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City and Water: The Problem of Trauma in the Process of Developing Urban Resilience

Abstract

Objectives: In the paper, the authors study the socio-cultural, spatial, and functional relationships of city and water in the context of the paradigm shift that is taking place in urban development.

Research Design & Methods: The following qualitative methods are used: field observation, participatory observations, transdisciplinary analyses, and case study.

Findings: The historical development processes and the resultant collective traumas that have developed in Gliwice were analysed. Some substantial links and correlations have been discovered.

Implications / Recommendations: In the sphere of the local cultural background, there are echoes of traumatic events which, to a large extent, have shaped subconscious beliefs and self-defence mechanisms. It is necessary to take this part of reality into consideration while working on city development plans.

Contribution / Value Added: The article illuminates the background and mechanisms of some of the processes shaping the relationship between the city and water. Collective traumas play a significant role in these processes, and the fundamental changes that are key to building urban resilience are strongly dependent on working on it attentively. The authors formulate the concept of a trauma network as a significant element of the urban system.

Keywords: city regeneration, urban resilience, river, blue-green infrastructure, collective trauma

Article classification: research article

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Introduction – cities in need of a change of consciousness

At the material level, cities are a physical manifestation of an urban community's life. As with a living organism, some elements of the city may be in a state of ailing, so that their vitality is perceived as weakened and, as a natural reaction, we want to revitalise them – to heal, revive, restore their performance. The quality of the urban fabric, like that of a living organism, can be perceived through the characteristics of the dysfunctions and illnesses that affect it, both physically and psychologically.

The urban space created by human societies contains elements of processed nature which, in the modernist perspective of the process of space production, is still treated mainly as a resource pool. Such a way of thinking is still surprisingly vital, with its roots firmly ingrained in the biblical “subduing of the Earth”¹, which became the basis of modern civilisation, as Lynn White outlined in his famous text titled “The Historical Roots of Our Ecologic Crisis” (1967). White's article aroused great controversy by attacking one of the key paradigms of Western civilisation. But is this paradigm still defensible? The river – or, more broadly – water is one such urban natural resource, the state of which shows more and more clearly that such an exploitative way of thinking, valuing reality, has already run out. The attitude to the role of nature in the city is gradually evolving. The predictions concerning climate change and its destructive effects, the pace of weakening regenerative capacity, and the destruction of natural ecosystems all make a radical change in the perception of the nature–culture relations as a fundamental issue for survival.

From the point of view of social change agents², an in-depth understanding of how a change of consciousness takes place in urban communities is now becoming a fundamental issue in times of the climate crisis. Experience shows that on the road to creating new ways of taking action, there is mental resistance and a shutting off to the direct experience of reality, which is often the greatest difficulty to overcome. The search for the causes of this resistance, encountered in real situations of participatory action, led the authors of this article to the theory and practice of working with trauma. The preliminary results of our enquiries form the basis for the considerations set out in this text. In this outline, using the example of a river in the city, we would like to look at the dynamics of trauma operating in the urban organism, and to try to describe the situation of the urban system, whose multidimensionality appears to us as a result of the combination of individual and collective traumas. Our reasoning is based on the achievements of several scientific disciplines. As architects-urban designers working for changes in the way decisions are made in cities, we see the need to go beyond the traditional framework of different disciplines of science pertaining to cities (and especially beyond the framework of our own field) towards integrating them. As our attempts to work with specialists in various fields show, reaching out to related scientific disciplines provides an in-depth yet fragmented picture of the reality. Oftentimes, the opinions of experts do not converge, do not complement each other, do not co-create a coherent picture. Specialists are also rarely willing to strive towards a common description of a selected fragment of the reality. This encourages us – representatives of the field which for its basic activity (designing real changes in urban space) needs a coherent, integrated, and deepened picture of the situation – to personally

¹ “God blessed them and said to them, ‘Be fruitful and increase in number; fill the earth and subdue it. Rule over the fish in the sea and the birds in the sky and over every living creature that moves on the ground’” (*Genesis 1:28*, b.d.)

² I.e. people active in their communities (activists, influencers) who, by their actions, initiate and accelerate changes in social attitudes towards important current problems.

explore related fields and make specific use of their achievements. Such actions are often controversial among specialists, but at the current stage of scientific development we do not see a better way to speed up the process of integrating the achievements of different fields. Our attempts to integrate them result in a kind of eclecticism and, of course, significant shortcomings; it is difficult to be a specialist in many fields. Moreover, the language we use is incompatible with the set of meanings adopted in various disciplines, such as the concept of “public space”, the meaning of which is so difficult to agree on for architects and sociologists – and we know it from our own experience – that it only seemingly means the same thing for representatives of both fields.

In the first part of the article, we will look at the process of changing the nature–culture relationship in the urban environment and especially at the radical change that has become one of the foundations of modernity in European culture. The river in the city seems to be a phenomenon extremely suitable for illustrating this process, primarily via its technical-practical, ecological, and cultural symbolic dimension. This first part aims to illuminate the background, the changing cultural landscape, the freshest layer of which can seem, to the average resident of the modern city, like something natural, almost eternal. In fact, however, it is rather an effect of an unusual episode in the relationship between culture and nature. We are looking at a process that we are trying to modify through design, so in the next section we will introduce a systemic perspective, which, in our opinion, is essential to thinking about the city as a whole, including the question of urban resilience. The river is important here in three ways: as a key element of the urban ecosystem, as a symbolic representation of the relationship between culture and nature, and as a spectacular presence of living nature in the urban fabric. The way we see it, what most often blocks opportunities to instigate changes in the attitude of residents to the river – and, more broadly, nature – in the city is the mechanism of emotional entrapment in unhealed

and unresolved traumas³. Traumas in the city are interconnected and multi-layered; we present here a diagnosis based on our research conducted over the course of several years. Our chosen case of the city of Gliwice, Poland, provides us with rich and interesting material, allowing us to look at the complexity of the situation as a kind of a synergy of collective traumas.

Water as the foundation of urban life and culture – modernistic degradation

Water availability has always been one of the key factors in setting up cities. Water, essential for everyday life, was drawn from wells and springs, but rainwater was also used, collected in various types of tanks, which was common especially in Southern Europe. The basic dependence of the quality of life of city dwellers on access to natural water resources in the city or its immediate vicinity was undeniable. Therefore, the location of the city by the river or (in a different way) on the sea coast was much more important in the development of opportunities. In addition to being an inexhaustible water supply for living needs, rivers were transport routes that allowed one to reap the benefits of trade, being as they were a place of acquiring food, a source of energy, but also that which improves defensive values.

In the history of European cities, rivers have been used intensively and widely. Extensive networks of urban canals forming venetian-type structures allowed for an impressive development of craftsmanship, which was the basis of the success of large weaving and cloth-making centres in Western Europe (Sowina, 2009). Until the end of the 19th century, the use of rivers, water supply, and management in cities had been an important element in shaping social relations. Their significance and use changed with the development of civilisation, but water was a constant factor present in the urban landscape. More or less

³ For an elaboration on the development blocked in traumas on the national scale, see: Bielik-Robson, 2016.

extensive networks of canals co-creating the urban space that one can admire today in several European cities (e.g. Amsterdam, Bruges) were a fairly common element of the structure of historical cities. The situation changed significantly at the end of the 19th century.

Lucyna Nyka (2013) draws attention to that moment, explaining that in the 19th century, canals in cities, which were no longer needed for transport and were epidemiologically dangerous, started to be buried on a mass scale. As the researcher notes, an important premise for the removal of watercourses from the space of the cities of that time was the increasingly large-scale urban development activities aimed at straightening out winding, narrow, and medieval streets. Moreover, the specific cultural situation of that time, the opposition of nature to culture – combined with the development of water engineering and urban planning regarded as a scientific activity – caused rivers in their previous understanding to disappear from the field of interest of urban planners. It is worth taking a closer look at that change, as the beliefs and convictions formed at that time still largely determine the current relationship to water in the city.

The turn of the 19th and 20th centuries in the history of Europe, but also of the world, was a groundbreaking moment for many reasons. As historians call it:

Hobsbawm: “[...] every historian is struck by the fact that the revolutionary transformation of the scientific world view in these years forms part of a more general, and dramatic, abandonment of established and often long-accepted values, truths and ways of looking at the world and structuring it conceptually” (1989, p. 256).

Davies: “Europe’s political unease was matched by many of the cultural trends of the *fin de siècle*, which are often subsumed under the omnibus term of Modernism. Modernism involved a series of fundamental breaks with tradition that went far beyond the usual ebb and flow of intellectual fashion. As one critic was to write, ‘The aim of five centuries of European effort is openly abandoned’” (1998, p. 841).

It is difficult to determine exactly what had the most significant impact on the changes in the life of cities and the processes of their multifaceted transformations launched at the beginning of the 20th century. Undoubtedly, scientific and technological achievements were crucial: electrification, unprecedented engineering capabilities, the emerging new mobility, and communication capabilities changing perceptions of space. The discoveries of medicine were also important, and advances in bacteriology were a boon for the movement of hygienists, which was reflected in the demands for urban development. It is likely that Darwin’s theory and entry into the general intellectual circuit of the concept of unpardonable “struggle for being” as “laws of nature” could have become a handy argument for freeing one’s moral conscience from the brutalisation and commercialisation of economic life. The shape of economic relations was also influenced by increasingly fierce competition for the last, uncolonialised lands and the birth of the global world. Perhaps, however, the most significant changes were brought about by the development of psychology, mainly Freudian psychoanalysis. Freud’s concepts, alongside the development of biology – especially the theory of evolution, which put man in line with animals – was a Copernican revolution in human self-perception. The scientific questioning of its subjectivity and its causality – the essence of urban culture – seems to be the biggest blow to traditional European urban communities⁴.

With the development of modern capitalism at the turn of the 19th and 20th centuries, economic rationale gradually began to dominate all other values, from a means to an end – in the spirit of Protestant ethics and Weber – and became an end in and of itself. The effects of this process of changing the understanding of rationality – harnessing it to increase profit for the sheer sake of making profit itself – were initially mainly

⁴ A detailed analysis of the process of this change in European culture is carried out by Agata Bielik-Robson (1997, p. 72 and beyond).

social, becoming a subsoil for the lush development of socialist ideas. The natural world remained an inexhaustible reservoir of raw materials and goods for exploitation. It was not unfounded; in view of the completely different scale and capabilities of civilisation at the time, human actions did not pose a threat to the planetary ecosystem.

The progressive dominance of “rationality” – understood in the spirit of Darwinian evolution (in terms of the primacy of effectiveness in competing over other qualities) – economics, technical utility, functionality, and efficiency has, over the decades, led to a widespread belief in its naturalness, in broad discourse granting the principles of liberal economics the unjustified status of universal science.

“This is an example of naturalising processes that are political or social. This naturalisation consists in the fact that what is de facto within the reach of human will or interference is made part of processes of a fatalistic nature, equal to natural processes over which man has no influence (storms, floods, earthquakes)” (Szahaj, 2014, pp. 95–96). Historical accounts make it possible to see that modernisation brought, in addition to indisputable scientific and technological development, a heavy load on a set of severe collective traumas that have had an inhibitory effect on human beings’ ability⁵ to feel a connection with nature. It was not until the middle of the 20th century that the development of ecology, especially deeper ecology, drew attention to this aspect of modernisation. However, due to its focusing on the destruction and suffering caused by humans, whilst ignoring the suffering experienced by people, the discourse of ecology has a limited potential to change this situation.

How did the cultural change of the 19th century and the further development of modernism affect cities and, in particular, the water situation in the city? The nascent modern worldview has brought new cognitive perspectives. Scientific urban

theories have emerged, most often based on new scientific findings and ones that shed new light on, e.g., health issues and the impact of external conditions on the functioning of organisms. In particular, hygiene has become a basis and a leit-motif in scientific urban concepts. European health congresses and exhibitions presented urban problems as the most urgent ones to resolve. Symptomatically, the first associations of urban planners appeared at hygienic associations (Czyżewski, 2009). In the most famous and detailed concept of the time – namely Ebenezer Howard’s Garden City – there is an interesting thread about water. As Adam Czyżewski (2009) notes, two versions of the Howard plan – that from 1898 and that from 1902 – differ with regard to the presence/absence of iris fields and water channel networks, which Howard had initially arranged in his exposition as a thoughtful source both for generating electricity and providing a pleasant aesthetic experience by highlighting cascades. In his extremely interesting study – and following the development of the Garden City Movement against the background of the cultural changes of the era – Czyżewski points to Howard’s utopian, circular, metabolic idea (in some way representative of the spirit of that time), which, after all, lost to the pragmatic principle of growth. The concepts referred to by Czyżewski – namely extensive discussions on the disposal of urban pollutants (mainly faeces) with the ease of a neophyte, through the issues of dealing with corpses – go into eugenic ideas, revealing, in an alarming combination of logic and consequences, the dark side of rationalism and intentions. At the same time, however, the economic processes of the rapidly globalising world gradually washed out of the Weberian *wertrationalitat* values other than the purely mercantile⁶.

⁵ For an elaboration on the deep-rooted effects of the trauma of industrialisation, see Obschonka et al., 2018.

⁶ Numerous concepts and real attempts to neutralise and at the same time use urban sanitation as a fertiliser have failed due to the economic unprofitability of these methods in view of the proliferation of water-flush toilets and the mass import into Europe of *guano* from South America (Czyżewski, 2009, p. 67).

Rationality subordinated to hygiene rules, the economic process, and new technical possibilities can all be clearly seen in all the concepts of the city ideal from the turn of the centuries. The urban concepts developed by Garnier, Soria, Milutin, and Henard took up the challenge of reinventing the city, according to revised knowledge of the world and man, adapting the layout to new needs, requirements, but also new opportunities related to the development of technology and industry. An important element of these concepts were green areas, considered an essential component of the urban landscape for a good quality of life. Contact with nature and the possibility of resting among trees appeared in different ways as one of the key elements of these plans.

Interestingly, water was treated slightly differently in the said concepts: it was not, as one might assume, part of soothing, idyllic parks. In Garnier's plan of the Cite Industrielle, the river appears in the immediate vicinity of the city, but its interactions with the city are significant. The hydroelectric power plant, waste treatment site, industrial plants, slaughterhouses, and freight railway station are all places of contact and integration of the river into the urban domain. It was as if its strength had had to be harnessed by an even greater force of civilisation, and its main features were reduced to power (often destructive) but also exploitable as e.g. the river's ability to remove that which is unnecessary and unclean⁷.

Therefore, the rationality of the beginning of the 20th century – the times of unlimited production of industrial waste and pollution of rivers – encouraged treating rivers in the city either as wastewater (and closed into underground canals to be removed from the field of expanding cities), or as transport routes for industry. This approach thus returned them to the peripheries, developed in industrial zones. This way, many cities

turned their back on rivers – the canals with dirty (unhygienic) water were infilled, the watercourses pushed underground disappeared from the public space. Today, the majority of European inhabitants cannot even imagine the level of significant changes in terms of the presence of water structures that Europe underwent in the last century.

Nature, culture, and a change of consciousness

Water is one of the foundations of the ecosystem, i.e. every biological form of life on Earth depends on its availability and quality. The apparent abundance of water in most developed countries did not induce people to pay much attention to the issue of water resources, which led to a significant pollution of inland waters as well as seas and oceans. As has been mentioned, with rapid technological developments, rivers in cities have been reduced to the transporting and cleaning roles. Another problem is the degradation of many aquatic ecosystems, often to a dramatic extent. Water is just one example of the critical condition of the planetary ecosystem. Even more worrying signs of environmental degradation through increasing 'anthropo-pressure' concern a declining biodiversity, the disturbance of biochemical cycles of nitrogen and phosphorus circulation, and climate change (Rockström et al., 2009). It is becoming increasingly clear that the relationship between culture and nature requires radical reformulating. As the awareness of the dependencies between the elements of the global ecosystem and the possible catastrophic effects of Earth's processes is growing, strengthening urban resilience is becoming an important part of the policies of many cities around the world.

Resilience, or the ability of the system to survive

Resilience is a concept whose genesis dates back to the 1970s and involves the study of ecological systems and their ability to react and adapt to

⁷ A rich set of symbolic meanings related to water (e.g. purification, renewal, power) fits perfectly with the modernist location and role of the river in the city plan.

change (Holling, 1973). Quite rapidly, it was introduced into psychology, where it determines the ability to cope in crisis situations as well as the ability to quickly recover balance after traumatic events. For several years, the concept of resilience, as part of systems thinking, has been used in research on the functioning as well as in planning of the development of cities. In recent years⁸, with the increasing uncertainty an unstable situation in both socio-economic and environmental dimensions, urban resilience has become particularly important in current practice, mainly within the scope of risk management (Coaffee & Lee, 2016).

The concept of resilience is rooted in a systemic understanding of the reality. In this view – which now seems to be the most promising research prospect to embrace the complexity of the situation of the modern city – one can see it

⁸ The literature on the resilience of ecological and socio-ecological systems is already very broad and also concerns the theoretical foundation for implementing this approach in the practice of urban policy. Here, one can find different approaches and differently distributed emphases. A large part of the material is devoted to increasing resilience (in terms of sustainability and risk management) – e.g. Coaffee and Lee (2016). Other approaches try to capture the more general, holistic conditions of urban system resilience, determined by the structure and characteristics of its key elements. One interesting development in this trend is the development of the Stockholm Resilience Centre (see Biggs et al., 2015). The authors are attempting to synthesise the existing body of research by narrowing the framing of resistance to the issue of the preservation of ecosystem services. Such a limitation to a fundamental yet gripping scope allowed the formulation of seven principles of resiliency. Three of them – namely ‘maintain diversity and redundancy’, ‘manage connectivity’ and ‘manage slow variables and feedbacks’ – address the specifics of a complex adaptive system. The other principles – namely ‘foster complex adaptive systems thinking, ‘encourage learning’, ‘broaden participation’, and ‘promote polycentric governance systems’ – relate to efforts towards mental change. The authors repeatedly point out that – when too strong – the characteristics of the system’s resistance can become counter-effective and lead to excessive stiffness as well as the loss of the possibility to change (the so-called rigidity trap).

as an open socio-ecological system, characterised by considerable complexity and adaptability (Complex Adaptive System)⁹. Resilience here is a property, the ability of the system to cope with sudden changes, both “external” and caused by tensions within¹⁰ the system. The high level of resistance allows the urban system not only to quickly recover from the disturbed balance, but, above all, to adapt and transform by adjusting to new circumstances and finding opportunities for development in them. Urban practice is currently dominated by the “rebalancing” approach, but the full use of the systems thinking seems to be the “evolutionary” approach, which is slowly gaining attention from planners (Coaffee & Lee, 2016). The latter approach is aimed at navigating the process of change rather than strengthening durability and recovery after possible destruction.

Resilience in natural systems develops through the evolutionary pathway of slow expansion of connections, complexity, and redundancy. In socio-ecological systems such as the city, there is, on the one hand, a similar evolutionary process¹¹. On the other hand, through human capacity to transcend biological constraints, the resilience of such systems can be increased through conscious, deliberate, and community-based actions in different spheres. For our considerations, it is important to conclude that resilience (whether psychologically understood in relation to the human individual or treated as a property of the system which the city is) is intertwined with the mechanisms of trauma. This is what Rachel Yehuda, a leading trauma

⁹ The systemic approach considered in this text is the development of a system approach such as ‘black box’, a ‘metabolic machine’, from the late 1960s and the early 1970s. The current approach aims at a coherent representation of the urban reality as a socio-ecological, open system characterised by heterogeneity and interscalar dependencies (see: Cadenasso et al., 2013).

¹⁰ Since this discussion concerns an open system, the concept of the outside and within the system refers to arbitrary boundaries that separate – largely artificially – a fragment of the socio-ecological reality.

¹¹ See, e.g., Shane, 2013.

researcher, claims: “[...] some have argued that the diagnosis of PTSD is too limiting, and some have argued that it’s too expansive, but one thing is for certain — post-traumatic stress disorder is one kind of response to trauma, and there are probably many others, including resilience” (2015). Resilience can increase as a result of a trauma, but in order for this to happen, trauma requires a lot of work. In the case of untreated traumas, the resilience of the system might even decrease. Resources (both material and mental, cultural) are then used mainly for its mechanisms: reproducing established, unconscious patterns of action or comprehending reality. This effectively blocks the flexibility of reaction, openness to new situations, and creativity, all of which constitute the basis of resilience.

The systemic view, revealing as a coherent whole nature and culture/civilisation (socio-ecological system), provides an opportunity to meaningfully change the destructive consumerist approach to reality by means of exploiting the key motivation of the individual benefit for it. What is the crucial and, at the same time, the most difficult element of this change is the necessity to broaden the awareness and the understanding of ourselves, to change the perspective from ‘myself-in-a-world-that-is-resource’ to ‘myself-as-part-of-the-world’. This transition seems possible only by recognising and directly experiencing the different links and interdependencies that bind the social world to the ecosystem. An indirect step, which is already taking place, is the identification of the urban ecosystem as part of the urban economy; the term ‘blue-green infrastructure’ is increasingly found in urban development documents. While remaining in the modernist paradigm of using nature for human benefits¹², this approach to urban ecosystems allows for a gradual increase in awareness of their value, role, and importance for the lives of people inhabiting a city. However, it is only through personal commitment to urban ecosystems on the part of both policy makers and other actors

in urban life that significant change will occur. Such commitment can be the result of direct experience, i.e. daily communion with nature co-creating the urban milieu, not only in the sphere of aesthetics but in the very essence of the phenomenon of urban life. To experience nature is to feel its changeability, its connections, its dependencies, the coherence of the biosphere of which we are a part. The river is a great medium here; renaturalisation, i.e. the introduction of the non-human actors (plants, animals) into the urban environment, can make the river an “agent of change”. What is known about ecological and social systems indicates that this is a desirable direction, but for some reason it is still dominated in many places by a technical approach coupled with not acknowledging the negative effects of this immoderate and exploitative attitude.

Trauma as a possible cause of resistance

Trauma, in psychological terms, is a long-term psychosomatic reaction arising when a sudden event that exceeds a person’s emotional capacity – or a long-lasting or repeated difficult situation – triggers specific defence mechanisms¹³. These mechanisms work by, amongst other things, partially or completely cutting people off from experiencing the situation, which takes place through dissociation, denial, situational amnesia, which allows one to mentally (and often physically) survive, but in severe cases it can lead to long-term, limiting effects in the form of perpetuating behavioural changes, reducing consciousness, or splitting of normally integrated mental functions¹⁴.

¹³ Literature on the study of trauma, the process of getting out of it, psychotherapeutic methods, and the adaptation of trauma theory in related fields of knowledge is extremely rich. Key authors of these studies and publications include – apart from Judith Herman and Rachel Yehuda – also Bessel van der Kolk, Peter Levin, and Stephen Porges, to name but few.

¹⁴ “Traumatic events produce profound and lasting changes in physiological arousal, emotion, cognition, and memory. Moreover, traumatic events may sever these normally integrated functions from one another. The traumatized person may experience intense emotion

¹² See, e.g., Nassauer, 2012.

From the point of view of our considerations herein, the socio-cultural dimension of trauma is also important, especially the moment when reactions repressed through natural defence mechanisms come to light¹⁵. As Judith Herman writes: “Clinicians know this privileged moment of insight, when repressed ideas, feelings and memories surface into consciousness. These moments occur in the history of societies as well as in the history of individuals” (2015, p. 2). Two things can then happen: (i) collectively recognised trauma can be healed in the process of – as Ciano Aydin (2017) writes – active forgetting, which in its essence is its integration into history, which takes place through recognition, story-telling and later transfer to the symbolic sphere and ritualising commemoration if necessary; (ii) the trauma, in spite of its breaking through to consciousness, may not be socially recognised, because there will be no favourable socio-political situation. In the latter case, as Herman shows when analysing more than a hundred years of research on trauma, the process of its healing will not start, but the mechanism of collective denial, and silencing, will begin. Traumatizing actions and automatic reactions to them will be reproduced indefinitely in this and subsequent generations, having a particularly negative impact on resilience, because “traumatized people feel and act as though their nervous systems have been disconnected from the present” (Herman, 2015, p. 35).

but without clear memory of the event, or may remember everything in detail but without emotion. She may find herself in a constant state of vigilance and irritability without knowing why. Traumatic symptoms have a tendency to become disconnected from their source and to take on a life of their own” (Herman, 2015, p. 34).

¹⁵ Here the authors of this article assume that cultural trauma, as presented in the classic work titled *Cultural Trauma and Collective Identity* (Alexander, 2004) is, in practice, a certain stage of healing the trauma, which we understand as a psychological, cultural, and social continuum. Here we come more closely to the account presented in the *Interdisciplinary Handbook of Trauma and Culture* (Ataria et al., 2016).

The psychologically limiting mechanisms of unhealed trauma, both individual and collective, intertwine in acts of communication, creating interconnected, multilayered networks of culturally established beliefs and meanings, as well as social relations of dependence – and often domination – from which there is no escape. It seems that at this moment in history, each new trauma is interrelated with previous traumas, i.e. it directly or indirectly results from them. Owing to epigenetics, it is already known that trauma can be transmitted from generation to generation at the biological level through a biochemical influence on the way the body reads the information contained in DNA (Yehuda & Lehrner, 2018), and not exclusively through cultural contents or direct transmission by behaviour. Recognising the working of a network of collectively unprocessed, unhealed traumas operating at the subconscious level in the urban system is possible by observing the trauma-specific effects (here we focus on the selected ones):

- the **emotional** effect – inadequate to situations (“hysterical”), exaggerated reactions in situations of difficult decisions (over-reactivity, foreboding or anaesthesia, indifference, lack of response)¹⁶, or a type of dementia when making

¹⁶ For instance, during the development of the concept of modernisation of the Niepodległości Square (the so-called ‘Plenty’ – the site is a kind of small park) in Ruda Śląska Godula – in the course of a participatory meeting – large and difficult to control emotions were caused by the fear that on the occasion of modernisation old trees will be cut down (such a possibility had not even been considered and we had informed about it from the beginning). The residents found it difficult to focus on other issues, as they had already experienced the traumatic felling of beautiful old trees on the market a few years earlier. It seems that there are traumas associated with the relationship of domination; the inhabitants have nothing to say, they are notoriously surprised in many cities in that the trees, forming the areas of rest and contact with nature appreciated by all – are cut down without emotion (emotional anaesthesia of decision-makers). The decision to cut out, in turn, has the character (as we learned in different cities) of the denunciations of residents fearing that old trees are life-threatening (quote “during the storm they fly like matches”), i.e. there

decisions in specific ranges¹⁷; compulsive repetition of actions that have repeatedly appeared to be based on erroneous, anxiety-exaggerated premises, with opposite effects to the desired ones;

- the **mental** effect – (often city-specific) “lack of logic”, characteristic simulation of certain actions, inconsistencies of the declarative layer with the operational layer (e.g. an urban narrative going against the facts);
- the **social** effect in the form of disturbed relations between local authorities and residents (domination instead of democracy);
- the **ecosystem** effect as a relationship of dominance over the natural elements of the ecosystem;
- the **cultural** effect as a specific attitude to the historic urban fabric, e.g. disrespectful (because the new is better) or hostile (because it is foreign).

By culturally processing successively uncovered networks of traumatic meanings through revealing causes, interpreting cultural contents, naming, and building a new narrative, we can free ourselves step by step as individuals and social groups from successive layers of individual and collective trauma, and establish a healthy relationship with reality and with each other. In this sense, one can see the reception of the books by Jan Sowa (2011) and Andrzej Leder (2014) as one of the most important and therapeutically opening experiences of recent years. The works include *Fantomowe ciało króla* and *Prześlona rewolucja*, respectively; they quickly introduced into the discourse the wording

are probably some old fears here (there are currently not many deaths due to the falling of trees).

¹⁷ For instance, the problem of local authorities assimilating information that container settlements or the placement of people with the status of “social welfare ward” in specific ghettos on the outskirts of the city does not solve the problem of poverty, but actually exacerbates it. There seems to be a trauma concerning the origin or experience of poverty – to move the poor beyond the horizon, to quickly deal with the issues, to avoid having contact with poverty – which could trigger hard experiences inherited from previous generations.

allowing one to describe the situation still present in our socio-political system in the context of their origin (e.g. the serfdom-style of relations in most institutions in Poland). Appropriate naming, as we already know from Freud, is a necessary first step in the process of recovering from trauma, especially one inherited from previous generations¹⁸.

Trauma and the life of the city

Working to change the relationship of individuals and the urban community to the river – or more broadly – flowing water, also as rain, through the city, seems like a desirable pro-development action. In our opinion, however, opening up to the current way of understanding the high value of water in the city requires the necessity to first have worked through a lot of trauma, which is just beginning to manifest itself in urban discourses, which, by realising the kind of suffering that is behind it, can help to trigger the healing process.

In order to present our observations and thoughts, we have chosen the city in which we live and where we try to work towards its development, namely the city of Gliwice. For more than twenty years, we have been involved in various ways in activities related to urban space, and in significant investments changing its character. Some of our activities also include research¹⁹. We take similar actions in other cities of the region, which gives us room for comparison in terms of ways, capabilities, and characteristic traits of the operation of different urban organisms.

As part of observing urban processes from the position of a resident, we have the opportunity to look at the specific situation of social relations

¹⁸ Working through the social traumas that define the quality of our personal lives requires searching for and developing a language that will allow us to call that which hurts us in a way closest to where our pain comes from. Otherwise, to express pain, the causes of which we are unable to find in memory, we will compulsively and constantly use the same empty platitudes which do not have the strength to release us from trauma (cf. *Rozmowa z prof. Andrzejem Lederem*, 2017).

¹⁹ See: Janik, 2016; Bugno-Janik & Janik, 2012.

in Gliwice. The grassroots activity of the inhabitants, the awakening public sphere – in which signs of cultural trauma and possible ways of working through them begin to emerge – are effectively suppressed or marginalised by the city authorities, while at the same time the urban fabric is constantly treated in a way that expresses outdated modernist values with an astonishing lack of respect for a large part of the city's cultural heritage.

The city authorities, supported by a “silent majority”²⁰ of residents, act in the belief of the extremely progressive nature of the vision of the city. However, the subsequent “successes of the city”, publicised in many ways, reveal mental blocks resulting in the adoption of anachronistic determinants of prosperity.

Evident historical situations, though still not revealed in the discourse – e.g. re- or ex-patriation, cultural uprooting, war, living “in the house of the enemy” – are absent, repressed, often denied, and “covered up” by the “forward-looking narrative”. This narrative, constructed in the post-war period, probably brought relief to the trauma of resettlement by means of directing attention to the work of establishing a “new beginning” and “creating a future”, by pushing aside difficult emotions related to the past (Janik, 2016). However, clinging tightly to the “future-building narrative” becomes, paradoxically, a significant obstacle to development, blocking the process of overcoming trauma; or, as Frank Seeburger (2016) puts it, it hinders the opening up to trauma which would allow the integration into the (individual and collective) consciousness; in other words, it prevents the “active forgetting process” (Aydin, 2017, pp. 125–137).

The stubborn repetition of the narrative of the “archaically” understood future keeps Gliwice's urban discourse in conceptual terms anchored deep into the 20th century. In a sense, declarative content – the city's official promotional slogan, namely “The future is here” – is a kind

²⁰ This is what the local elections show, in which the same team has won since 1993.

of magic spell that effectively obscures the fact that the concept of modernity to which it refers becomes an oxymoron; a modernity that is unconventional, transgressive, present (invoked), and absent (because it belongs to the future and in a mental sense has not yet occurred) at the same time. This flickering of meaning quite effectively protects the entire propaganda structure from falsification and at the same time, on closer inspection, reveals the hidden traumas, most likely the trauma of backwardness, resulting, among other things, from the contact of repatriates from rural areas in the east of the pre-war Poland with the civilisation achievements left by the Germans in Gliwice. The trauma of “living in the enemy's house” also seems important here; on the one hand, it resulted in ‘de-germanising’ and ‘re-polonising’ actions, and on the other hand, it deprived residents (the vast majority of whom were resettled people) of the sense of laying down roots and a good functioning of the urban community. In this context, an “escape to the future” appears as a strategy of denial, a defensive mechanism that distracts one from a story which is hard-to-work-on²¹.

Since the end of the 20th century, many European cities and world rivers have been experiencing their renaissance. They are rediscovered as an extremely attractive element of urban public spaces, a great basis for recreational areas, but also as an opportunity to revitalise waterfront areas and radically change water management. Projects such as the IBA Emscher Park, the Brillancourt Park on the outskirts of Paris, and the Gowanus Canal Sponge Park are examples of developing – on the basis of a change in approach to the river and its biological reconstruction – new forms of cooperation and participation, or co-design.

Gliwice, from its very beginnings has been associated with water. The name itself echoes

²¹ Of obvious importance here is also the national scale (similar situations have repeated in many cities of the ‘Recovered Lands’ [Pol. ‘Ziemie Odzyskane’]) as well as the political dimension of systemic actions. Here, however, the authors of this article focus on the local specificity of Gliwice.

the Slavic word ‘*gliw*’, which denotes the wet land. The Kłodnica river, flowing through the city centre, initially with backwaters and a branch of Wilde Klodnitz, powered by several streams (in the centre is Ostropka and Doa) was used to power the Kłodnicki Canal connecting the city (and running further to Zabrze) with the Oder, which was extremely important during the rapid industrialisation of the cities of Upper Silesia. In the centre of Gliwice, there was a city port which – together with the canal running through the city parallel to the river and the Ostropka stream flowing in the axis of Dworcowa Street – made water a significant element of the urban landscape. As in other European cities, the gradual displacement of the river from the city began in the early 20th century. Even before World War II, the bed of the Kłodnica river was regulated, Wild Kłodnica branch was covered and Ostropka was covered, and is now part of the rainwater sewer network. The city port and canal were liquidated (the last fragments were infilled in the middle of the 20th century). A section of the metropolitan highway, the Drogowa Trasa Średnicowa, was planned (in the 1950s) and implemented a few years ago in lieu of the old canal. In the general consciousness of the city’s inhabitants, today the Kłodnica river represents effluent (not unjustifiably), with which contact should be avoided. This is confirmed by the development of the river’s surroundings. A few sections of walking paths running along the crest of the embankment are an exception to the generally backward-to-river inverted urban functions. Since the Kłodnica no longer performs any economic function, it occupies a rather marginal place in the consciousness of the inhabitants, although it is sometimes referred to in the pre-modern or even archaic poetics, such as “Gród nad Kłodnicą” (“Borough on Kłodnica River”). Older residents’ stories about “once fishing in Kłodnica” or “when I was a student (1950s), we used to go on dates on the Kłodnica River” do not resonate in the social consciousness anymore. One is surprised to see views of the picturesque river and city canals in photographs taken a hundred years ago.

Unexpectedly, in recent years, the issue of water in Gliwice has become very topical and arouses lively emotions. The impetus for heated and extended protests came from the plans to build flood prevention reservoirs on the Ostropka stream, overwhelming the suburban landscape, and especially the large reservoir on its tributary – the small Doa creek. The investments, planned with a modernist flair, and – from the point of view of recent analyses by hydrologists – significant exaggeration, have become a result of unprecedented grassroots activity.

Social protests erupted in Gliwice (more than 5,000 signatures via Internet and 2,000 via a paper petition to abandon construction) and revealed an extent of social activity which had been unknown in the post-war history of the city.

The main reason for the protests, as noticed by the city authorities at first in public discourse, was the threat to “individual interests”, rooted in modernist values: the group of most actively protesting residents are those who live in the immediate vicinity of the areas dedicated to retention tanks, and who use them as recreational places. They clearly feel that this will cause a decline in the quality of their place of living. Paradoxically, therefore, the modernist belief in the importance of recreational places surrounded by greenery for the quality of life in the city became the cause of – from the perspective of the city authorities – the anti-modernist revolt. In the first phase of the protest, when looking for arguments against city authorities’ plans, the residents reach the acquis of post-modern solutions, in which, where possible, the riverbed is re-naturalised and flood-control solutions are an extension of the natural retention, i.e. the retention of rainwater in underground or small above-ground reservoirs and rain gardens, increasing the permeability of the pavement and increasing the number of plants and tanks not encased in concrete; understanding and cooperating with nature and not subduing it to the mankind.

However, the arguments and actions developed in the post-modern vision of the world do not

reach the decision-makers' mentality, which seem to be overwhelmed by the "fog of irrationality" expressed in the repetitive slogans about saving the city from flooding, without noticing either other possibilities for achieving this goal or other threats exacerbated by technocratic solutions. The information that the inhabitants are not against flood protections but against the way in which they are implemented is not able to reach the minds of those representing the city authorities, as can be seen in the repeated statements of the mayor²². Symptoms of trauma are different for both sides of this conflict – the city inhabitants react strongly (sometimes hysterically) at the emotional level, which does not prevent them from thinking rationally in the direction of seeking alternative solutions. The city authorities, on the other hand, are most often emotionally numb, but also over-reactive (they feel attacked), but the main problem is one of blockage at the mental level; there is no sign of the possibility of discussing an alternative solution. The problem of blocked communication at the mental level is aggravated by the distorted relations between the local authorities and the inhabitants, which is one of domination and control rather than cooperation and participation. Therefore, the second stage of the inhabitants' actions takes another form, appropriate to the identified situation, namely merit-based, expert criticism of the city authorities' actions. The inhabitants realise that the authorities – despite declaring a modernist vision of the world – *de facto* only imitate this way of thinking. Thus, residents commission independent expertise from hydrologists, who show errors in the design of the tank (the oversizing of the tank is significant).

²² A fragment of the text from the leaflet informing about the results of the petition against the construction of the tank: "We do not accept that Wilcze Doły [the name of the site – M. J.] should fall victim to the construction of a dry retention reservoir according to a scaled-up design based on outdated data. We demand reliable public consultations to work out a reasonable alternative to this project – with respect for nature and the opinion of the citizens of the city of Gliwice".

Will the next steps result in a process of healing the trauma? It is not known yet. However, it seems that diagnosing the extent to which symptoms of trauma occur can help them take effective action. It is known from the study of individual trauma: when symptoms are revealed, the case is very delicate and requires a professional therapeutic approach. First of all, the situation demands the awareness of a traumatised person that their symptoms qualify for the necessary treatment, before an expected change in attitude (a healthy approach) to the problem can be expected. In the case of collective trauma, where the disruption of relations (domination instead of equality²³) is an additional complication, the influence of the inhabitants on the behaviour of the representation of the local authorities is marginal; it becomes impossible to make the other side of the conflict aware of the need to change their approach. At this point, the solution seems to be a personal change in the position of authority. Such attempts (outside the normal election procedure) have already been made twice in recent years, but without success. However, the referendums, organised as a result of great efforts of active citizens, did not bring the expected result due to the legal construction invalidating the referendum because of insufficient participation. Many residents do not feel the need to get involved, which, in our opinion, is the most widespread symptom of trauma resulting from relations of domination, the source of which is still to be

²³ Residents are treated to a mock consultation and are not allowed to have their say; surveys are carried out with questions structured in such a way that negative answers can only be seen as the result of aversion (a symptom of trauma: the inability to imagine other solutions); there is no room for the expression of substantive opinions; and residents are not allowed to have their say during city council meetings, which is disputed on legal grounds. However, the activities of the residents do have an impact and two projects are prepared to "decorate" the completed reservoir with greenery, which are presented as alternatives to be voted on, while the size of the reservoir and the way it was created are questioned on their merits.

found in the period of serfdom²⁴. The residents who did vote were overwhelmingly in support of dismissing the mayor.

The observations of the situation in Gliwice revealed a network of related traumas, the main threads of which are presented below (albeit the authors acknowledge that this is a simplified depiction)²⁵:

- **the trauma of centuries of violent relations of domination** is multi-faceted and requires closer research, but already on the basis of primary observation it can be noticed that the actions of the authorities, which ignore the opinions of the inhabitants, are consistent with Leder's diagnosis (2014); their origins go back to the times of serfdom, and some of them are certainly the result of unprocessed relations of domination in the previous political system. Since the beginning of the protests with regard to the retention reservoirs, but also in other similar situations, the city authorities have placed themselves in a position of domination, disregarding the opinions of residents, trying as much as possible to avoid direct meetings with residents and at most feigning public consultation (controlling speech, ignoring critical statements, stigmatising those considered to be "agitators" and "freaks"). In situations of high and continuous pressure from residents,

²⁴ It should be mentioned here that the partly low turnout was probably the result of the defensive tactics of the circles supporting the authorities, implemented through the campaign called "I Am Not Going to Their Referendum".

²⁵ Urban traumas, as we chose to define them, are part of a continuum of trauma that manifests itself in the city. Among them are mass traumas (cf. Alexander, 2004), i.e. traumas that affect many people, activate in different situations synchronously, and yet do not form a cultural trauma, because they have not revealed themselves in the public discourse, lacking an agreed interpretation. From a psychological perspective, however, it is precisely the "implicitness" of the trauma – the repression – that determines its destructive effect; as already Freud had shown, revealing (telling) the trauma is already the first stage in the process of recovering from it.

city representatives use various domination strategies that reveal their fear of direct contact, probably perceived as a confrontation. Unjustified anxiety, avoiding contact, and striving to control the situation are all clinical symptoms of trauma. In the city, this trauma is most acute from the point of view of both active citizens (agents of change) and, more broadly, from the point of view of urban resilience, because it blocks the development of a healthy, democratic urban community, in which participation and activity of residents plays a fundamental role (e.g. by launching group creativity, solidarity, cooperation), and local authorities play a supporting role. Situations stemming from the trauma of domination also have a re-traumatising effect: almost every personal or group contact with the local authority on a controversial issue is an experience of humiliation.

- **the trauma of an unintegrated systemic change** manifests in the inability to change the relationship between the local power and the residents. Despite the regulations, there is still a division: we (the residents) versus they (officials, councillors, city authorities), combined with a sense of powerlessness of the inhabitants towards power. This is reflected in the pretence of consultation while decisions are taken outside the knowledge of residents.
- **the trauma of uprooting** affects residents (or their families) who were resettled in the city after World War II. The trauma of exile and of having to leave their place caused many of the "repatriates" to emotionally "not move" to Gliwice (Zagajewski, 1991), treating this city as only a temporary residence. The rooting was hampered by the cultural strangeness of the "enemy house", as well as the socio-political system, on the one hand minimising urban self-government, while on the other strengthening the unified national identity at the expense of the multicultural mix (Kubit, 2010) that could constitute the leaven of the urban community (Janik, 2016). As a re-

sult, a very strong incentive is needed for a NIMBY-type reaction²⁶ to appear, because the inhabitants do not feel connected to the city (in terms of the sense of being co-hosts). The process of recovering from this trauma requires a personal commitment to discovering the history of the city; being familiar with its history allows one to feel a connection to the place and to appreciate its value.

- **the trauma of cultural alienation** – the indigenous inhabitants (Silesians), remaining after the process of post-war population exchange, experienced the trauma of nationality verification, and later, in the process of the “re-polonisation” of the so-called ‘Reclaimed Lands’ [Pol. ‘*Ziemia Odzyskane*’], they constituted a group treated as culturally alien. The Silesian identity, when viewed superficially and through a simple polarisation, was glued together with the German identity, thus treated with suspicion, which resulted in its discrimination (Tracz, 2004) and suppression. In recent years, the situation has changed somewhat, but – as numerous examples show – the effects of this trauma are still present in Gliwice. Typical trauma-related symptoms blocking full participation in public life – shame, sense of inadequacy, fear of revealing socially undesirable elements of identity (cultural inadequacy) – cause the practice of distancing oneself from the discourse and the absence of this group of inhabitants in the “city consciousness”. This also makes it impossible for immigrant residents to use the “agency” of native inhabitants in the process of establishing an emotional relationship with the fabric and history of the city.
- **the trauma of modernisation** is about the disconnection from emotions and nature,

²⁶ NIMBY (not-in-my-backyard) – a reaction of protest against changes in the immediate environment which reduce the quality of life. In a traumatised community, the way the NIMBY reaction takes place can reveal the degree of traumatising (how exaggerated the reaction is) as well as the quality of the relationship with the authorities (the inhabitants do not feel safe, included, etc.)

discussed earlier in this text; it is evident in the way cultural heritage is treated (the new is better than the old) as well as the environment (e.g. attitude to water or trees in the city, which is also the subject of protests similar to those discussed here), which is intertwined with the way of dealing with the trauma of uprooting, where directing attention to the future was presumably an important protective mechanism of trauma.

Conclusions – trauma networks²⁷ as a hidden part of the urban system

Collective traumas do not exist in isolation from individual suffering. If one observes the community only through the manifestations of its life, i.e. activity revealed in public discourse, one does not need to come into contact with the suffering of specific individuals, representatives of the community. However, when conducting participatory activities with inhabitants, individual traumas are revealed in many ways and allow one to see more broadly how personal, mass, collective, and cultural traumas intertwine, stiffen or drive each other, and how a tangled network of trauma is formed, causing difficult-to-loosen tensions in the relationships that build the urban system. This network is holographic or perhaps fractal: zooming in on a network node allows one to see in it a magnified picture of the whole trauma, from personal through experienced in the local community to a larger-scale nation, country, and, finally, the whole world. In the perspective of the transformation of the urban fabric of Gliwice,

²⁷ In the system analysis, a thorough look at networks of connections (relations) between system elements can lead to the discovery of further invisible “layers” of the system (by analogy of consciousness and the subconscious) affecting known relationships between system elements. By introducing the term “trauma network”, we want to emphasise that trauma is not a single, “subcutaneous”, poorly perceived element of the system, but a whole subsystem, which is like an invisible “lining” of all relationships in the urban system.

the traumas resulting from modernisation and industrialisation are the most evident – e.g. in the situation of the river and city’s streams – as well as the trauma of uprooting and the unprocessed changes in the political system, manifesting itself in the inability to establish a partnership between the authorities and the inhabitants. In order to increase the resilience of the urban system, which is so necessary in uncertain times of a global crisis, the networks of trauma need to be loosened and the energy trapped in them needs to start to flow in order to fuel different parts of the system, and to stimulate collective creativity and cooperation.

Maintaining the focus on the inhabitants of Gliwice, the most clear are the traumas resulting from the displacement, uprooting, and cultural domination of the displaced over the indigenous people, although they are clearly linked to the traumas resulting from urbanisation or industrialisation, or, more broadly, undeveloped feudal relations.

The trauma networks we observe work in such a way that individual traumas reinforce each other and form stiff, distant, inflexible relationships, halting individual and social development, and weakening urban resilience: the trauma of cultural alienation does not allow citizens who are rooted in the city, but marginalised (Silesians), to openly tell its history to those who need to take root (descendants of immigrants or “incomers”). Thus, the process of assimilating the cultural heritage²⁸ of Gliwice’s identity does not work this way. In turn, the inhabitants who are not rooted do not feel their right to the city, a sense of entitlement to belong to this place, so they do not come forward *en masse* in its defence, and if a more mass reaction appears, it is often accompanied by huge, almost hysterical emotions²⁹ (typical of severe trauma), which do not

allow for the actual elaboration of new solutions, and which give free rein to the uncontrolled social authorities, trapped in the “future” narrative but also in their own traumas and mental patterns created in response to them.

In the case of Gliwice, the development of the situation of the residents’ protest against the construction of huge retention reservoirs in attractive recreational and natural areas shows that seventy-five years after the end of the war – one of the consequences of which was mass resettlements – successive generations of residents have begun the process of recovering from the trauma of uprooting, and at the same time they are rising up against the effects of the wider trauma of modernisation, which is the direct cause of the hopeless state of rivers in the cities. Those who are playing the role of active citizens (mainly a 30–40-years-old generation) can be considered as “new bourgeoisie” – to quote Paweł Kubicki (2016) – who begin to understand that the city is a kind of self-managed community of inhabitants, start to feel co-responsibility, and act against treating the city only as an economic resource at the disposal of the local authorities. They come up with practical proposals for solutions that make systems think about the city as vital in terms of a natural course of action. Thus, there is hope for the strengthening of urban resilience, which is so necessary in these increasingly uncertain times. The issue of water in the city can be a great opportunity for this, but only under one condition: the necessity to go through the process of healing traumas.

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meetings of other flood tanks in Gliwice, on the Ostropka stream.

²⁸ The process of assimilating heritage – from the heritage of the enemy to the assimilation into “our common European heritage” – is described by Jacek Purchla (2017). Wrocław, whose post-war history is also founded on the migration of its inhabitants, has gone through this process, unlike Gliwice.

²⁹ We had the opportunity to experience the situation of hyperactive behaviour of the citizens during consultation

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