the continents (for example, African, South American, North American, European), religious influences (churches are the central points of cities), and other factors (Klett.de, 2012).

Cities realize different functions inherent only to them. These are:

- The Administrative function (various offices, banks).
- The commerce function (department stores, shopping centers, pedestrian zones).
- The service function (catering establishments, hotels, restaurants, cafes, discos, repair points, medical clinics, hospitals).

[1] Jericho was probably the biggest city around 7 thousand years ago with a population of two thousand residents, http://www.sfora.pl/Zobacz-najwieksze-miasta-w-historii-swiata-g38996 (23.9.2012).

- The communication function (public transport, railways, road network, parking spaces).
- The cultural function (cinemas, theaters, museums, schools).
- The tourist function (monuments, tourist trails).
- Recreational function (green areas, parks, amusement centers).
- The supply function (water supply systems, power plants, heating plants).

In former times, the defensive function of the city was also important. Defensive walls and fortifications were built to protect urban residents against invaders and marauders. Now, this function is realized in other way. The cities must no more defend themselves against invaders or robbers, but against unwanted settlers. Many cities have already so many inhabitants that their further growth could cause serious disturbances in the realization their substantial functions. Now, city walls and fortifications have been replaced by administrative and economic barrier. Not so long before simply it was forbidden checking in and settling in the so-called *closed cities* in the socialist states. Nowadays, the factors limiting the settlement into the cities (particularly attractive cities) are for example high rents and life costs, usually much higher than in the small towns.

The structure of the city includes geometric, physical (geographical) and social spaces. The geometric space consists of shapes of buildings, districts, transportation routes etc. To the physical sphere of the city belong buildings and their complexes (housing estates, streets, and squares), inbuilt and recreational areas (including green areas), communication networks and people (residents) with their entire material inventory. Social space is formed by different spheres of activity of inhabitants (cultural, commercial, industrial, service, communication, etc.), public areas, and the social structure of the city (e.g. professional, ethnic and demographic). The morphology of the city can be a result of situational, spontaneous or planed urban development. Situational morphology in opposition to planned does not fulfill the requirement of geometric order and of appropriate arrangement criteria of buildings, institutions, companies, etc. due to the physical, mental and temporal distances.

Principles of creating cities in the past and now

In fact, up to the beginning of the twentieth century, the cities mostly developed for the reasons that were in some sense natural:

- The need or desire to be near the ruler (King, prince, mansion, etc., and the higher the ruler was, the more he needed the people, which defended and served him).
- Looking for refuge from the enemies (many cities were forts surrounded by the fortifications).
- Making an intensive exchange of goods (cities were built on important trade routes and their crossings).
- The desire to live closely to workplaces.

Many cities arose for other reasons, inter alia due to the realization of the two parallel tendencies to the suburbanization and metropolization. Suburbanization is caused by the desire of the people to run away from the centers of the big cities, in order to avoid the different inconvencies. It follows also from the social and cultural reasons, e.g. people would like to be closer to nature (for example, in the U.S., the satellites cities arose, because white people are fleeing from African Americans, who are largely inhabit urban centers and – in the opinion of white people – they reduce the cultural standards, e.g. the level of education in the public schools). Whereas metropolization is a consequence of rapid expansion of large cities; and that is caused by the mass influx of people from the small towns to the large cities. People are running to cities mostly with the intention of find a better job and life conditions, and to liberate themselves from the restrictive environmental bonds which are typical for rural areas and small towns. The larger is the city, the weaker are these bonds. The city offers anonymity, what inter alia facilitates criminal activity. Crime rates in cities are much higher than in the country and they grow proportionally to the number of inhabitants. Cities are also attractive for other reasons: they give a chance for better education, they provide greater comfort of living and opportunities to participate in cultural and entertainment events, and they enable wider interpersonal relationships. In the past, the area where a city would arise, had to fulfil first of all the relevant natural conditions (topographic and climatic) and additionally some artificial conditions, e.g. administrative and strategic. Nowadays, I think, more attention is paid to artificial conditions. The natural conditions do not be rather so much important, because modern technology is able to make us independent from them. We can build a city in a cold polar or in hot tropical climate, in areas at risk from earthquakes and in insufficient sunlight, in artificial lagoons or islands, etc. However, it must be emphasized the growing importance of environmental conditions.

The explosion of cities and new challenges for ecology of cities

Explosion of cities rises in consequence of increasing globalization, democratization, and thanks to the great facilities for the translocation of people. The inflow of people to the cities looking for work will increase, because at all times there is a lack of the labor force in the big cities and, therefore, it is

easier to find a job; and besides, in common perception, the city seems to be the best place to live due to the various causes. The city is still like a hole that can absorb more and more people wanting to live there. There is a proverb known since the Middle Ages: *Rural air makes an owner of a man, and the city doing him free*. Hope for prosperity, for getting a job, for better education and for career pushes people to the city as if a magic force. And anonymity frees people from the traditional family alliances and moral standards. That is also relevant for rural people and especially for the young ones. (Lenz, 2010) People pull into the cities, because they expect an easier and more comfortable life there, better access to the education, culture and other services, cheap and serviceable means of transport, better health care, security and supply (Lingenhöhl, 2010). Usually these expectations are not fulfilled. Anyway, the prophecy of Wellington E. Webb, a former mayor of Seattle, that the twenty-first century will be a century of cities, is confirmed[2]. New cities must arise and the cities already existing must be extended; they will transform into multi-million Moloch's: in megacities, urban agglomerations, metropolises and mega-regions[3]. Now, each of twenty-six megacities in the world counts over 10 million inhabitants, and in a few years there will be twice as many such cities (*Das Jahrhundert…,* 2009). Therefore, one speaks already about *the era of metacities*[4]. At present there are more than three billion people in the cities, that is to say, every second person on Earth lives in a city, and – according to forecasts of city planners – in twenty years this number could increase to five billion[5]. Further urbanization will create various problems in the nearest future. Already we can foresee only a number of them, but not all. Some of these problems are related to the progressive reduction of the agricultural and relaxing areas proportionally to the urban development. It appears a founded fear that too little land area for cultivation may not be enough to feed nine billion people in the world expected soon, despite the increase in crop yields. And in addition, inhabitants must have sufficient recreation areas and green areas which are important components of the urban landscape. Unfortunately, agricultural areas are reduced drastically and in many countries already approach the critical value[6]. People who have the ambition to build the housing estates of single-family houses on large plots also contribute to the reduction of green areas. These residential complexes must be provided with access roads to the city and with all services infrastructure.

The next problems are related to harmful impact of cities on their natural environment. These problems are generally quite well researched.

Other problems relate to the influence of a city on the health of its inhabitants. Smog and excessive levels of a variety of toxins and waste belong to the serious nuisance of to the life in a big-city environment. Residents of large cities are attacked daily by the smoke, fine dust and a variety of other toxic substances and allergens. Their impact on the human body causes lung disease and mental disorders. Polluted air generates pathological changes in the brain, which reduce the ability to learn, weakens the memory, and cause depressions. Perhaps this explains why – according to statistics – mental illnesses among the urban population are more common than among rural residents (Fonken, 2011). Also the noise, which intensifies itself proportionally to the number of the inhabitants, is harmful in the cities. It also contributes to the systematic deterioration of physical and mental health. It causes diseases of the respiratory and circulatory systems, allergies and depressions.

Ecology of the city has been dealing with these problems for several years. It deals, like city planning, especially with the treats generated by technical infrastructure and logistics (arrangement of offices, shops, etc.). Ecology of the city explores the relationships between organisms living in the cities, between them and urban environment (Niemela, 1999) as well as between the city and its geographic environment. (Rowe, 2000) In particular, it deals with (Jacobs, 1993):

- Problems relating to the material structure of cities (topography and landscape, natural resources and environment, the ways of urban building, all kinds of urban infrastructure, buildings, land management, cultural agencies, institutions).
- Economic issues (the generating of wealth, type of work performed, commercial activity of inhabitants, accumulation of public money, de-

[2] *The 19th century was a century of empires. The 20th century was a century of nation states. The 21st century will be a 'century of cities',* http://www.usmayors.org/pressreleases/documents/webb_lyon.pdf (23.08.2012).

[3] These predictions are based on the assumption that there will be no disaster, which resulted in drastic population declines.

[4] Researchers at the United Nations have to introduce this new term to better describe the future of the city. It is the *metacity*. In the seventies of the last century the United Nations introduced the name *megacity* first for the cities with more than 5, then 8, and most recently 10 million inhabitants. And a *metacity* has more than 20 million people; this is so many people as live in Denmark, Norway and Sweden.

[5] Urban development is so explosive that urban development planners and inhabitants cannot keep up it. See Chloé Lachauer, *Die Welt als gigantische Mega-City?*, in: *Zentrum für angewandte Politikforschung*, München 2005.

[6] According to estimates, from the areas suitable for the cultivation of cereals and vegetables, and for animal farming, which is about 800 million hectares, is already used about 85 %.

signing and producing of goods and services, cost of living, innovations).
- Ethical issues (decision-making, involvement in the city affairs, justice and fairness of residents, social integration and exclusion, the principles and the laws ruling in the city, availability of services, studies and education, the hierarchy of values).

Unfortunately, the ecology of the city doesn't deal itself with the relations within the social infrastructures in the cities, and particularly with the cultural and spiritual problems. It is not interested in the social, psychological and spiritual threats, which result from living in an urban environment in megacities. In its research area there is no place for the negative influence of physical, technical and social elements of urban infrastructure on inhabitants of such cities. Therefore, the current research field of the ecology of the city should be extending on the above mentioned problems and also on the internal relations within the city: between the various groups of inhabitants, between the different urban objects of the city and between inhabitants of the city and all other elements of the whole its infrastructure.

Problems of social urban ecology

According to the criteria of Western culture urban development contributes to the progress of civilization, because cities are above all driving force of economy. However, contrary to the hopes of people who pull to the large cities in order to find better living conditions, the life is there increasingly more difficult for many reasons. Here, more serious threats are waiting for them (Kohr, 2008). That is confirmed by the scientific institutes which study the problems of the life into the megacities, but there are also people who have a different view[7]. Nevertheless, most researchers have rightly recognized the current development of megacities as a true urban disaster. Physical and mental endurance of people to live in megacities seems to approach to the very critical state. Living in a megacity poses its inhabitants a lot of social, psychological and spiritual problems. For the most part they are effect of unsustainable urban development, but not only of that. I show here the most important of these problems.

Lifestyle

Living in the city causes a radical change in lifestyle. New residents try to live in a way and on a level similar to native inhabitants. The life in the city ennobles people, although not always, but quite often. This was visible in the old cities where burgher traditions have been preserved. New inhabitants participated in the cultural life of the city, in order to achieve the average standard of the culture of the city and not to differ too much from the native inhabitants. Violation of such standards by the newcomers caused usually sharp negative reaction of the native residents (for example, in Cracow the behavior incompatible with the traditional standards of this city was strong criticized: *It's not in Cracow style*, as in the so-called *society* it was necessary to behave *on the Cracow style*). Now, this phenomenon disappears. The newcomers want to live like wealthy burghers, generally parvenus, whose level of culture often leaves much to be desired. Attempts to promote new standards of culture by newcomers generally were unsuccessful. Very stable and resistant to foreign factors was the immune system and homeostasis of cities, because, I think, that at that time, newcomers arrived not so massively to the cities, as now and the vast majority of the urban population was incumbent residents who successfully tried to keep the old and good urban traditions. This has confirmed the example of Nowa Huta in Poland. Inhabitants of this new socialist city were mostly blue collar workers coming from poor villages. According to the wish of politicians at that time, they had to introduce the canons of socialist culture to the bourgeoisie in Cracow. And it happen exactly the opposite.

Now, many immigrants of the whole world settle into the cities. They bring rural traditions to cities, because a minority of old inhabitants is no able to oppose to them. Different cultures, behaviors and religions mix in big cities. This destroys the old urban traditions, weakens the homoeostasis of cities, and causes various inner conflicts.

Social dissonance

In many cities the social gap between rich and poor residents deepened. This phenomenon is not only characteristic for rapidly developing megacities in Africa, Asia and South America where the poor are concentrated in specific ghettos, in slums, which grow in an uncontrolled way (in the 2010, about one billion urban dwellers lived in slums without access to water, electricity and garbage disposal). The privatization of public space in cities is one of the important reasons for the move of people to the slums. Shopping centers, banks, multiplexes, supermarkets, fast food restaurants, boutiques and estates surrounded by walls are multiplying in all megacities over the world (Wasieczko, 2012). They occupy more and more public space of cities. Old buildings, where the flats are generally cheap, are destroyed and new buildings are established, where the rent exceeds the financial ability of many people. City precariat is badly paid and do not have a borrowing capacity. Former tenants were expropri-

[7] If one believes scientists from University College London, who showed that among the urban population is increased genetic resistance to certain diseases (tuberculosis and lepra), the life in cities can also have a good sides (*Gazeta Wyborcza-Nauka*, 24.9.2010).

ated of their apartments, because they have been taken over by the market and they could not afford to pay the rent. This phenomenon has already a global dimension. The growing gap between rich and poor inhabitants of cities is a very internal contradiction of modern cities. It can lead not only to some urban rebellion, but to a countrywide and even to a world revolution, as it had already taken place in modern history (Harvey, 2012). With satisfaction one should note, that Roger Tognelli, FDP chairman of the City Council of Zurich (Switzerland), want to liquidate this conflict. Better earning inhabitants should give their co-operative flats to the community. He said: *We cannot allow that someone achieves lifelong profits from a very low rent*. His proposal refers to earning over 60 thousand Swiss francs. 76% residents opted for this project. In this way, in 2050 the city will get about 30 % more flats which it will be able to give to less wealthy residents (Metzler, 2012).

Security

Safety of inhabitants in contemporary cities is very important problem. It relates mostly to the threats resulting from increased vehicle traffic on the roads, from being among a huge number of people, and from the high criminality. In contrast to what many people think the urban environment is not safer than rural. Serious dangers for pedestrians create ever faster cars and other vehicles rushing through the streets. Staying in an anonymous urban crowd creates also a lot of dangers. In large population centers – in the streets, in shopping and entertainment centers, in parks, stadiums, railway and metro stations there are multitudes of people, where single persons are unrecognizable, anonymous and invisible. Therefore, they feel impunity and many from them really behave and act with impunity. It contributes to the spread of a multiplicity of crimes: robbery, fraud, rape, theft, murder, etc. This is particularly in the case of situations of the increasing unemployment and pauperization in connection with the ambition to catch up to the standards of material wealthy inhabitants. The crime rate grows proportionally to the number of inhabitants and to social density in the city. This is one of the serious plagues of megacities. In despite of the popular opinion, staying among lot of people does not reduce the threats for an individual person. It increases in denser networks of social dependencies and interpersonal relations. Safety of an individual is inversely proportional to the size of the group in which he stays. As a matter of fact, one is safest when alone and independent from anybody.

Management

Management collapse threatens the big cities regardless of the support by modern informatics technology (Kraas, 2009). Even great achievement of intelligent management systems in the form of the so-called *smart grids* does not help. Their functioning is based on the computer supporting control of communication networks, financial services, radio and telephone networks, water supply systems, power stations, heating plants, Internet, etc. However, the huge chaos can occur in the case of failures (Bornebusch, 2010). Dennis L. Meadows, co-author of the revolutionary book *Limits to Growth*, in an interview published in *Pictures of the Future – Building Greener Cities*, warned not to see the Holy Grail in technical solutions. New technologies must necessarily grow, but one should not believe that they themselves will solve our problems (Liebeskind, 2010). Management efficiency reduces proportionally to the size of the city and to density of its population. Experts gave the critical value for the number of the population in megacity, the so-called pain limit. Exceeding leads to the disorganization of the city management.

Enslavement

In large cities the degree of the enslavement increases due to the durable reduction of the free living space of its inhabitants. This refers to physical, social and psychological residential milieus. Each human, like other organisms, requires an appropriate area, which only he and no other can use. This area gives him the liberty feeling and ensures his privacy and security. I call it *free life milieu of an individual*. With the increase of the population density into megacities – and it is within the range of 1,800 inhabitants (New York) to 44.400 inhabitants (Dhaka, Bangladesh) per square kilometer – this life milieu is reduced gradually and in many cases it approaches the critical value (World Urban Areas…, 2012). Hence, the subjective feeling of freedom by the inhabitants and their objective degree of freedom are continually reduced. Legal, cultural and moral restrictions contribute also to the reduction of their freedom. These restrictions appear ever more and one should them rigorously enforce, if one wants to keep a social order and avoid conflict situations into the large masses of the people. The enslavement of the inhabitant of a large city manifests itself for example in form of the feeling of the inferiority complex. It occurs above all where dominate high buildings and famous skyscrapers. And the expansion of cities will have to make more in the third dimension of space (in height) than in the other two (on the plane) because of the territorial limitations. Architecture of skyscrapers often overwhelms a man and scares him. Staying within it, he feels insignificance, littleness and – in consequence – he experiences the depression. This is because high buildings violate the natural harmony between a person and his urban landscapes due to the disproportion of geometrical dimensions. High buildings weigh down the people and *crush* them with their weight and size. This phenomenon also occurs in the case

of large squares and avenues of the city, which are inseparable elements of the landscapes of big cities. Staying on such squares or arteries we feel great freedom proportionally to the size of their space, but at the same time we feel our inferiority and loss on such a large area. In addition, the inhabitant of a large city feels lost, because nearly always he is in a crowd. Wherever he is, he is surrounded by many people. And an individual nowhere does feel so lost and lonely, as just in a crowd or mass[8]. The feeling of the restriction of freedom, loss and loneliness – characterizes inhabitants of large cities – also worsens their mood and reflects negatively on their psyche and mental state. *Globalization causes that everywhere in the world people are moving from the countryside to the cities. As migrants, they are in their new home often excluded and sometimes strange. This causes additional stress. However the stress and social isolation pose danger to their psyche* (Meyer-Lindenberg, 2012).

Another aspect of the enslavement is reduction of privacy. It is particularly threatened into large cities because of great social density, of living into multi-residential houses, of continuous being in numerous gatherings of people, and of monitoring the public space with all kind of hidden cameras (Zukin, 2009).

Architectural weariness

The control of the large cities by world-wide largest financial and service centers as well as the tendency to build to lowest costs, fast and according to architectural standard projects, cause the standardization of the urban landscape. In each city one sees the same architecture. Everywhere one meets almost the same institution buildings, standard settlement, houses, shopping centers etc. Due to the building according to the architectural world fashion the view of the city is becoming more and more boring for permanent inhabitants and unattractive for visitors. The monotony of the urban landscape results also from the difference of the perception of space by the town designer and inhabitants. Multiplicity of the building styles melts in the standardization. This causes weariness and has also negative influence on the tourism. For what to drive to other cities, if one sees everywhere the same with the exception of some unique monuments and landscapes. However, the advantage of standardization is that everywhere in each strange city one can feel like home.

Identity

The growing mass migration of people to big cities from different continents causes that different cultures and sub-cultures, languages, beliefs, traditions, lifestyles and habits mix in them. That is good, because cities become more colorful. This somehow balances the urban architectural weariness. But simultaneously this weakens their identity. The inhabitants of large cities with the same ethnical, cultural, and religious roots form separate and relatively isolated groups. Thus, big cities are gatherings of dissimilar groups of inhabitants. They have different interests, habits, lifestyles and sometimes contradictory goals. This can causes conflicts between these groups. The greater is the variety of inhabitants groups, and the more conflict between them, the weaker is the identity of the city. The transmigration, mainly caused by the necessity for the frequent changes of the job, makes now city dwellers much less settled, when they were in the former times. In earlier times, several generations lived often in one city and even in the same house or apartment. Therefore, the inhabitants of the city formed a more stable or static social system. Today, they form a highly dynamic social system (something like to the state of plasma in physics), where everything – people, shops, infrastructure, customs, etc. – change ever faster, more turbulently and chaotic. It is not surprising, because we live in a true turbo-world (Sztumski, 2006a). Transformation of the inhabitants of the city from the static to the dynamic system reflects itself into the change of the identity of the city from the material identity to the functional. In the past, the essence of the city was determined more by its material objects (people, buildings, streets, shops, etc.), which are more stable than its functions. Therefore, the nature of the city was determined by its material identity. Now, the functions of the city (economic, touristic, cultural, administrative etc.) are more important than its material objects. Therefore, the nature of the city is more determined by its functional identity. Proportionally to mixing of different people, cultures, languages, traditions, etc. cities become ever more similar. Modern megacities have comparable demographic and urban landscape – in each of them one can find similar-looking people, similar types of buildings and similar architectural systems. Financial centers, administrative building, work establishments, schools and hospitals are built in one same way. In the past, a lot of cities had something specific and unique: folklore, slang, songs, habits, colorings, buildings, restaurants, hotels, places, streets, and manners of being. All this forms the nature and the spirit of the city. Today, all specific elements of the city are in rudimentary condition and gradually disappear (Sztumski, 2000).

The aesthetics of a big city

With the aesthetics of big cities something is getting worse, even though they are more and more well-kept, and the buildings and streets renewed and modernized. In many cases there is architectonic dissonance resulting from the confusion of styles

[8] David Riesmann, Nathan Glazer, and Reuel Denney pointed this out yet in 1950 in the book *The Lonely Crowd.*

and types of old buildings[9]. In the direct neighborhood of low buildings in gothic, renaissance and baroque style there are ultramodern skyscrapers made of glass and metal[10]. It is really a shocking view unbearable for people sensitive to an aesthetic harmony. Another problem is the construction of new, multistory buildings generally in the neighborhood of earlier raised and low houses so that they block the view from windows, or significantly reduce the viewed space. It is also one of the factors that cause an increased sense of enslavement. It is easy to see that being in a closed and visually very limited space causes the mood of despondency and it is the source of depression of the urban population. Numerous studies of psychologists confirmed this.

The dominance of artificiality

The city is something artificial already by its nature. And constantly one adds to it ever more artificiality in the form of synthetic material and unnatural cultural components. Natural urban green areas disappear due to the fast expansion of the cities, which is subordinated to economic criteria. Building and urban infrastructure arose in these areas. Various plastic substitutes are introduced instead of natural green. By the way, this is another example of disrupting the homeostasis of human (city inhabitant) with the nature. Artificially established gardens on balconies and roofs, artificial lawns, planting trees or even the creation of artificial parks in the realization of the idea of the gardens cities of tomorrow will not restore this homeostasis. Artificial or *soulless green* is able to replace the natural green only in visual aspect. Cheap and fast architecture replaces natural building materials, called traditional, by artificial. For example, instead of the traditional bricks made of clay it uses plates made of different synthetic materials. Another thing is the not entirely explored impact of synthetic building materials and the saturation apartments with various synthetics on the health of residents. Artificial human behavior and customs dominate a lot more in the cities, than in the villages. This is forced by fashion and by the desire to imitate the others. In addition, in big cities it is easier to produce the artificial demand for many goods and services, which are unknown to the people in the small cities or in the villages.

Self-government and democracy

The real self-organization of townspeople, which is the basis of democratic management of the city, should not be reduced to indirect governance by municipal authorities – to the president or the mayor and to the city council. It is best, if the people decide important issues of the city indirectly. However, in the case of a large number of people it is difficult to achieve such indirect democracy and in megacities it is simply impossible. How could million people decide – everyone personally – on what happens into such cities? Directly, it is impossible. One could try to reduce the number of the intermediate stages from the individuals to the municipal authorities, e.g. by a referendum (Makowska, 2012). That would be reasonable, if the referendum is representative, that is, if a relatively large number of people participates in it. But in practice, the presence in elections and referendums is not too big: it is inversely proportional to the number of inhabitants and directly proportionally to the extent of the affair. The fewer inhabitants are concerned with the affair, the more would like to express their opinions. The affairs in big cities usually concern large territories and many people. The same could be referred to other possible forms of direct governance: public debates, consultations, etc. It naturally raises a question about the maximum or optimal number of the inhabitants in the city, where the inhabitants could govern really directly. That is the question about the limit value of the inhabitants of the city, which is really democratically and not illusorily managed by the urban functionaries. Undoubted fact is that the management of the city by the officials, despite so-called *democratic choices* or election, is not fully democratic. In the opinion of people, presidents of cities behave like former feudal lords and the city councilors like courtiers at feudal. In the effect, the idea of democracy was reversed: the city and its functionaries are not for inhabitants, but on the contrary. Inhabitants are indeed a burdensome addition to the city, because they disturb various investors, corporations etc. in their business. Also for other reasons related to the correct functioning of the city (purchasing, export and utilization of wastes, communication, access to offices, shops and workplaces, etc.) it should not exceed the specific number of people.

Some planners think that such a limit is 300 000 inhabitants, though once in Czechoslovakia it was considered (and respected this to a certain extent) that in the cities there should not be more than 100 thousand inhabitants; that would guarantee the optimal realization of their fundamental functions. Maybe it was dictated by military assumptions connected with the defense strategy of the Warsaw Pact. I think that it is impossible to determine the optimal number of urban dwellers in general, but only in relation to a particular city and depending on internal and external factors and on economic, demographic, geographic, climatic, social, military, and other criteria.

[9] Architectural dissonance is not visible only in big, but also in small cities and villages.

[10] A typical example of such dissonance is the Alexanderplatz in Berlin and the area around the railway station in Cracow.

Compatibility of the morphology with functions of the city

The development of large cities brings an enormity of bad effects, but one cannot stop it, because cities will be still the centers of civilization, trade, science and art. It should not, however, allow them to grow in an uncoordinated manner. Cities should be developed according to the idea of sustainable development for the good of the cities and their inhabitants. Further development of cities according to this idea must be well-planned and controlled; particularly it has also to take into account ecological criteria. These requirements are included in the idea of so-called *smart cities*; it is already partly implemented. Sustainable urban development requires the involvement of many experts – representatives of different subdomains of science, architects, economists, ecologists, urban planners and politicians. Ethicists, aestheticians and philosophers, who especially deal with the eco-philosophy and the ecology of the city, may be even useful here in some way. Relations of architecture with the philosophy have been known for a long time. Architecture, like any other activity, requires some thought to make it effective, also a philosophical reflection. Already in the first century BC, Vitruvius wrote in *Nine books about architecture* that practice and theory are needed in order to build. And *a theory can be understood as any methodical structured way of thinking* (Illies, 2009), and therefore also the philosophical thinking. Vitruvius claimed that philosophy is needed also to the architect for this reason, because *it forms magnanimity at architect and he teaches that the he should not be conceited, but rather easy to contact, fair and honest, and – what is most importantly – free from greed, because no work can be done without conscientiousness and integrity. An architect (...) should guard with seriousness his dignity and take care of a good reputation, and this is recommended by philosophy* (Petkowicz, 2010). Extremely important challenge, defined by the ecology of the city, stands before architects, urban planners and other experts in the field of ecology, sociology, management, psychology, aesthetics, etc. – to try to make the life easier for city dwellers, so that they more than ever take care of the proper development, of the urban landscape and protect it. This favors their life and makes it enjoyable. Unfortunately, further unsustainable development of the city, which still creates greater threats to the internal and external environment of the city and its people, is not conducive to this. Some of these threats are related with functions of the city, and others with its structure. Most of them are discussed in the previous section. The idea of the sustainable development, understood as a balance or a golden mean between contradictions, which lug the urban organisms, could help, to realize this challenge (Sztumski, 2006b;2011). This concerns the balance:

- Between the various functions of the city (all functions material and spiritual should be treated equally important).
- Between the components of the morphology of the city (all elements of the structure of the city should be regarded as equally important).
- Between the structure of the city and its functions (elements of the structure should be present in such numbers and form, to enable it to function optimally).
- Between the traditional and modern architecture of the city.
- Between the old urban folklore (the spirit of the town) and a modern lifestyle[11].

It has to be so because the city is an organized system and must be considered holistically. It is a dynamic system, but rather yet dissipative one, while there are already some symptoms of a tendency to transform the city from unsustainable to sustainable system, for example, increase of fluctuations and turbulence. One can indicate two essential reasons for this phenomenon: the excessive mobility and dynamics of urban development, and the increasing condensation of physical and social urban space. In spite of this, a mechanism of homeostasis works in the dynamic system *city*, thanks to what city is relatively stable and ordered. This homeostasis must be protected. Harmonizing the morphology of the city with its functions allows obtaining this goal. In the case of a disruption of this harmony it will take place a disappearance of the city in its present sense[12]. It also concerns the balance within the areas of biotic and social diversity in the city: ethnical, class, professional, cultural, generational etc. But this requires the compromise between economic, social and ecological criteria as well as the equal treatment them in the further development of urban planning.

References

1. BORNEBUSCH J. PH., *Vernetzte Welt. Moderne Technologien machen Städte lebenswerter, aber auch anfälliger,* http://www.wissenschaft-online.de/aretikel/1035613&_z=859070, 9.6.2010 (11.09.1012).
2. *Das Jahrhundert der Städte*, http://www. planeterde.de, 19.06.2009 (23.08.2012).
3. Die Stadt der Zukunft, in: *ZEIT–Wissenmagazin*, Mai 2009, http://www.zeit.de/online/2009/06/Architektur-Zukunft (15.09.2012).

[11] At the World Congress of Architects in Naples in 2000, I appealed to respect the traditional lifestyle in the old cities and to protect the spirituality of the cities.

[12] Depopulation of large cities and scattering them as a result of suburbanization contributes also to the disappearance of cities.

4. FONKEN L.K., XU X., WEIL Z. M., CHEN G., SUN Q., RAJAGOPALAN S. and N., 2011, Air pollution impairs cognition, provokes depressive-like behaviors and alters hippocampal cytokine expression and morphology, in: *Molecular Psychiatry*, July 5.
5. HARVEY D., *Rebel Cities: From the Right to the City to the Urban Revolution*, Bęc Zmiana, Warszawa 2012.
6. ILLIES Ch., 2009, Architektur als Philosophie – Philosophie der Architektur. Essay, in: *Das Parlament - Aus Politik und Zeitgeschichte*, 25/15.06.2009.
7. JACOBS J., *The Death and Life of Great American Cities, Elements of the city ecology: three processes*, New York 1993.
8. KLETT, http://www.klett.de/sixcms/ list.php?page=geo_infothek&node=Stadttypen (24.08. 2012).
9. KOHR L., *Probleme der Stadt*, Salzburg 2008, (08.07.2012).
10. KRAAS F., *EU Commerce. Business Development in the European Union*, 2009.
11. LACHAUER C., Die Welt als gigantische Mega-City?, in: *Zentrum für angewandte Politikforschung*, München 2005.
12. LENZ M., 2010, Schlaue Systeme und Faktor Mensch. Wie urbane Zentren in Zukunft verwaltet werden sollen, in: *Spektrum der Wissenschaft. Die Wissenschaftszeitung im Internet*, 27.08.2010 (28.08.2012).
13. LIEBESKIND D., 2010, Interview: A star architect on livable cities, in: *Pictures of the Future. The Magazine for Research and Innovation*, Spring.
14. LINGENHöHL D., Planet Stadt, in: *Spektrum der Wissenschaft. Die Wissenschaftszeitung im Internet* (3.05.2010).
15. MAKOWSKA L., GERWIN M., *O Tezach o Mieście i demokracji w działani*u, in: Nasze Prawo do Miasta (http://www.my-poznaniacy.org/index.php/kongres-miejski/123-opinie-i-opracowania/670-o-tezach-o-miescie-i-demokracji-w-dzialaniu (23.09.2012).
16. MEYER-LINDBERG A., 2012, Die Seelennöte der Stadtmenschen, in: *Gehirn & Geist*, Nr. 1-2, p. 12.
17. METZLER B., 2012, Besserverdienende sollen Wohnung abgeben, in: *Tages-Anzeiger*, Zürich (20.01.2012).
18. NIEMELA J., *Ecology and urban planning, Biodiversity and Conservation*, New York 1999.
19. PETKOWICZ P., *Vanitas czy venustas*, (http://suw.biblos.pk.edu.pl/resources/i1/i2/r12445/SetkowiczP_Vanitasenustas.pdf (10.09. 2012).
20. RIESMAN D., DENNEY R. & GLAZER N., *The lonely crowd: a study of the changing American character*, Yale Univ. Press, New Heaven 1950.
21. ROWE S., 2000, The Ecology of Cities, in *The Structurist* No. 39/40.
22. SZTUMSKI W., 2006a, The Turbo-World and the Deceleration Principle, in: *Problemy Ekorozwoju/ Problems of Sustainable Development*, vol. 1 no 1, p. 49-57.
23. SZTUMSKI W., 2006b, The idea of sustainable development and possibility of its realization, in: *Problemy Ekorozwoju/Problems Of Sustainable Development*, vol. 1, no 2, p. 73-76.
24. SZTUMSKI W., 2011, Jak kształtować świadomość dla potrzeb ekologii i trwałego rozwoju?, w: *Problemy Ekorozwoju/Problems of Sustainable Development*, vol 6 no 1, p. 162-166.
25. SZTUMSKI W., *Life world in quickly changed and condensed social space-time*, in: *The human being and the city*, ed. Toro de P., Naples 2000, http://www.unisobna.it (CD-ROM).
26. WASIECZKO A. M., Bunt Miast przed nami? in: *Obiegi*, http://www.obieg.pl/książki/25704 (5.01. 2013).
27. *World Urban Areas Population And Density*: *A 2012 Update*, http://www.newgeography.com/content/002808-world-urban-areas-population-and-density-a-2012-update (22.09.2012).
28. ZUKIN S., *Naked City: The Death and Life of Authentic Urban Place*, Oxford University Press, Oxford 2009.