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# THE COMPOSITION OF THE URBAN ORGANISM: EMPATHETIC CITY – INTUITIVE CITY

The aim of this work is to show the structure of a city perceived as a living organism, responding to the specific needs of particular generation groups, based on rhythmic activities and creating a well-functioning composition. The entire discussion is based on observational, comparative and heuristic methods, as well as emotional perception (direct contact and perceptual reaction). The article is an attempt to initiate a discussion and outline the problem of complexity of an intuitive, empathetic city, in which we can see analogies to a living organism as well as to a composition enclosed in the context of a work of art. This, as a consequence, may contribute to a better understanding and definition of the needs and development processes of contemporary urban spaces.

**Keywords:** composition, city, living organism, rhythm, structure

## 1. INTRODUCTION

We can perceive a city as a living, dynamic organism which, like the human body, has its own functions, structure and character. It is not just a collection of buildings and streets, but a space which, according to Vitruvius' triad, should be utilitas, firmitas and venustas. It is these qualities that inspire our affection, respect and sense of security. Thanks to them, we should feel in the city as if we were in a well-organised organism, a separate entity with its own place and identity. The city reflects the lives and emotions of the people who inhabit it, and the rhythm of the city is its pulse, measured by the pace of life set by its residents, their daily activities, traffic, events and cycles of functioning of the space. The rhythm of the city, apart from its connection with the specific way of life and behaviour of its inhabitants, is closely related to urban composition, referring to various aspects of urban planning and organisation. It concerns

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both the intensity of everyday life and the harmony between various urban elements, such as buildings, streets, parks and public spaces. The importance of 'identifying accelerations or slowdowns, sometimes stagnation, in the dynamics of urban space transformation, taking into account its full territorial dimension' is emphasised by K. Heffner, K. Gasidło and A. Klasik, referring to a study by J. Runge[4], which "considers the concept of the rhythm of the city in complex settlement structures, where it draws attention to the importance of the mismatch between functional, spatial and socio-cultural changes and urban development, when the rhythm is a derivative of supra-local conditions or characteristics of the local economic and socio-cultural space. All this can lead to disharmony in development and a deepening of the state of imbalance." [Heffner, Gasidło, Klasik 2023: 16]. Harmony is key to creating a functional and friendly space, which means that buildings, streets, parks and other facilities should be designed in a way that promotes their interaction. For example, well-planned public spaces can encourage social gatherings and interactions, while adequate transport infrastructure can facilitate movement around the city. The ability to perform many functions that are important to people in public spaces 'has a comparable effect on the level of activity' [Gehl 2009:79], while the level of activity in everyday life refers to how residents interact with urban space and how various factors, such as transport, services, recreation and culture, influence their experiences. The way people move around the city, their habits and how they spend their time create a unique rhythm of urban life, which is growing, driven by communication and globalisation, and the identity of the city 'is reflected in the way its residents speak, in the way they move around it' [Sudjic 2017: 105]. Urban space remains connected to people, and the dynamics, actions and instincts of residents translate into its energy. The modern city does not slow down; on the contrary, it rushes forward, often at the expense of deeper contact with space and with oneself. This can lead to frustration, alienation and a lack of deeper interpersonal contact, implying increasing anonymity and a loss of social identity and sense of place. Therefore, observing and implementing effective solutions related to the functioning of urban structures can contribute to improving their quality of functioning, deepening the sense of identity and, consequently, improving the quality of life of residents.

[4] J. Runge's study, *Complex settlement system – traditional economic region – socio-cultural space*, provides an extensive discourse on the phenomenon of complex settlement systems, delving into the intricacies of developmental progress and regression in terms of the diversity of directions and trends of change.

## 2. STATE OF RESEARCH / THE ISSUE OF THE CITY AS AN ORGANISM IN LITERATURE

Generally speaking, when discussing the characteristics of a modern city, it can be said that its diversity and variety are largely noticeable. We are dealing with industrial, historical, tourist, financial and academic cities, which, despite similar elements (streets, squares, neighbourhoods), differ from each other in terms of identity, rhythm and function. Contemporary cities are becoming increasingly globalised, often becoming anonymous and uniform, which can cause a sense of lack of belonging and identity. Like the human body, the city struggles with "civilisation diseases", ages and develops. References to the human body are a popular theme in literature, and in this context, inspirations drawn from the science of the human body, such as the ideas of Harvey or R. Sennett, are interesting, emphasising that a city, like the circulatory and respiratory systems, must have an efficient flow system – communication, movement, energy. The connection with the respiratory and circulatory systems influenced the emergence of new views on public health, which architects implemented in their designs during the Enlightenment. 'They wanted to create a city where people could move and breathe freely, a city made up of arteries and veins through which people flowed like healthy blood cells' [Sennett 1996: 207]. This had a significant impact on changing expectations and plans related to urban planning. In the context of comparing functioning in architectural space to human life, P. Zumthor expresses himself as follows: 'Architecture has its own area of existence. It remains in an exceptionally physical relationship with life,' it is 'the setting and backdrop for passing life, a sensitive vessel for the rhythm of footsteps on the floor, for concentration at work, for the silence of sleep' [Zumthor 2020: 12]. The words of T. Ganti are also interesting: 'treating the city as an organism is entirely justified, because this entity, as a functional whole (system), fulfils all the necessary conditions or has the characteristics that a living organism must fulfil (possess)' [Ganti 1986: 21]. They point to considerations regarding the analogy between the structure of a city and an organism, and the mutual resonance between the two. The topic of comparing the structure of a city to the human body is also raised by K. Słuchocka, who points out the similarities: 'Humans as a species are very similar to each other, but they are separate, individual phenomena. The city was created in their image, which is why it is treated as living tissue and can develop harmoniously and in accordance with its identity, each time constituting, despite many similarities, an autonomous phenomenon' [Słuchocka 2021: 31]. J. Łapińska also comments on the relationship between the city and the organism: 'Urban space is created in relation to the body. The dynamism of the city is created by its inhabitants, their life energy and life-sustaining instincts.' [Łapińska 2017: 154], or J. Parysek, attempting to analyse

similar features in refining the definition of the organicist concept of the city [Parysek 2010: 43]. This concept is discussed in D. Maslowski's study, who writes: "Adopting the organicist concept of the city, apart from purely scientific and substantive values, brings with it the possibility of a more accurate understanding of the structure and essence of the city's functioning. Furthermore, it allows for better planning and adaptation of its infrastructure to the needs and expectations of the majority, and, as a result of a long process, even the entire population." [Masłowski 2010: 73]. It seems reasonable to use references to the city as a unit to the organism and to take into account in our considerations the functioning of both on similar, systemic principles, bearing in mind their variability in the context of development, time, technology and the consequences that these factors entail. Looking at all these factors differently, we can assume that we are dealing with successive cycles. In addition, the human organism can be considered an organised composition in terms of its structure and functional capabilities from a spatial and functional point of view, as noted by B. Jałowiecki [Jałowiecki 2018]. We can also refer to the assumption of D. Grzonka, who compares the composition of a city to a network based on visual points – nodes designed to facilitate location and information transfer [Grzonka 2017: 11]. At this point, it is worth referring to the reflections of Kurt Lewin, who coined the term: hodological space – the space of possible movement [Lewin 1934] in which "preferred paths are determined, representing a compromise between several zones, such as 'short distance', 'safety', 'minimum work', 'maximum experience', etc." [Norberg-Schulz 2000: 22]. Yi-Fu Tuan presents an interesting point of view, treating a place in space as a pause in the process of movement of people and animals who do so for specific purposes. 'Such a stop makes a given neighbourhood a centre of value' [Tuan 1987: 175]. Movements occurring in cities, as well as in other spatial systems, have relatively "fixed and easily definable directions. They are characterised by repeatability at specific intervals, e.g. during the year (spring-summer season, autumn-winter season), week (weekend period, working days period), etc. This applies not only to the directions of these movements, but also to their specific intensity" [Gulczyński 1990:25]. Constant movement and change also refer to the broadly understood 'transience and permanence' that Baranowski asks about in his monograph 'Can a city live, and thus be transient, and at the same time remain unchanged, or must it first die in order to live? Experience shows that the city is a place where transience and permanence coexist; neighbourhoods and places that are frequented and bustling with life are bordered by enclaves of poverty that are frozen in hopelessness and decay' [Baranowski 2009: 23], giving the impression of a constant drive towards healing and full efficiency, restoring neglected structures to full life so that they can once again fulfil their designated roles.

## 3. AN INTUITIVE CITY – A LIVING CITY

Both the human body and urban structures are examples of complex systems the functioning of which is based on the principles of integration, specialisation and communication. This analogy, although symbolic, allows for a deeper understanding of biological survival mechanisms and the design of effective systems. The complexity and adaptability of these structures testify to their remarkable effectiveness, both on a biological and social scale. The structure itself is also important in terms of its nature and quality, which translates into functional intuition related to practical operation.

Treating both structures, human and urban, as organisms, it can be seen that in both cases they are 'forced' to operate in a strictly defined manner – they must precisely coordinate all processes in time. For the organism to function properly, biologically important features must proceed without disruption and must not conflict with other equally important processes. Specific coordination allows events to be predicted and organised, and thus to function efficiently. Beneficial coordination will largely be determined by repeatability preceded by trial and error, which, if effective, will pave the way for further activities when repeated many times. These can develop into a rhythmic system of functioning associated with processes that repeat over time and shape particular social and spatial areas. For example, Jerzy Parysek and Lidia Mierzejewska distinguish certain specific rhythms of city functioning, such as: 24-hour, daily, weekly, monthly, annual and random rhythms. They are assigned to them by relevant entities, municipal entities (energy, gas, heating, water supply, sewage, communication, public transport, etc.), security, health, life and property protection units, commercial and service establishments, offices, nurseries, kindergartens, schools of various types, workplaces, sports and recreation facilities, municipal service facilities, recreation facilities, etc. [Parysek, Mierzejewska 2013]. They thus draw attention to the conditioning of the indicated rhythms by 'the calendar and activities that have been in place for many years, the existence of which also determines the temporal organisation'. [Masłowski 2010: 79].

### 3.1. Rhythm in the functioning of the human body and the urban organism

The repeatability of specific activities can be systematised through the identification of similar groups, e.g. weekly, quarterly, annual rhythms (cycles), daily rhythms, night-time rhythms, considering them in terms of comparing the functioning of the human body and the urban organism. All of them exist in a dependent manner, and the consequences of the events that occur (necessary or inevitable changes, emergencies, etc.) determine the appropriate response. The interdependence of their occurrence links groups of rhythms into a closed cycle (tab. 1a, 1b).

Tab. 1a. General classification of the body's rhythms in relation to humans

| No | Rhythm | Examples | Characteristics |
|---|---|---|---|
| 1 | day | daily activities related to work, study, recreation | high-level activities guaranteeing a sense of calm, satisfaction, confidence and balance in daily life; building emotional bonds, cooperation, high energy, physical and mental engagement |
| 2 | night | time of regeneration | regulating and calming processes, preparing for daily activities; calming down activity |
| 3 | 24-hour | 24-hour operating cycle | an alternating pattern of interdependent activities; noticeable consequences resulting from the influence of both rhythms on each other |
| 4 | weekly | mutually complementary activities, spread over individual days of the week | a pattern of behaviour and activity aimed at fulfilling long-term responsibilities requiring action according to a schedule based on daily, night-time and round-the-clock rhythms |
| 5 | quarterly | activities related to the changing seasons | a pattern of behaviour and activity aimed at fulfilling long-term responsibilities in accordance with specific atmospheric and environmental conditions, taking into account daily, night-time, 24-hour and weekly rhythms related to external independent factors |
| 6 | annual | a sequence linking all individual activities into a closed, repeatable 12-month cycle | implementation of long-term objectives based on specific sub-rhythms that take into account the specific nature of the activities assigned to them |

Source: Katarzyna Słuchocka.

Tab. 1b. General classification of the body's rhythms in relation to the city

| No | Rhythm | Examples | Characteristics |
|---|---|---|---|
| 1 | daily | daily activities related to work, study, recreation | activities related to supporting effective communication, ensuring the provision of appropriate infrastructure enabling the implementation of daily activities, promoting social contacts, service, educational and health-promoting functions, providing a sense of security and comfort of use |
| 2 | night | Time of regeneration | measures responsible for regulating night-time mode; appropriately adapted residential, service and public utility infrastructure (acoustics, choice of materials, location in relation to needs and values), reduction of traffic concentration, regulation of lighting, preparation for daytime activities |
| 3 | 24-hour | 24-hour operating cycle | alternating pattern of interdependent activities; necessary interaction of both individual rhythms to support 24-hour functions; regulation of the level and intensity of activity in adjacent zones; adaptation of the building infrastructure to a 24-hour operating mode (regulation: energy, communication, classification of functions and assigned objects) |
| 4 | weekly | mutually complementary activities, spread over individual days of the week | logistic spatial planning – tailored to complement various functions (activities of various social and professional groups, etc.) related to housing and spatial needs; functioning based on daily, nighttime and round-the-clock rhythms – a coupled mechanism of city functioning (facilities, transport, economic facilities, complementary infrastructure) |
| 5 | quarterly | activities related to the changing seasons | adaptation of construction, technical, economic, communication, service, education and workplace infrastructure in accordance with the order of behaviour and activities related to the fulfilment of long-term obligations by residents in accordance with the assumptions of the annual rhythm; taking into account the daily, nightly, 24-hour and weekly rhythms related to external atmospheric and environmental factors |

| No | Rhythm | Examples | Characteristics |
|---|---|---|---|
| 6 | annual | a sequence linking all individual activities into a closed, repeatable 12-month cycle | long-term planning – adaptation of construction, technical and economic infrastructure, transport, facilities for services, education and workplaces in accordance with the order of behaviour and activities related to the needs and fulfilment of obligations by residents on a 12-month basis; planning that takes into account daily, nightly, 24-hour and weekly rhythms related to external atmospheric and environmental factors; reference to and coordination of works and projects related to the principles of regenerativity, accessibility and inclusiveness |

Source: Katarzyna Słuchocka.

Considering the general classification of the body's rhythms in relation to humans and cities, one can see analogous connections between elements attributed to the sphere of human behaviour and factors related to design work on building infrastructure. The annual rhythm contains individual fractions of rhythms from shorter time intervals and, as in the case of humans, forms the basis of the order of existence, shaped day by day, with a specific repetitiveness – from daily to twelve-monthly. The city, as a well-thought-out, harmonious composition, should function in such a way as to complement the intertwining needs of humans and their environment – providing shelter from the cold, rain and excessive sun, offering spaces for sleep, work, entertainment and learning, as well as facilitating communication. Due to changing needs related to social and technological development, and above all to awareness, people indicate – and sometimes even force – the need to adapt external infrastructure to their standard of living. Environmental guidelines resulting from the implementation of environmental protection requirements – such as the use of appropriate materials, their recycling or the reduction of losses and costs – are in line with applicable standards and regulations, influencing the continuous transformation of the context in which we operate. The response to emerging needs is development that takes place in rhythmic temporal progress. Building on historical and cultural heritage, previous technical achievements, etc., influences the shape and quality of space, and 'rational consumption of goods and services and an appropriate level of recycling, i.e. reuse and recovery of raw materials, reduces the impact of adverse urban metabolites (pollutants)' [Masłowski 2010: 80].

### 3.2. Generational groups – relationships and needs in urban spaces

Another group characterised by activities in different rhythms are generational groups. Directly resulting from successive developmental cycles, they form communities defined by needs and ways of functioning in time and space. The relationships between them are at different levels of activity and variability, which is related to life trends (political situation, economic situation, standard of living, sense of security), cultural conditions, social activity, common attitudes and social hierarchy, professional activity and bonds. The basis is coexistence, and in particular educational cooperation, building bridges between generations, developing awareness, accompanying change.

What is important is the specific fact of repeatability (rhythmicity) and inevitable changes that carry with them the legacy of the past, which can be used in the future. The variability of the organism determines development, and development as a factor of movement drives – and even obliges – action.

In an urban organism whose development and shaping are based on the principles of inclusiveness and regenerativity, one can see a template borrowed from the natural environment, of which humans are an integral part. Every need has its justification, and in response to it, existing resources are used first, launching remedial programmes. The basis for remedial responses is the definition of the problem, which is based on awareness and knowledge of the functioning of the entire organism, the characteristics of its components and their mutual influence on each other.

For example, generational groups at the opposite ends of the spectrum, despite their significant differences, also have common needs. For example, two selected extreme groups were analysed, including pre-school and school children and elderly people who are professionally inactive (tab. 2).

Tab. 2. Needs and collaborative activities for school-age children and elderly individuals who are professionally inactive

| **No.** | **Generation** | **Characteristics of activity / needs** | **Examples of possible joint activities/everyday activities related to play, learning and leisure;** | **Characteristics of activity / needs** | **Generation** |
|---|---|---|---|---|---|
| 1 | Children | play – physical activity | playgrounds / parks / outdoor gyms / exercise rooms in enclosed facilities;<br>– physical activities both indoors and outdoors;<br>– rehabilitation activities;<br>– walks;<br>infrastructure adapted to the needs of both groups | social activities – physical activity | The silent generation |

| | | | | | |
|---|---|---|---|---|---|
| 2 | Children | education | kindergartens, schools, libraries, community centres – therapeutic activities:<br>– workshops involving both groups; – learning how to use digital tools;<br>– foreign language learning;<br>– art and music workshops;<br>– joint preparation and consumption of meals;<br>diverse infrastructure adapted to the needs of both groups | education | The silent generation |
| 3 | Children | leisure | green areas: gardens, parks:<br>– growing plants together;<br>– caring for animals;<br>– reading together;<br>– participating in performances, shows, concerts | leisure | The silent generation |

Considering the extremely diverse generational groups and their needs and possible activities, they can be viewed in terms of common dependencies which, by complementing each other, bring benefits to each of them. They contribute to strengthening physical activity, mental development, the development and maintenance of social contacts, and prevent social withdrawal.

In an urban environment, responses to identified needs are expressed through appropriately designed infrastructure, adapted for comfortable use, in this case by children and the elderly. The application of accessibility and inclusiveness principles is a fundamental factor in achieving these goals. It is also important to keep up with technological progress, industrial development and the possibilities of using material amenities. The words of Jacek Purchla seem relevant here: 'Cities, as mirrors of civilisation, are not only the result of centuries of accumulation resulting from the intermingling of cultures, ideas and values, but also the "product" of complex social processes.' [Purchla 2024: 184].

Taking into account the needs and possible activities of generational groups of children and seniors additionally influences the development of awareness, strengthens education, and increases motivation. Similar relationships can be observed in urban structures. Correlations in the field of psychology and social conditions are the driving force behind activities in the areas of space, architecture and urban planning. Both groups require the adaptation of building infrastructure in the context of pursuing innovative solutions that meet the needs of specific users. Mutual needs, understood as shared functions, imply their adaptation with a focus on achieving the expected results. The flow

of information, exchange of experiences and multi-disciplinary cooperation represent a comprehensive approach that allows for the creation of universal, user-friendly and effective solutions for everyone. The structure and functioning of a city based on planning and active architectural design processes can contribute to the effective communication of urban spaces and the efficient management of spatial resources, offering comfort of use, including safety, functional and communication facilities, in accordance with the principles of accessibility and inclusiveness, as well as respect for the natural environment. A holistic approach will imply the healthy and efficient functioning of both structural groups, which are fully co-dependent: human organisms within the urban organism (fig. 1).

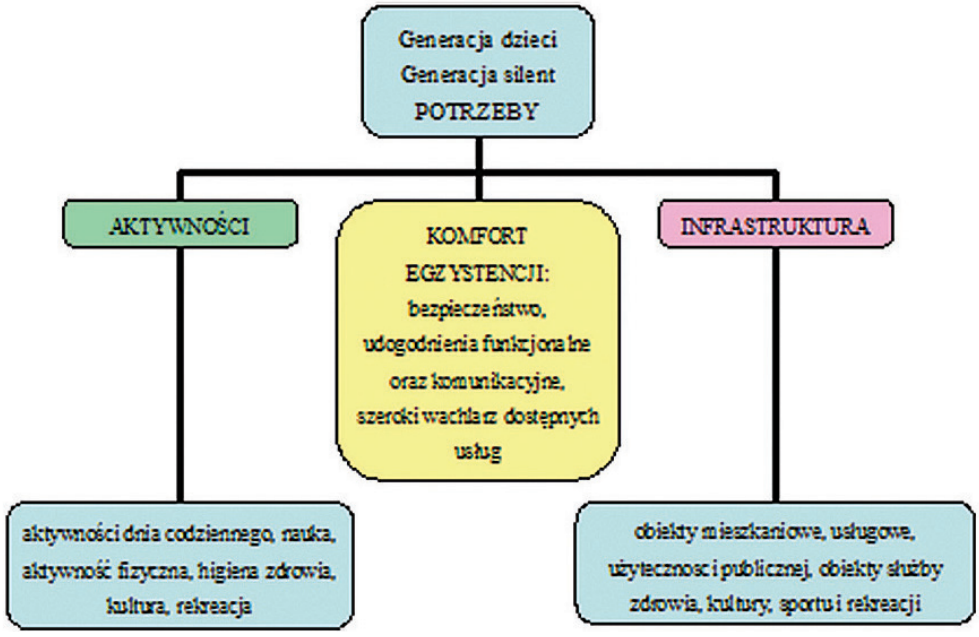


Fig. 1. Summary of the common needs of the children's generation and the silent generation in terms of activities and infrastructure

A significant set of common elements, i.e. the comfort of existence considered in terms of the possibility of living a dignified life in dignified conditions, is contained in universal solutions that are friendly and effective for everyone, regardless of differences in age, culture, level of education or access to technology. Thus, a properly defined concept of comfort of existence will be a factor of mutual motivation and drive. It can also lead to greater understanding and tolerance, as well as effective identification of problems and definition of needs in the context of design and planning related to the composition of the city.

## 4. CLOSED COMPOSITION – COMPONENTS OF A COMPASSIONATE CITY

The favourable coordination of all functions that make up the complex operation of the body will largely be determined by their repeatability.

The characteristic repetitiveness manifested in urban space through periodically intensifying trends, choices of direction and setting of goals serves corrective processes. Good information management and the ability to analyse previously applied solutions also serve this purpose. Implementing new ones in their place promotes development trends and raises operating standards (updated processes). 'When analysing a city, including the multitude of elements that make up this whole, the vast array of diverse relationships connecting the components of the city and connecting these components with their surroundings (the immediate and more distant external zone), as well as the functioning of the city as a human living environment, we have the right, it seems, to treat the city as a system.' [Maslowski 2010: 72]. This type of composition, based on mutual relations, connections between individual zones, and systemic dependencies, seems to be an independent organism in many aspects. In this respect, the composition of individual cities is, in a sense, a closed composition – understood in terms of the structural composition of an artistic work, e.g. a painting, to which nothing can be added or taken away without disturbing the perfection of the arrangement. Similarly, the composition of a city, which encompasses all the elements necessary for its efficient and comfortable functioning, can be compared to an artistic composition, which is an order of components that implies understanding of the content and good reception of the whole.

city ↔ organism ↔ closed composition

Following D. Masłowski's words once again, it can be said that "the city as a separate entity gains something resembling consciousness – which arises and is shaped by local authorities and communities, but also, like the human organism, acquires certain habits, learns appropriate behaviours, but is also exposed to stagnation in the event of poor management by its administrators and the entire community, and even to regression associated with problems and wrong decisions" [Masłowski 2010: 73]. Defining its character, which includes its colour, level of traffic, changes or the leading configuration of functions, shapes the identity of the city. The human organism can be described in a similar way in terms of physical and mental activity, behaviour and style of dress, affiliation with a particular community or group, the realisation of life stages in accordance with a chosen ideology, and, in the case of a city, a development strategy. When talking about the composition of a city, it should be understood as a set of

elements of the urban layout, but also as a set of so-called sympathetic elements, which constitute an additional dimension perceived beyond the physical possibility of experiencing space. These include, for example, a set of colours representing a given city or district (green areas, built-up areas – colours of buildings, etc.), smells that create the right atmosphere, sounds generated by traffic intensity and weather conditions related to the space. Sympathetic elements, perceived by users through their senses, constitute a set of indicators that can draw attention due to their deviation from the accepted standards associated with a given space. Sympathetic elements can stimulate activity that implies appropriate reactions leading to the mobilisation of the body. This, in turn, is related to the body's ability to maintain a stable internal environment despite changing external conditions.

sympathetic elements ↔ components of the urban system ↔ sensory response

When analysing a selected city, where "we breathe the atmosphere of the place, hear the sounds that belong to it, feel how they are reflected by the invisible houses behind us" [Rasmussen 1999: 40], we can accept the perceived state, but also feel it as something foreign to us. This phenomenon can be described as the adaptive reuse of space, which should be understood as the willingness and ability to accept the existing conditions offered by a given space (urban composition) or to take action to adapt a given space (urban composition) to one's own needs or those of the entire community.

adaptive reuse of space ↔ development proces

Reversible adaptation of a place encompasses a range of processes, including revitalisation, revaluation and regeneration. These processes are collectively aimed at implementing remedial and preventive measures. This list includes such activities as the strengthening of adaptive, restorative and integrative capacities in terms of aesthetics, the comfort of use, economic and social situation (revitalisation), the restoration of historical resources to their former appearance and utility value (revaluation), the active rebuilding of ecosystems, the strengthening of the health of natural environments and the adaptation to climate change. Activities undertaken for the benefit of the socio-economic-ecological system are those which are designed to improve conditions for the future of our existence and ourselves. The necessity of such activities is clear in the face of the accelerating degradation of the environment and social and economic systems, just as it is necessary to change patterns of thinking and behaviour. The underlying principle of these activities is to enhance awareness and sensitivity regarding the state of our surrounding reality. This may potentially result in an increased commitment to the restoration and improvement of public spaces and all ecosystems.

## 5. EMPATHIC CITY – HUMANITARIAN/ACCESSIBLE CITY'

Homo sapiens possess the capacity for adaptation to prevailing circumstances, the recognition of necessities and the resolution of issues. It is evident that empathy plays a pivotal role in these processes. The concept of empathy is multifaceted and understood in two primary ways. Firstly, it is perceived as 'the ability to understand the roles played by other people, and as the ability to see social situations and one's own actions from one's own perspective and that of others, and the ability to coordinate these two perspectives simultaneously' [Kliś 2012: 150]. With a particular emphasis on the structural and functional characteristics of the city, a certain analogy with human behaviour becomes apparent. In the context of human relations, empathy facilitates understanding, fosters identification with others, enables the recognition of motivations, and encourages effective dialogue at both the interpersonal and societal levels. This paper posits that by situating empathy as the foundational keystone, it will engender positive conduct and culminate in efficacious resolutions. This construct fosters a depiction of individuals who, guided by empathy, can collaboratively engender the optimal conditions for existence. It is posited that they are able to adopt a mediatorial role, facilitating processes of mitigation, conflict resolution and effective, progressive functioning, both individually and collectively. Such reactions have been shown to occur in instances of direct interpersonal contact, a form of interaction that enables learning, feeling and reacting. This reaction may include positive responses that are conducive to the resolution of difficult issues, disputes and even the counteraction of conflicts.

empathy ↔ reaction ↔ cooperation / action for one's benefit

Thus, within the structure of the city, we can find components similar to empathy, which is classified as a sympathetic component. These are systemic capabilities that enable change, adaptation to the right development strategy, and flexible (soft) systems in the sense of adaptation to the changing conditions and needs of the city. They play an important role in the phenomenon of reversible adaptation of a place, implying progressive activities in the city in relation to the composition – residents and context – in which they live. They are helpful in implementing specific tasks and courses of action, in adapting to newly emerging external requirements. They are also important in the processes of monitoring progress using pre-defined indicators, in the processes of synchronisation and harmonisation of the tools and procedures used. The process of identifying issues that are important to the community and shaping the building infrastructure to support their daily activities – work, study, entertainment, etc. – is the beginning of changes that directly affect

users and the environment. It entails activities that initiate development in the areas of perception, experience, response and action in space in order to improve or change its character, to make it better. These activities, resulting, among other things, from empathy, generate further needs and indicate possible directions for cooperation for the benefit of users and space. The establishment of guidelines pertaining to accessibility is imperative in the creation of an environment that caters to the requirements of all user groups. This is achieved through the definition and reinforcement of established rules, thereby ensuring the accessibility of the environment. Concurrently, the facilitation of transformation is essential in accommodating emerging needs, trends and new tools. This is accomplished through the opening up and paving of the way for the transformation to continue in line with the aforementioned factors. Urban regenerative transformation, as theorised by Jerzy Hausner in his study [Hausner 2023], occurs across multiple levels in a concurrent manner. As well as bio-organic, economic and political regeneration, social regeneration is also a significant component of the overall regeneration process. Indeed, social regeneration is predicated on the notion of empathy, which enables the identification of needs and the opportunities to meet them. The activities that have been initiated (e.g. associations and community actions) contribute to the development of the organisational and structural potential of the city. This, in turn, can serve as an indicator of the direction in which the necessary work should be undertaken. It is evident that grassroots initiatives, stemming from the discernible necessities and indications of individual units, possess the capacity to effect alterations in comprehensive structures within urban areas. This phenomenon is referred to as urban feedback adaptation. The smallest link can be considered a successful building block in the context of urban activities, provided that it identifies a conducive foundation for understanding, acceptance and discussion. This foundation must be supported by tolerance and openness in order to facilitate the emergence of empathetic urban activities. Hausner [2024: 190] asserts that there is an imperative to formulate a 'new concept of thinking about urbanity', which is to strive for the most effective form of organising urban life, particularly in the context of the city as a heritage, which constitutes a rich base in terms of artefacts, experiences and knowledge. As Rewers (n.d.) posits, 'urban space is the subject of interdisciplinary research creating an unlimited number of intertwining perspectives and research levels, because it is segmented by national memory and integrated by transnational imagination.' As Rewers [2005: 208] notes, it is important to emphasise that the potential for change to occur gradually and for this to be attributed to social groups, indicates the following dynamic changes in the urban organism, in which man – an element of identity in the closed composition of the city – is its supreme value.

## 6. CONCLUSIONS

**1. The city as an organism**

The concept of the city as an organism facilitates a more profound comprehension of its intricate structure and functions. This paradigm enables the formulation of more sustainable, well-designed and functional urban spaces.

**2. Rhythm and cyclicality**

A plethora of research has demonstrated that both the human organism and the city operate in rhythms: daily, nightly, weekly, seasonal, and annual. Arguably, the repetitiveness of these rhythms is crucial for harmonious social and spatial development.

**3. The application of empathy in urban design**

A city that is designed with empathy is one that caters to the diverse needs of its inhabitants, thereby facilitating their comprehensive engagement in societal activities. Consequently, the capacity to empathise with the requirements of others is enhanced, which in turn can be reflected in the configuration of urban spaces.

**4. Closed composition**

The city is designed to achieve internal coherence – each of its elements should interact with others in a rhythmic, balanced cycle, responding to the needs of users and the environment.

A city is considered a closed composition when it is in perfect order. Such a city is a structure based on mutual systemic dependencies, whereby each part functions in relation to the whole, and changes in one area must be integrated into the rhythm of the entire system.

**5. Feedback adaptation of place**

The mechanism by which users influence space, and conversely, space influences their behaviour, is referred to as 'feedback adaptation of place'. This concept necessitates an ongoing dialogue between the designer and the community, encompassing both the functional and the emotional/sensory dimensions of the built environment.

**6. A city that is inclusive and regenerative**

The notion of sustainable urban development necessitates the integration of tenets pertaining to inclusivity, regenerativity and adaptability, thereby enabling responses to climate, social and technological transformations. When meticulously conceptualised, infrastructure has the potential to foster intergenerational collaboration and fortify urban identity.

**7. Revitalisation, revaluation and regeneration processes**

The integration of these processes with the concept of the 'city as a living organism' is imperative. This should not only entail the recreation of forms, but also address the social, environmental and functional 'diseases' afflicting the urban fabric.

**8. The city of the future is** conceived as **an empathetic, regenerative and systemically organised entity.** It is designed on the basis of biological, social and

environmental knowledge, incorporating cyclicality, emotionality and a holistic approach to space.

## 7. SUMMARY

This work presents the city as a complex, dynamic system that functions on the basis of rhythmic, interrelated processes and common mechanisms of functioning, in a manner analogous to the human organism. The relationships between areas of activity and identified needs shape their present and future forms in both the city and the living organism. This paper sets out the hypothesis that an analysis of the urban structure can be usefully undertaken through the prism of biological analogy and artistic composition. It argues that such an analysis should focus on aspects such as the rhythm of functioning, regeneration, communication, adaptation and integration of functions in the appropriate order.

The city is presented as a living organism – it is responsive, learning, capable of change. In this paradigm, empathy is shown to play a special role as a factor that binds social and spatial activities together, enabling the design of an accessible, inclusive and humane city. Empathy may also be defined as the capacity of a city to respond to the needs of its inhabitants, functioning as a mechanism that supports the harmonious development of urban space. The concept of an empathetic city entails ensuring the safety and comfort of its residents, while also fostering social integration and environmental regeneration. The repetitive rhythms of daily life and intergenerational relationships, such as those between children and seniors, and their implications for the shape of urban space, play a significant role in the city's functioning.

A comparative approach, when employed in conjunction with an analysis of the rhythms of the functioning of the organism and the city, facilitates a more profound comprehension of the mechanisms that govern urban space. The city, as a closed composition, becomes a reflection of social needs, values and relationships, and that its development is a response to changing external and internal conditions. Furthermore, the city is composed of physical and 'sympathetic' elements, perceived by users sensually and emotionally, and that it is thus a system of interdependent elements, capable of transformation and adaptation.

This article seeks to add to the ongoing discourse on the future of cities as distinct, closed compositions and organisms that respond to the evolving needs and challenges of the modern world. The observational, comparative and emotional methods employed in this study indicate the profound relationship between humans and urban space – a well-conceived composition. Further research in this area has the potential to establish a robust foundation for the development of comprehensive models that inform the planning and design of urban spaces.

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## KOMPOZYCJA ORGANIZMU MIEJSKIEGO: MIASTO EMPATYCZNE – MIASTO INTUICYJNE

### Streszczenie

Celem pracy jest ukazanie struktury miasta postrzeganego jako organizm żywy odpowiadający na celowane potrzeby konkretnych grup pokolenio-wych, oparty na rytmicznych działaniach i tworzący dobrze funkcjonującą kompozycję. Całość dywagacji osadzona została w ramach zastosowanej metody obserwacyjnej, porównawczej, heurystycznej, także na emocjonalnym odbiorze (bezpośredni kontakt i reakcja percepcyjna). Artykuł jest próbą podjęcia dyskusji i nakreślenia problemu złożoności miasta intuicyjnego, empatycznego, w którym zauważyć możemy analogie zarówno do organizmu żywego, jak i do kompozycji zamkniętej w kontekście dzieła artystycznego, co w konsekwencji może przyczynić się do lepszego zrozumienia i definiowania potrzeb oraz procesów rozwojowych współczesnych przestrzeni miejskich.

**Słowa kluczowe:** kompozycja, miasto, organizm żywy, rytm, struktura