

Mariusz LAMPRECHT*

THE ROLE OF THE BUILT ENVIRONMENT IN HUMAN LIFE. SELECTED ISSUES

Abstract. Creation of the built environment and research in this field pose a particularly difficult challenge nowadays. The pace of social and technological change does not allow for evolutionary development of cities and the formation of their land use according to current conditions. Creating spatial solutions that are unmatched in their contexts is becoming not only possible, but very probable (see Alexander, 1964). The development of the built environment involves not only art, technology, history, economics and law, but also philosophy, culture, medicine, psychology, sociology and many other spheres in which human life is manifested. However, only a relatively small number of disciplines such as spatial planning, urban design, urban planning, etc. (ignoring at this point the differences in the meaning of the concepts) in their application layer are meant to create space and bear responsibility for it. Also society has certain requirements of practical nature towards them.

This article attempts to outline the nature of research on space urbanised by people and to determine the four main fields of research aimed at the problems of man and the built environment. In the next part, particular attention is paid to issues related to the impact of the built environment on the life of its residents in order to highlight the particular role and complexity of this area of research. This study, acting as a kind of test of the research, cannot be considered representative. Nevertheless, the analysis prompts several reflections on the current and future role of the built environment in the development of our civilisation, as well as further challenges related to it.

Keywords: built environment, physical environment, spatial planning, urban planning, quality of life.

1. INTRODUCTION

Deliberations on the built environment are closely associated with the concept of culture, one of the broadest terms to describe the human world. This term, by definition (see, e.g. *Encyclopedia...*, 1993, *Słownik...*, 2003), contains the whole

* Mariusz LAMPRECHT, Institute of the Built Environment and Spatial Policy, Faculty of Geographical Sciences, University of Łódź, 90-142 Łódź, ul. Kopcińskiego 31, Poland, e-mail: mariusz.lamprecht@geo.uni.lodz.pl

spiritual and material heritage of humanity, and thus everything that creates the built environment. In the literature, especially in anthropological studies, it is repeatedly emphasised that human culture is composed of two types of artefacts: human behaviour and material culture (Barański, 2007 after Schleretch, 1991; *The Columbia...*, 1956). Material culture includes items of material nature, that is all kinds of artefacts, including elements of spatial planning. These are mainly permanent artefacts (as only permanent objects can be elements of culture – Gyurkovich, 2010), which have been made in a conscious way (Malec, 2012). The built environment contains not only artefacts, i.e. the elements of nature which, once separated from this nature by human activities, serve in the primary form or after they have changed their form and state, as material support for the production of social life in all its dimensions. It is also the environment which is the result of the transformation of nature, e.g., domestic animals and plants that would become extinct or would grow wild after cessation of care (see Godelier, 2012). Assuming that the built environment is a manifestation of material culture, it is defined by James Deetz (1996) as ‘that sector of our physical environment that we modify through culturally determined behaviour’. This environment is not only the product of humanity but also the foundation of its development.

The places of the largest concentration of human creations are cities: many have witnessed rapid development of urban environment. This development manifests itself not only through succession, increased intensity or the overlapping and accumulation of new solutions and material forms, but also by the increasing complexity of technical environment. However, in the ‘post-modern societies of consumption saturation’ not just the quantity of the collected objects, but their quality is increasingly important. As a result, people exchange their possessions, although they have not lost their use value – they acquire larger televisions, faster computers, better houses. Similar processes can be seen in the field of spatial development. Modernisation or replacement of still functioning elements of land use is often undertaken, especially in rapidly developing societies.

The growing dynamics of spatial development is dictated not only by the desire to create a better quality environment but also the need to replace what has ceased to be functional and remove limitations arising from the finite resources of space available to man. Human needs also change. For example, departing from a large family model means that in some regions of the world there is an oversupply of large houses, which are also unattractive to a large part of the aging population (see Nelson, 2006).

The problem of mutual interaction between people and the human-made environment is of particular importance today. Modern society requires space and facilities better suited to its needs. The increasing mobility of the information society and broad access to information place the evaluation of the urban environment and the assessment of the occupied spatial position (more about these issues in Szczepański and Nurek, 1997) in a much broader context than in the past. As

a result, part of the population is willing to perceive a decision about moving to places as more attractive. The arrangement and organisation of space are therefore some of the factors that build the attractiveness of cities.

The article deals with the issue of, among others, the influence of the built environment on human life in urbanized areas. Its main purpose is to draw attention to the versatility of the studies analysing the influence of the built environment on human life and emphasize the legitimacy of including their results in the process of creating or modifying the existing spatial development. On that level, specialists in urban design, planners and architects – people who are particularly responsible for planning the urban space – play a major role. The presented discussions are conducted, above all, in the context of the quality of life which, despite being understood and defined in various ways, is largely dependent on the built environment, since it influences the degree to which numerous human needs are fulfilled, for example, on the physiological level (rest), on the level of safety (freedom from fear), on the level of aesthetic needs (harmony), in self-realization (the fuller development of the human potential possessed) (see needs hierarchy of Maslow, 1990). The perspective presented in the article also refers to the approach of Sen (2002), the Nobel Prize winner, who in his debates assumes that the quality of life is dependent on living, not the ownership of goods. He proposes to adopt the possibilities of humans using the possessed goods to assure their dignified living as a base for the assessment of the quality of life. These possibilities are doubtlessly co-determined by the built environment.¹

2. BUILT ENVIRONMENT AS AN OBJECT OF STUDY

The existence of a relationship between people and the surroundings is obvious as confirmed in the definitions of culture quoted above. Our skills, abilities and goals shape our environment which, in turn, provides the context and one of the many determinants of our behaviour. Human behaviour and what people build make a mutually-explanatory whole. Therefore, urban environment can be perceived as information about people (individuals and society). This draws the attention of many researchers, including Dant (2007), who wrote that ‘the way we build homes reflects our culture, our values, our relationship to the earth,’ Eco (1986 after Dant, 2007), claiming that architecture includes a cultural code and Leach (1989), who indicates that ‘all the various non-verbal dimensions of culture, such as [...] village lay-out, architecture [...] are organised in patterned sets so as to in-

¹ The statement of Sen claiming that not the issue of owning a bicycle is important, but the question of whether we can own and use a bicycle can be supplemented by saying that the latter is co-determined by, among others, the presence of bicycle routes in a city.

corporate coded information in a manner analogous to the sounds and words and sentences of a natural language.’ The study of the built environment allows us to understand the society associated with it.

The research referred to shows a specific character. The elements of the built environment, such as buildings, urban furniture, interior design, are neither fauna nor flora as Jean Baudrillard wrote (2006). They are the product of human activity and as such are not subject to the natural laws of ecology (such as the law of evolution and self-organisation). They cannot self-copy or reproduce, and if in the future we construct buildings or other facilities capable of e.g. self-repair, they will be useless if there are no people in them.² As noted by Nęcki (2004), ‘the environment does not have the properties of ‘a self-defining system’ which means it cannot say what it is or what it is not (e.g. a temple or a warehouse, a monument or ruin, a park or fallow).’ The features of the built environment and the importance of its components are decided by people, their creators and users. The sum of these meanings influences the attractiveness of an area.

The built environment is a static creation, in a sense ‘turned off’ for a while from the circulation of nature. It is a matter closed in certain forms, shaped by human hand. Nevertheless, it is subject, as any material object, to the rules of nature (e.g. the law of entropy), which do not play hide and seek with the researcher, do not change – you just need to know and understand them. In this respect, the built environment and its components are relatively easy to study. It is possible to determine their properties experimentally (for example, the resistance of objects or used raw materials to erosion, precipitation, earthquakes, live micro-organisms). Physical consequences of the existence of elements of management (such as modifying the strength and direction of wind, air temperature, the flow of rainwater), are also predictable. We can measure not only the impact of natural phenomena but also occupants behaviour (e.g. effects of overload or maltreatment of elements of management). Therefore what is reflected in inanimate matter, in the urban tissue, is easily measurable and recognisable.

The source of a much greater research difficulty is the reversed relationship, i.e. the impact of the built environment on the people staying in it (or more precisely the impact of the people themselves through specific urban planning). We know, though, the human lifecycle and people’s possibilities and limitations at various stages of development. We know – at least in generalization – human behaviour in specific spatial contexts (see e.g. spatial behaviour by McLoughlin, 1969). But knowing how and in which dimensions the built environment modi-

² Creating architecture with advanced computer design tools, the search for (creating) the genetic code of the buildings, the desire to create architectural “species” and “races” and finally the concept of digital-botanic architecture (see e.g. Frazer, 1994; Dollens, 2005) is rather a manifestation of the search for biological analogies in design solutions than the creation of living organisms subject to the laws of ecology.

fies a person's life is still insufficient. Shaping the neighbourhood described by Jane Jacobs (1993), safe space of Newman (1972), aging-friendly places (*Global age-friendly...*, 2007), activating public spaces (Gehl, 2011), user-friendly buildings (Hall and Hall, 1975), or smart spaces (Głowińska, 2014) are just some of the interesting research themes of great cognitive potential.

Today, there is a growing number of studies on human life in urban environment. This is due to the new contexts in which the further development of advanced societies is seen, such as the mentioned need to reduce consumption of available spaces and giving up quantitative development in favour of new ideas of qualitative development (see e.g. Wysocka, 2003). It is seen more and more clearly that space management has a significant impact on the quality of life of its users, including the functioning of modern urban societies. As a result, the issue of urban planning – usually viewed through people and their life – is undertaken in different contexts and different spatial scales within many sciences. These include geography, land management, urban planning, architecture, urban sociology, engineering and environmental protection, medicine and environmental psychology, anthropology and many other research disciplines and sub-disciplines.

It is not possible to review all research on the built environment and people functioning in it. It seems, however, that it is possible to mention four broad research fields, which include:

1) Research on the built environment (land development) understood as an achievement of technology and human thought. In this perspective, the built environment is seen as a material 'emanation' of human activity. The studies focused on the matter, materials and forms, that have evolved with the development of human skills, as well as the evolution of ideas about physiognomy, design and spatial solutions, etc. (expressed e.g. in architectural styles, or search for ideal urban forms), but also on the intentions of their creators. It seems that this approach should also include some aspects of contemporary studies on the evolution of elements of land development, such as smart buildings, zero energy building and responsive architecture.

2) Research on shaping space in the process of managing it. It focuses on the process of creating the built environment and features of the created physical space. It includes both the category of absolute space (spatial diversity) and relational space (spatial organisation). Development is seen here, as in the previous approach, as the material manifestation of human activity. The aim of the research includes the recognition of spatial structures and detection of the conditions and mechanisms that have shaped them, the study of evolution of forms created and inhabited by people, distinguished e.g. on the basis of morphological and genetic criteria, as well as analysis of the way the use of space fits into the existing natural conditions.

3) Studies on the impact of society on land use. This approach places people primarily in the role of users (and not the constructors as in the previous approaches),

modifying their environment. What is therefore important is how people shape the surroundings ‘produced’ by them. In this view, development is seen as a ‘receiver’ of human activities. Research following this trend includes user behaviour towards built space, both spontaneous and planned (e.g. taking steps to change or restore the existing way of development), from the level of detail (e.g. maltreatment or misuse of objects) to a general one (e.g. relation to material cultural heritage). Problems falling within this approach include the activities and research related to the handling of material resources (e.g. administration and real estate management).

4) Research on the impact of the built environment on people. The research included in this category focuses primarily on people as the recipients of stimuli coming from the environment shaped by them. Research aims at understanding the impact of the built environment on a number of manifestations of human life. Urban environment in this approach is seen primarily as determined by its conditions, more or less recognised by us. It creates both opportunities and constraints for action of individuals and societies inhabiting them. People are the creators but at the same time the beneficiaries (or victims) of the characteristics of the environment created by themselves. In this approach, people are located in a specific spatial configuration of material objects but also of the intangible assets created by them (such as the level of security or a sense of status resulting from the use of or possession of a piece of space).

These concepts cannot be considered separately, or assigned to a single discipline. However, each of them is a testimony to the existence of the interrelationships between people and the environment created by them.

The considerations presented in the following section will be limited to the latter presented approaches. This is due to:

- the growing interest in the impact the built environment exerts on human life;
- a large potential of these problems, as it appears that their exploration can bring many interesting and revealing conclusions;
- the dispersion of the research included in this trend within a wide variety of scientific disciplines, which on the one hand raises difficulties in constructing syntheses and generalisations but also allows drawing further, valuable conclusions on the basis of past achievements and existing data.

3. IMPACT OF THE BUILT ENVIRONMENT ON HUMAN LIFE – AN OUTLINE

The development of research in which people and spatial planning are in the centre is dictated primarily by its growing importance and current requirements posed to the environment in which people live. Since for the majority of human population it is the heavily built-up areas that are the habitat, the researchers’ attention is

focused primarily on the relationship between spatial management and quality of life of people living in a given surrounding.

Currently, our attitude to the shaping of urban space is subject to a significant change. This does not only stem from the increasingly complex environment 'facilities' that surround us, but also the increasingly more extensive knowledge of human life in their configuration. In the past, builders were primarily interested in the durability of the material from which the building was erected as well as its design. Today the issues taken into account include congestion law, privacy, personal space and environmental perception, as well as the impact of noise, temperature and air circulation. Increasingly, attempts are made to consider the impact of a building on people who will use it. Construction projects can meet various behavioural criteria, e.g. ensure a sense of security, ties with the community, address the needs of people with disabilities (Bell *et al.*, 2004, p. 21, see also Hall and Hall, 1975). This is the effect of increasing capabilities, knowledge and the growing interest in the consequences of living in an artificial environment, more and more technologically advanced and more tightly surrounding us.

Today, especially rapidly developing research is on selected social groups, the so-called sensitive³ ones. Especially the aging population of many cities in the world increases the number of studies pointing to the need to adapt the urban space to the capabilities and needs of its oldest members. What is noted is that the quality of life of the elderly to a large extent is determined by the spatial development. The studies indicate, among others, that there is a relationship between land use and physical activity and intensity of social contacts of the elderly (Kerr *et al.*, 2012).⁴ Suitable shaping of the urban environment plays in this area a huge role, especially through the elimination of architectural barriers, the use of technical and infrastructural solutions appropriate to the needs of the elderly, and through organising a friendly and safe space, both at the micro level (modernisation of apartments and buildings) as well as the macro level (the formation of the closest neighbourhood, providing adequate transportation to more distant places such as parks, theatres or offices). Appropriate space management can also have an important contribution to preventing spatial segregation of the elderly who prefer aging in place⁵ (Zubrzycka-Czarnecka, 2012; Costa-Font *et al.*, 2009; Kerr *et al.*, 2012; Laws, 1993).

³ Social groups seen as vulnerable by social welfare institutions include aging communities, large families, single parents with children, the chronically ill, the physically or mentally disabled, single people, the unemployed, the homeless, people not coping financially, people from the margins of society, women and children and the elderly (Czarnecki, 2005).

⁴ Older adults are a large but very inactive population group. Physical activity, especially walking, has many important health benefits for older adults. This review describes the relationship between walking and health and reviews studies investigating the relationship between the built environment, walking, and health in older adults. Important features of community design for older adults are identified and a suggestion for impacting walking behaviour is made (Kerr *et al.*, 2012).

⁵ As people age, they prefer to 'age in place.' The concept of aging in place refers to the ability to live in one's own home, wherever that might be, for as long as one can feel confident and comfortable.

Moreover, in the light of the aging and shrinking population, the youngest generations of city dwellers and their proper development are increasingly important. The deficit of demographic capital contributes to the development of family policy. In this context, properly developed space plays at least an equally important role. What is indicated, among other things, is that for the proper development of children in the cities, a sufficiently large open space area is important (including safe street space and not only playgrounds), located near the house and places used by adults. These spaces should be easily accessible, both visually and physically, so that you can see what is happening there and join easily (a synthetic review of the published studies on kid-friendly urban space was made by Churchman, 2003).

These approaches are part of a general trend of research on human behaviour in the built environment. They primarily emphasise the influence of the quality of space on the desire to use certain places in the city (the better the quality, the larger the increase in the optional activity) (Gehl, 2014). Similarly, sustainable and mix land use (retail, commercial activities, work places, the housing function) reduces the need to cover the daily distance and encourages non-motorised travel (Frank and Pivo, 1994; Saelens *et al.*, 2003, 2014; Handy *et al.*, 2002). Proper configuration of functions in space may lead the user to more health-promoting behaviours, physical activity and influence decisions made by pedestrians (Huang *et al.*, 2014; Papas *et al.*, 2007; Kulińska-Szukalska and Chlebna-Sokół, 2011; Granié, 2014). It also shows that interventions in land use involving the creation of new squares, opening the courtyards, streets and alleys for pedestrians, widening sidewalks, planting trees and introducing stylish infrastructure lead to the revival of construction activities and significant increase in the number of residents and students (Gehl, 2014).

Medical sciences also highlight the impact of development on human functioning, indicating the need to rediscover the importance of 'place' for human health (Frumkin, 2003). What is indicated are the negative health consequences resulting from the lack of movement caused by bad structure of the built environment (Heath *et al.*, 2012). Forced use of cars (especially through the development of suburbs) causes adverse effects including an increase in emissions and the number of accidents involving pedestrians, damages to mental health (including the so-called road rage resulting from long time spent in traffic jams). It is stressed that the improvement of the conditions in which pedestrians function (reduction of car traffic and limited parking options) means more people move on foot, which, in turn, has a significant impact on their health (e.g. reduces obesity and lowers the risk of illnesses such as diabetes and heart diseases) (Frumkin, 2002; Ewing *et al.*, 2008). There are also studies exploring new aspects of the impact of urban space on people. For example Rosset *et al.* (2012) attempted to verify the hypothesis (with reference to the concept of Cameron and Demerath, 2002),⁶ according to which the

⁶ According to this concept, a child's development is characterized by at least two periods when the body subjected to stress from the external environment is 'programmed' so as to achieve optimal (under the circumstances) parameters in spite of the negative impact.

metropolitan environment, due to the high level of urbanisation, not only affects the functioning of people but may be a modifier of their biological development.

An important contribution to the study of the relationship between the behaviour of people and the physical environment – their life environment – is made by the sub-disciplines of psychology, especially environmental psychology and architectural psychology. They study, among others, associations of people with urban environments, buildings, the interiors of buildings and spaces between buildings. The studies include mapping behaviour to assess if an area is used in accordance with its intended purpose or check how it will be used in the future (Bell, 2004). There are researches of physical traces left by people, giving evidence of certain behaviours (e.g. paths trodden across the lawns), together with measures of ‘erosion’ and ‘growth’ of matter in the human environment, the analysis of documents including e.g. behavioural implications of architectural plans (see e.g. Zeisel, 1981).

An important contribution to the development of these studies is also brought by proxemics, i.e. knowledge about the distances that people keep between each other and the information these distances carry, initiated by Hall (1976). It brings relevant content to spatial planning, stressing the need to take into account the users of a given space and what relationships will prevail in there (i.e. if benches in the park are too close to one another, it can result in only some of them being used).

Other important studies include ergonomics, the science dealing with the interaction between people and their material environment as well as the search for optimal solutions to provide them with the best operating conditions, both in the office, while travelling, at home, or in a place of recreation etc. (the review of the current issues raised in the context of this discipline was made by Costa *et al.*, 2012).

Among the important studies on human behaviour in urban environment the theme of safety of urban residents is also present. Publications by authors such as Jacobs (1993), Shlomo (1968), Newman (1972), Paul van Soomeren (1987) have contributed to raising awareness about the importance of urban planning in reducing crime. It is assumed that the possibility of crimes to be committed can be prevented or reduced if physical environment is designed in such a way as to foster closer ties between residents and increase the likelihood of disclosure of the fact a crime is being committed (the appearance of a potential criminal). A major role is played by the scale and the appropriate arrangement of buildings, facilities and lighting, suitable shaping of corridors (no niches and bends), streets and passages, as well as maintenance in good material condition (theory of broken windows). What is important is the formation of a sense of belonging of a given space to a particular social group (private and semi-private spaces). This affects not only the level of safety but also the quality of life in other dimensions, and also the quality of the space utilised by people (Jasiński, 2013).

An issue that is relatively new, but fits in the above trend, is creating a space free from acts of terror. In response to them, especially the most common bomb-

ings, new methods of securing buildings against terrorist attacks were designed: *Design Out Terrorism*, i.e. actions to obstruct a terrorist attack, and *Hardening Building Envelope and Structure*, i.e. increasing the resistance of the building to the effects of bombing (a broad overview of relations between the management and human security was conducted by Jasiński, 2013).

The issue of the impact of the built environment on human life is also raised on the grounds of sociology of the city, the basis of which is the assumption that people live differently in cities than outside them (Häußermann, 2008). Numerous questions about the effects of space on the human and social organisation are also put forward by sociology of settlements, highlighting, among others, the social importance of the material environment and its impact on the territorial behaviour (Hamm, 1990).

Moreover, on the basis of architecture the attention is drawn to the importance of urban spaces. For instance, Palej (1998) notes that ‘safe areas of the city [...] are rediscovered as a guarantee to prepare children for life in society. On the carefully managed streets and squares children best learn social skills, talking to different people, and the desire to help others.’ As indicated by Lennard and Lennard:

Principles of design, visible and recognised in a beautiful city, such as harmony, well-balanced proportions, adequate relationship between the buildings, the continuation of public space, unity and diversity – do not only refer to physical structures. They are also accepted by the child as a model of positive attitudes. In an ugly city the situation is the same: the rules governing the physical environment – boredom, monotony, conflicting relationships between objects or uncontrolled development – can be understood by a child as acquiescence and even encouragement to behavioural conflict and uncontrolled aggression (Palej, 1998 after Lennard and Lennard, 2000).

The cited quotes also emphasise that space management significantly shapes the psychosocial sphere. Living and realising their life goals in a specific area, people constantly receive and valorise stimuli coming from it. Attractiveness, accessibility, security level, a sense of chaos or order, belonging, identity, experiences and memories, and even the beauty and aesthetics shape the human being, culture, consciousness and behaviour (Diec, 2010; Florida *et al.*, 2011). Development also affects the information sphere; it may have a symbolic significance, deliver emotions, reflections, feelings of attachment, identity, affiliation. It strongly affects people’s consciousness by creating not only the environment of their lives but also impacting what we call the atmosphere of the city (Regulski, 1986). It may also develop resilience of modern societies. As noted by Hall (1976), the mass extinction of people during the Black Death in the mid-fourteenth century was not only caused by the plague, but also by the reduced resistance to stressful busy life in medieval towns.

Many aspects of the impact of built space on human life have been omitted in the text. These include attempts to use architecture as a medium for driving the society (urban utopias) (Burno, 2011; Paszkowski, 2011), the achievements of

humanistic geography (e.g. Tuan, 1987), the issue of content and stimuli provided by architecture⁷, the issue of urbanisation as a phenomenon affecting society in general (see e.g. Majer, 2010), the economic dimension of the discussed issues and finally the issue of urban (and housing) normative as a tool for shaping the conditions of life of the inhabitants of the city (e.g. Pancewicz, 2010). However, the selected examples demonstrate not only the importance of the built environment in people's lives but also emphasise the importance of research that deals with these issues. It also seems that the integration of the already achieved accomplishments in the fields of these disciplines is as valuable for further progress in this area as new scientific discoveries.

4. THE FUTURE OF THE RELATION BETWEEN MAN AND URBAN BUILT ENVIRONMENT

Today there are voices predicting the total degradation of the importance of physical space in the future (e.g. Siemiątkowska, 2004). It is emphasised that the development of the Internet leads, among others, to the reduction of direct social contacts. In the modern 'world of global flows' a new metropolitan class not attached to a place is being born (Castells, 2001) – the creative class (Florida, 2010), easily finding itself in the space of big cities, regardless of their geographic location. Many activities are no longer determined by distance: remote transmission of information, ideas and solutions, the ability to shop from anywhere on earth, the decline in the cost of transport of goods and people, more and more on-line jobs; they are to be responsible for the 'death of distance' (Cairncross, 2001). According to some researchers, perhaps this is the beginning of the end of the old world in which 'the familiar concept of space and the local community will be, with the change of generations, replaced by the global communication networks – creations without history and individual identity' (Lewicka, 2012).

These opinions, however, are not true to what we define as the built environment, managed space or spatial planning. The functioning of some social groups is becoming less dependent on the location, but not on the properly organised and managed space. This is evidenced by, among others, actions taken towards the renewal of urban spaces, as well as the popularity of the idea of smart cities and edge cities.

In the society of the future a significant share will still belong to the groups strongly 'embedded locally.' Each person will experience old age, the need for

⁷ As Eco wrote (1996), stairs invite us to ascend even if we stumble in the dark on the first step and we do not see them.

connection with the place and the local community, aging in a place. Those relatively less educated, poorer, less entrepreneurial also will not disappear in subsequent generations. Therefore, it is not possible to speak of a reduction in the importance of spatial planning, quality and organisation of the built environment in human life. Regardless of the location, they have played and will continue playing an important role in further development of civilisation. It can even be said that in connection with development, part of the society not only is, but will be even more sensitive to the quality of the space and the possibilities offered by it. It is rightly emphasised, after all, that 'the measure of the desired level of urban development is a situation where cities can advantageously and permanently meet the needs of their users' (Czornik, 2012).

We live in an increasingly high-tech environment, which in an increasingly sophisticated manner is 'capable' of meeting our needs, but at the same time in an increasingly complex ways affects us and determines our behaviour. Urbanised environment, primarily cities, are becoming an almost constant, in its own way, natural habitat for the majority of the world's population. This means that the life cycle of a substantial part of modern societies is carried out in artificial environments, developed in an intense and complex way. The result is that our civilisation is becoming more vulnerable to the hazards resulting from malfunctions of the technical systems around (e.g. blackouts, failures of traffic-controlling information systems, etc.).

Contemporarily emerging new technologies (smart homes, Internet of Things, automated car transportation, etc.), disruptive innovations, shortening of the life cycles of products (including elements of spatial management) mean additional, new contexts of research on the impact of human-developed space and its organisation on those humans. It also seems that not only the new research, but also attempts to interpret or reinterpret what has been observed in various fields of research disciplines, will enable a better understanding of the mechanisms of how people function in the environment created by them and the mechanism of the very principles of this creation.

In the light of the above, the role of those responsible for creating space for people and those investigating all aspects of human life in the urban environment will still be important. This especially refers to the responsibility for creating space. As Florida rightly pointed out, it is necessary to take more effort in eliminating disparities in the level of development of the various regions of the world, including the quality of the space utilised by man. Particular responsibility lies with the most creative and entrepreneurial part of the population. These are their innovative activities that allow us to eliminate barriers and create the environment offering a growing range of opportunities (affordances) of human activities. This effort should take into account the achievements of many scientific disciplines and should be based on the experiences (also the benefits of failed solutions). This process requires the ability to accumulate knowledge, match facts and create a synthetic vision of the

whole. Today part of the responsibility for the process of creating space is passed on to those living in it by including them in this process (public participation). This is undoubtedly a sign of respect to the future users of space and self-awareness of the planners of the incompleteness of their knowledge. The directions of analyses, the evaluations and assessment of the built environment particularly strongly depend on subjectivity, both of the researcher and the space user. An example would be the concept of spatial order, which is not clear among researchers. Indication (e.g. in local plans or urban concepts) of the way of building an area (e.g. the buildings forming the road frontage) is striving to introduce specific rules that make up the mentioned spatial order. However, exceeding a vague border, the imposition of specific technical solutions or sets of ready-made variants (e.g. house projects) can be seen as a process of standardisation which is 'the beginning of the process of erosion of the spatial differentiation' (see Dant, 2007), or the destruction of 'spatial identity of cities' (see Siestrzewitowska, 2008).

Nowadays, the amount of acquired data about the environment in which people operate is growing rapidly. This is fundamentally changing the way we make, occupy, manage and remake space (see Starkey and Garvin, 2013). This sheds new light on the attempt to better understand the relationships that exist between people and the environment. This also opens up new fields of research (or restores the old ones), with a considerable potential that could be the source of many new discoveries important to the public.

But we must also remember that the built environment is the creation of a much longer time horizon than human life. Even the space perfectly tailored to each social group will not withstand the pressure of changes resulting from the development of civilisation, or the requirements of the consumer society in search of new forms and content as well as 'phenomena' in the urban space. We are therefore condemned to the constant evolution and exploration of the built environment, as well as being non-stop 'in the process.' This conclusion, however, is the starting point for a separate discussion on the dynamics of urban environment.

REFERENCES

- ALEXANDER, Ch. (1964), *Notes on the synthesis of form*, Cambridge: Harvard University Press.
- ANGEL, S. (1968), *Discouraging crime through city planning*, Berkeley: University of California, Institute of Urban and Regional Development.
- BACH-GŁOWIŃSKA, J. (2014), *Inteligentna przestrzeń. Trzeci wymiar innowacyjności*, Warszawa: Oficyna a Wolters Kluwer bussines.
- BARAŃSKI, J. (2007), *Świat rzeczy. Zarys antropologiczny*, Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- BAUDRILLARD, J. (2006), *Spoleczeństwo konsumpcyjne, jego mity i struktury*, Warszawa: Wydawnictwo Sic!

- BELL, P. A., BAUM, A., FISHER, J. D. and GREENE, T. C. (2004), *Psychologia środowiskowa*, Gdańsk: Gdańskie Wydawnictwo Psychologiczne.
- BRIDGWATER, W. and SHERWOOD, E. J. (eds.) (1956), *The Columbia Encyclopaedia*, 2nd Edition, New York: Columbia University Press.
- BURNO, F. (2011), 'Miasta Mussoliniego. Architektura i urbanistyka jako instrument polityki państwa faszystowskiego', *Kwartalnik Architektury i Urbanistyki*, 56 (3), pp. 27–51.
- CAIRNCROSS, F. (2001), *The death of distance : how the communications revolution is changing our lives*, Brighton, MA: Harvard Business School Press.
- CAMERON, N. and DEMERATH, E. W. (2002), 'Critical periods in human growth and their relationship to diseases of aging', *American Journal of Physical Anthropology*, 119 (35), pp. 159–184.
- CASTELLS, M. (2001), *The rise of the network society*, Oxford: Blackwell Publishers.
- CHURCHMAN, A. (2003), 'Is There a Place for Children in the City', *Journal of Urban Design*, 8 (3), pp. 293–302, <http://doi.org/10.1080/1357480032000108116>.
- COSTA, A. P. L., CAMPOS, F. and VILLAROUCO, V. (2012), 'Overview of ergonomics the built environment', *Work*, 41, Supplement 1, pp. 4142–4148.
- COSTA-FONT, J., ELVIRA, D. and MASCARILLA-MIRÓ, O. (2009), '“Ageing in place”? Exploring elderly people's housing preferences in Spain', *Urban Studies*, 46 (2), pp. 295–316.
- CZORNIK, M. (2012), *Konsumpcja miejska. Ekonomiczne refleksje nad ewoluowaniem funkcji miejskich*, Katowice: Uniwersytet Ekonomiczny.
- DANT, T. (2007), *Kultura materialna w rzeczywistości społecznej: wartości, działania, style życia*, Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- DEETZ, J. (1996), *In Small Things Forgotten: An Archaeology of Early American Life*, New York: Anchor Books.
- DIEC, A. (2010), 'Wzory preferencji przestrzeni architektonicznej', [in:] BANASZKIEWICZ, M., CZECH, F. and WINSKOWSKI, P. (eds.), *Miasto. Między przestrzenią a koncepcją przestrzeni*, Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- DOLLENS, D. (2005), *Digital-Botanic Architecture: D-B-A*, Santa Fe: Lumen Books.
- ECO, U. (1986), 'Function and Sign – The Semiotics of Architecture', [in:] GOTTDIENER, M. and LAGOPOULOS, A. (eds.), *The City and the Sign: An Introduction to Urban Semiotics*, New York: Columbia University Press.
- ECO, U. (1996), *Nieobecna struktura*, Warszawa: Wydawnictwo KR.
- Encyclopaedia Americana. International edition* (1993), vol. 8, Danbury, Connecticut: Grolier Incorporated.
- EWING, R. *Pedestrian- And Transit-Friendly Design: A Primer for Smart Growth*, Smart Growth Network, https://www.epa.gov/sites/production/files/documents/ptfd_primer.pdf (10.06.2016).
- EWING, R., SCHMID, T., KILLINGSWORTH, R., ZLOT, A. and RAUDENBUSH, S. (2008), 'Relationship between urban sprawl and physical activity, obesity, and morbidity', *Urban Ecology*, Springer, p. 567–582, http://link.springer.com/chapter/10.1007/978-0-387-73412-5_37 (10.06.2016).
- Florida Pedestrian Planning and Design Handbook* (1999), Chapel Hill: University of North Carolina, Highway Safety Research Center, California.
- FLORIDA, R. (2010), *Narodziny klasy kreatywnej oraz jej wpływ na przeobrażenia w charakterze pracy, wypoczynku, społeczeństwa i życia codziennego*, Warszawa: Narodowe Centrum Kultury.
- FLORIDA, R., MELLANDER, C. and STOLARICK, K. (2011), 'Beautiful places: The role of perceived aesthetic beauty in community satisfaction', *Regional Studies*, 45 (1), pp. 33–48.
- FRANK, L. and PIVO, G. (1995), 'Impacts of mixed use and density on utilization of three modes of travel: Single-occupant vehicle, transit, and walking', *Transportation Research Record*, 1466, pp. 44–52.

- FRAZER, J. (1994), *An Evolutionary Architecture*, London: Architectural Association.
- FRUMKIN, H. (2002), 'Urban sprawl and public health', *Public Health Reports*, 117, pp. 201–217.
- FRUMKIN, H. (2003), 'Healthy places: exploring the evidence', *American Journal of Public Health*, 93 (9), pp. 1451–1456.
- GEHL, J. (2011), *Life between buildings: using public space*, Washington, D.C.: Island Press.
- Global age-friendly cities: a guide* (2007), World Health Organisation, http://apps.who.int/iris/bitstream/10665/43755/1/9789241547307_eng.pdf (10.06.2016).
- GODELIER, M. (2012), *Idee i materia. Myśl, gospodarka, społeczeństwo*, Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego.
- GRANIE, M. A., BRENNAC, T., MONTEL, M. C., MILLOT, M. and COQUELET, C. (2014), 'Influence of the built environment on pedestrian's crossing decision', *Accident Analysis and Prevention*, 67, pp. 75–85.
- GYURKOVICH, J. (2010), *Architektura w przestrzeni miasta: wybrane problemy*, Kraków: Politechnika Krakowska.
- HALL, M. R. and HALL, E. T. (1975), *The fourth dimension in architecture: the impact of building on behaviour. Eero Saarinen's administrative center for Deere & Company, Moline, Illinois, Santa Fe, NM: Sunstone Press.*
- HALL, T. (1976), *Ukryty wymiar*, Warszawa: Państwowy Instytut Wydawniczy.
- HAMM, B. (1990), *Wprowadzenie do socjologii osadnictwa*, Warszawa: Książka i Wiedza.
- HANDY, S. L., BOARNET, M. G., EWING, R. and KILLINGSWORTH, R. E. (2002), 'How the built environment affects physical activity: views from urban planning', *American Journal of Preventive Medicine*, 23 (2), pp. 64–73.
- HÄUSSERMANN, H. (2008), 'Europejskie getto', *Res Publica Nowa*, 3, pp. 43–52.
- HEATH, G. W., PARRA, D. C., SARMIENTO, O. L., ANDERSEN, L. B., OWEN, N., GOENKA, S., MONTES, F. and BROWNSON, R. C. (2012), 'Evidence-based intervention in physical activity: lessons from around the world', *The Lancet*, 380 (9838), pp. 272–281.
- HUANG, R., MOUDON, A. V., COOK, A. J., DREWNOWSKI, A. (2014), 'The spatial clustering of obesity: does the built environment matter?', *Journal of Human Nutrition and Dietetics*, 28 (6), pp. 604–612.
- JACOBS, J. (1993), *The Death and Life of Great American Cities*, New York: The Modern Library.
- JASIŃSKI, A. (2013), *Architektura w czasach terroryzmu*, Warszawa: Wolters Kluwer SA.
- KERR, J., ROSENBERG, D. and FRANK, L. (2012), 'The Role of the Built Environment in Healthy Aging: Community Design, Physical Activity, and Health among Older Adults', *Journal of Planning Literature*, 27 (1), pp. 43–60, <http://doi.org/10.1177/0885412211415283>.
- KLOEBER, A. and KLUCKHOLM, C. (1952), *Culture. A Critical Review of Concepts and Definitions*, Cambridge.
- KRAJEWSKI, M. (2007), 'Postępy i przedmioty', [in:] STANISZEWSKI, M. (ed.), *Pojęcie podstawowe*, cz. 3: *Miasto postępu*, Poznań: Wyższa Szkoła Zarządzania i Bankowości.
- KULIŃSKA-SZUKALSKA, K. and CHLEBNA-SOKÓŁ, D. (2011), 'Styl życia a występowanie otyłości w badanej grupie dzieci łódzkich', *Przegląd Pediatryczny*, 41 (4), <http://eds.b.ebscohost.com/eds/pdfviewer/pdfviewer?sid=1da43bef-1b96-4659-ac92-deb9548c2999%40sessionmgr101&vid=18&hid=104>.
- LAWS, G. (1993), '“The land of old age”: Society's changing attitudes toward urban built environments for elderly people', *Annals of the American Association of Geographers*, 83 (4), pp. 672–693.
- LEACH, E. (1976), *Culture and Communication: The Logic by which Symbols Are Connected. An Introduction to the Use of Structuralist Analysis in Social Anthropology*, Cambridge, UK: Cambridge University Press.
- LENNARD, H. L. and LENNARD, S. H. C. (2000), *The forgotten child: cities for the well-being of children*, Carmel, Calif: International Making Cities Livable Council, Gondolier Press.

- LEWICKA, M. (2012), *Psychologia miejsca*, Warszawa: Wydawnictwo Naukowe Scholar.
- MAJER, A. (2010), *Socjologia i przestrzeń miejska*, Warszawa: Wydawnictwo Naukowe PWN.
- MALEC, T. (2012), 'Identyfikacja relacji pomiędzy kulturą materialną a niematerialną i ich wpływ na rozwój architektury', [in:] TROCKA-LESZCZYŃSKA, E. and PRZESMYCKA, E. (eds.), *Miasto w kulturze*, Wrocław: Oficyna Wydawnicza Politechniki Wrocławskiej, pp. 277–289.
- MASLOW, A. H. (1990), *Motywacja i osobowość*, Warszawa: Instytut Wydawniczy Pax.
- McLOUGHLIN, J. B. (1969), *Urban and regional planning. A systems approach*, London: Faber and Faber.
- NELSON, A. C. (2006), 'Longer view: Leadership in a New Era', *Journal of the American Planning Association*, 4, pp. 393–410.
- NEWMAN, O. (1972), *Defensible space*, New York: Macmillan Publishers.
- NEŹCKI, Z. (2004), 'Transakcje środowiskowe – człowiek w otoczeniu przyrody czy cywilizacji', [in:] *Ekologia społeczna*, Kraków: Stowarzyszenie Ekopsychologia, pp. 93–100.
- PALEJ, A. (1998), 'Współczesna problematyka przestrzenna miast i jej historyczne tło', [in:] BOJANOWSKI, K., LEWICKI, P., GONZALES, L. M., PALEJ, A., SPAZIANTE, A. and WICHER, W. (eds.), *Elementy analizy urbanistycznej*, Kraków: Politechnika Krakowska, pp. 31–112.
- PANCEWICZ, Ł. (2010), 'Od Parker Morris Standards do Building for Life: normatywno-urbanistyczny jako narzędzie wartościowania przestrzeni miasta – doświadczenia krajów anglosaskich', [in:] MADUROWICZ, M. (ed.), *Wartościowanie współczesnej przestrzeni miejskiej*, Warszawa: Wydział Geografii i Studiów Regionalnych, Uniwersytet Warszawski, Urząd m. st. Warszawy, pp. 205–216.
- PAPAS, M. A., ALBERG, A. J., EWING, R., HELZLSOUER, K. J., GARY, T. L. and KLAASSEN, A. C. (2007), 'The built environment and obesity', *Epidemiologic Reviews*, 29 (1), pp. 129–143.
- PASZKOWSKI, Z. (2011), *Miasto idealne w perspektywie europejskiej i jego związki z urbanistyką współczesną*, Kraków: Wydawnictwo Universitas.
- REGULSKI, J. (1986), *Planowanie miast*, Warszawa: PWE.
- ROSSET, I., ŻADZIŃSKA, E., WAGNER, I., BOROWSKA-STRUGIŃSKA, B., LORKIEWICZ, W., SITEK, A. and ŚMISZKIEWICZ-SKWARSKA, A. (2012), 'Badania pilotażowe związku środowiska urbanizacyjnego Łodzi ze statusem społeczno-ekonomicznym rodzin w aspekcie oddziaływania na wybrane parametry morfologiczne dzieci', *Przegląd Pediatryczny*, 42 (3), pp. 133–140.
- SAELENS, B. E., SALLIS, J. F., BLACK, J. B. and CHEN, D. (2003), 'Neighbourhood-based differences in physical activity: An environmental scale evaluation', *American Journal of Public Health*, 93, pp. 1552–1558.
- SCHLERETCH, T. (1991), 'Material Culture or Material Life. Discipline or Field? Theory or Method?', [in:] POCIUS, L. G. (ed.), 'Living in material world. Canadian and American Approaches to Material Culture', *Social and Economic Papers*, 19, pp. 231–252.
- SEN, A. (2002), *Rozwój i wolność*, Poznań: Wydawnictwo Zysk i Spółka.
- SIEMIĄTKOWSKA, A. (2004), 'Od kontemplacji do konsumpcji – postrzeganie przestrzeni miejskiej', [in:] JEŹRZEJCZAK, D. (ed.), *Humanistyczne oblicze miasta*, Warszawa: Wydział Geografii i Studiów Regionalnych, Uniwersytet Warszawski.
- SIESTRZEWITOWSKA, M. (2008), 'Pojęcie tożsamości przestrzennej miasta', *Teka Komisji Architektury, Urbanistyki i Studiów Krajobrazowych*, 4, pp. 192–202.
- Słownik wyrazów obcych* (2003), Warszawa: Wydawnictwo Naukowe PWN.
- STARKEY, C. and GARVIN, C. (2013), 'Knowledge from data in the built environment', *Annals of the New York Academy of Sciences*, 1295 (1), pp. 1–9.
- SZCZEPAŃSKI, M. S. and NUREK, S. (1997), 'Miasto i świat społeczny jego mieszkańców w perspektywie socjologicznej (szkic do syntezy)', [in:] KACZMAREK, J. (ed.), *IX Kon-*

-
- wersatorium Wiedzy o Mieście. Współczesne przemiany struktur przestrzennych dużych miast*, Łódź: Łódzkie Towarzystwo Naukowe, pp. 29–39.
- TUAN, Y. F. (1987), *Przestrzeń i miejsce*, Warszawa: Państwowy Instytut Wydawniczy.
- VAN SOOMEREN, P. and VAN DIJK, B. (1996), *Safe and secure cities, The physical urban environment and reduction of urban insecurity*, Amsterdam: Bureau Criminaliteitspreventie.
- WYSOCKA, E. (2003), *Wpływ społeczeństwa informacyjnego na zagospodarowanie przestrzenne*, Warszawa: Instytut Gospodarki Przestrzennej i Mieszkalnictwa.
- ZEISEL, J. (1981), *Inquiry by Design: Tools for Environment-Behaviour Research*, Belmont, CA: Wadsworth.
- ZUBRZYCKA-CZARNECKA, A. (2012), 'Polityka miejska wobec starzenia się populacji miast – na przykładzie Polski, Francji i Kanady', *Problemy Polityki Społecznej. Studia i Dyskusje*, 7, pp. 119–128.