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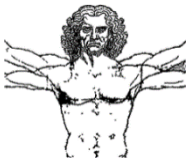

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ORIGINAL ARTICLE

Riverside space and local communities. Selected theoretical aspects

Aleksander Wolski and **Grzegorz Jankowski**

Katowice School of Economics, ul. Harcerzy-Wrzesnia 3, 40-659 Katowice, Poland

Email addresses: wolskialek@interia.pl and grzegorz.jankowski@gwsh.pl

Abstract – This article is dedicated to the analysis of selected theoretical aspects regarding the riverside space. The very concept of space is presented interdisciplinary as the subject of research in numerous fields of science. Most attention was paid to analyses riverside space in the context of human-river relations, and the mainstream consideration is the social role of the phenomenon, its social perception, and the resulting actions. The concept of space is connected here with the concept of local community, which supplements the issue, and their interdependence mainly results from the attributes and the process of creating that community. So in the article, a lot of space is devoted to theoretical considerations of these interrelationships and dependencies. Selected contemporary examples of revitalization and re-use of the riverside space and the social impact of these processes in urban areas are also presented.

Keywords – riverside space, local community, riverside landscape, revitalization

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INTRODUCTION

The concept of space from the point of view of science, as well as general consideration, accompanies the mankind since the very beginning. Considering the migratory, the nomadic, and finally settled lifestyles of man, space is a natural reference point for all activities of man. This issue is discussed by the authors of the present article mainly on the basis of sociology, as well as geography, especially humanist geography. Space is defined in many ways within those sciences, but the basic notion is strongly related to reference to a place or region of existence (e.g. in case of this discussion, it is a riverside area), as a determinant of community, of life, economic conditions and, most importantly, social bonds.

The presented article is devoted to theoretical analyses of the phenomenon of riverside space. It is presented from multiple points of view, as a subject matter of research of many fields of sciences. Most attention was paid to analyses of space in social and cultural terms, with particular emphasizing the social aspects of this phenomenon (its social perception in particular). The notions of space and local community have been combined, which results from the fact that a local community that occupies a given space develops it and at the same time depends on it strongly. Thus, the article is largely dedicated to pointing to those mutual relations and dependencies.

RIVERSIDE SPACE AS AN ASSET

It could be concluded in the light of the above considerations that a river, being an integral element of geographic space, plays a highly important part in the development of social space, which is discussed above. According to Świątkiewicz (1993) and Anderson et al., (2019), a river is a specific kind of space, related to a particular community, which treats it as its own with all consequences of this fact, and being an indicator of identification of that community with its territory

(it is reflected e.g. in auxiliary descriptors in names of locations – Krosno Odrzańskie, Nakło nad Notecią, or Nowe Miasto nad Pilicą. This is, therefore, space, which uses a river to create a specific image of a local community, which may be the basis for a peculiar "asset" of this community in contacts with the external world.

An important aspect of a discussion on riverside space, or the role of a river in developing this space, is the importance of a river as a culture-forming element. Considering multiple overlapping phenomena in that respect, a river is often regarded as an important element in the cultural heritage of a local community resulting from many centuries' tradition (Świątkiewicz 1992). What should also be kept in mind is the role of social contents passed down from one generation to another, which are essential for maintaining this tradition. Thus, river (or riverside) space is also a culture-related element as a result of receiving this property from local communities, which are closely dependent on it as it satisfies their economic, religious, political or recreational needs.

Undoubtedly, aware identification of a local community with the space it occupies (riverside space in this case) is an important element of perception of this area by third parties (e.g. incoming tourists), which confirms the quality of cultural values it includes. However, the "withdrawal" of communities from rivers, which was common in the late 20th century, caused vast damage to the cultural (both tangible and intangible) values, as well as in the hydrotechnical infrastructure. Forgotten, uncared for, and often damaged sluices, weirs, culverts, harbor buildings, mills etc., have become sad witnesses of the bygone prosperity of riverside areas. Urbanized riverside areas have become the "stage" of man's fight with a river (increasingly high embankments, river regulation or rerouting rivers through underground concrete channels) rather than cooperation aimed at further rational use of the potential of a river. The process of turning towards a river again will be difficult and long-lasting. This is not only about wide-range proceedings regarding the revitalization of the natural environment in areas along river banks, but also the process, carried out at multiple levels, of the revitalization of local communities, aimed at making them realize the benefits of their functioning in riverside space. Recognition of the importance of water transport for economic development of riverside areas and functioning of its infrastructure, and benefits coming from tourism and recreation are only a few of the many aspects of the mentioned social revitalization as well as renaturalization or reclamation of areas which may currently be classified as regions of high potential of cultural heritage.

It should be noted here that not all researchers represent such a multi-disciplinary approach to research of rivers and their surrounding space. A clearly physiogeographic and ecological direction of research, focused on small rivers in their upper runs rather than all catchments or main rivers, is presented in papers by researchers like Langhammer and Sitar (2008), Janský and Kocum (2008), Matoušková (2008), Matoušková et al. (2010) or Curda et al. (2011).

It could be stated, therefore, that riverside space has been, is, and will be used by man; only the methods and intensity of this use may change. River systems (space they take up) of the Nile, the Euphrates and the Tigris, the Indus or the Yangtze were considered "paradise rivers" in 2700-2200 BC, as they fed most of the residents of the globe at that time. They provided ways of transport and commuting and made up axes of economic development. The world of agricultural civilizations could develop thanks to river systems, and riverside space created by those systems was frequently a dominant element of the landscape at that time (Piskozub 1993).

Riverside space appears to be highly important, not only for local communities, in the field of religion. Mutual relations between river space with its specific landscapes and beliefs and rituals have been crucial in the history of civilization. An example could be the Nile as the life-giving river, whose annual flooding, according to Egyptian beliefs, was controlled by god Hapi (Friedman, 2008). A similar case was that of the Jordan, which is an extremely important natural and cultural element of Palestine (not only because of acts by John the Baptist). Also, rivers like the Tiber, the Ganges, the Rhine or the Yellow River should be mentioned here (Morgul 1993).

Rivers, along with their riverside areas (especially abundance of their heritage) also become an important point of tourism-related interest.

Wyrzykowski (1994) considers rivers to be one of the major elements included in recreational, sightseeing and specialist values. Favorable features, which increase the tourist value of riverside areas, include both landscape values and favorable conditions for active recreation, e.g. swimming, water sports or water trips (canoeing). With numerous natural curiosities and cultural values (e.g. historical elements of hydrotechnical infrastructure), as well as values of contemporary human activities, space taken by a river has its sightseeing values. The character of a river, in turn, makes it possible to use it for specialist tourism, e.g. fishing, canoeing, sailing or rafting (Wyrzykowski 1994).

There are multiple ways of tourism-related use of rivers and their surrounding area. River valleys function as ecological corridors and are very important for the functioning of numerous ecosystems, which are frequently not related directly to a river itself. There are inland routes in valleys of e.g. Augustów Channel, Elbląg-Ostróda Channel, the Krutynia, the Brda, the Wda, or the Radunia, and the so-called Great Wielkopolska Loop or Żuławy Loop, which allow for canoeing trips. What is also worth mentioning is tourist routes of inland navigation in sections of some rivers, e.g. the Vistula, the Nogat, the Narew, the Odra or the channels mentioned above (Wyrzykowski 1994). Also, regions with rivers adopt names related to those rivers, which proves their important natural and cultural heritage. Examples of this phenomenon include the names of three national parks (Biebrza NP, Drawa NP, and Warta Mouth NP) and nine

landscape parks (e.g. San Valley, Słupia, Poprad or Narew Landscape Park).

HUMAN-RIVER RELATIONS IN THE URBAN RIVERSIDE SPACE

An interesting aspect is also human-river interactions observed in the urban riverside space. There are no reasons to dwell on the obvious connections in the history of settlement, based on the city's links with the river in the context of water and food supply, waste disposal, transport, trade, industry, development, and defense. However, the issue of recent changes in these relations is worth considering. As A. Pancewicz (2002) recalls until the 19th-century riverside cities remained in close relation to the river in economic, functional and spatial aspects. Changes occurred with the development of industry, where excessive industrial exploitation, as well as chaotic buildings, led to serious disturbances in the relations of local communities with the river in urban riverside spaces. Especially the period of the last few hundred years is characterized by a great dynamism of these relations. The rapid development of civilization, including the expansion of communication facilities for industry (mainly land roads and railways), moved residents away from the river perceived only as transport roads and concreted sewage collectors. The degradation of rivers and the surrounding space, which has progressed over time, and the loss of their importance in urban life, have contributed not only to the removal of the river from the city's spatial plans but also to the inhabitants' awareness. An example of such activities can be the history of rivers in Łódź or Seoul, where residents have long forgotten about their existence (Fijałkowski, 1995). The significance of urban river valleys is largely influenced by such elements as the environmental condition of the stream, their biodiversity and microclimate and its importance for the city, the quality of the landscape of the riverside urban space, accessibility together with the quality of infrastructure, and the resulting economic and recreational opportunities for this space. According to the authors, the examples listed are the most crucial ones that should be created to maintain the social significance of the river.

The causes of degradation can be divided into economic, environmental and social. In the first case, first of all, the economic decline of inland waterways, the need to acquire new investment areas and incorrect planning decisions should be mentioned. The environmental aspects are dominated by the poor state of water quality and with it the degradation of the natural environment of the river valleys. The social causes of the "cultural death of the river" are quite extensive and less obvious. These include: lack of identification of residents with the river (a large immigrant population characterized by a lack of connection with the place), a lack of identity of river valleys, low ecological awareness of the inhabitants, and finally low awareness of the economic (including recreational and tourist) importance of the river. The watercourse then loses its landscape (aesthetic) and functional values in social consciousness (Przewoźnik, 2005). Currently, the basis for all activities in riverside spaces (especially urban areas) is flood cleaning and protection, river regulation (this term should not be confused with river sewerage) and linking new concepts with the historical conditions of the city (Pancewicz, 2002). It makes the river safe in the social consciousness and only on this foundation can its further acceptance be built. Then it is necessary to link new concepts to the historically existing city landscape. It should also be remembered that the river in the city (despite its cultural uniqueness) is an element of regulatory connections within the entire catchment (Pancewicz, 2002).

In recent years, it has been noticeable that cities have returned to rivers, appreciating their role in urban space. We are witnessing a "harvest" of regeneration projects aimed precisely at restoring the positive relations of cities with rivers. The purpose of these visions is to transform the riverside areas, giving them new functions (although it should be said to recreate long forgotten) mainly representative and recreational. The newly understood river in the city is to be his showcase, salon of urban life and its integration. According to Szwed (2016), the river in the city is a specific compositional axis of various landscape assumptions. At the root of these trends is the search for new factors of local development related to the tradition, history, and culture of the place, as well as the search for interesting, unique places that give the possibility of "escaping forward", whether from declining industries or maintaining its current position (Muszyńska- Jeleszyńska, 2013).

SELECTED ASPECTS OF THE REVITALIZATION OF URBAN RIVERSIDE SPACE

Here are obvious examples of successful revitalizations in the world, such as the transformation of the former shipyard in Bilbao into a cultural and residential center, Duisburg with Europe's largest inland port and the transformation of the industrial city under the slogan "Living on the Water", Ruhr and Saarbrucken (Barwicka, 2010) (Kizilova, 2019). These projects concern declining cities of declining heavy industry. In these places, attention was paid to the restoration of the city-forming aspect of the river (Szwed, 2016). Rarely mentioned and equally interesting is the revitalization of the river in the center of Ljubljana in Slovenia, where the city was "opened" to the river (Ljublianice) and the aesthetics of the newly created areas was given high. The unattractive, deserted and dangerous place changed into a showcase of the city in 2004. The focus was on returning public space to the river and offsetting the effects of pedestrian traffic. It is also worth paying attention to domestic initiatives. The cities lying on the rivers cease to turn their backs on them, new quays and boulevards were built in Szczecin, Kraków, Supraśl, Vistula boulevards in Warsaw were rebuilt (together with the city beach initiative), the banks of the Warta river in Poznań were developed, also boulevards and beach were created on the Warta in Konin and Chwalszew, reconstruction of the Granary Island began in the Tri-City (after 25 years of project initiation), a spatial development plan for Bystrzyca was adopted in Lublin, and attempts are being made in Białystok

to incorporate the Biała river into the urban landscape. Programs for the regeneration of urban watercourses in Poland are socially expected and useful, also in line with European assumptions, such as Europe 2020, Cities of the Future, Toledo Declaration and the Leipzig Card. The flagship projects of the revitalization of urban rivers in Poland are Bydgoszcz with the Bydgoszcz Water Junction and Mill Island. Mentioning the revitalization of Bydgoszcz riverside spaces, it should be mentioned that the implementation was carried out under the REURIS project. In addition to Bydgoszcz, the project also involved: Katowice, Leipzig, Stuttgart, Brno, Pilsen (Frelich and Bzdęga, 2014). The project leader was the Central Mining Institute (GIG) from Katowice.

In Bydgoszcz, as part of the REURIS program, the section of the Old Canal has been revitalized. The main goal of the implementation was to enable residents to relax by the water, as well as restore the historical significance of this part of the watercourse. It should be noted that the project was carried out with the recognition of the needs of potential beneficiaries (residents) and their acceptance (Gieroszka et al. 2014). This is a very important aspect of the creation of added value, which is anchoring the river in the minds of the inhabitants, its acceptance and creating a new image of the city positively associated with the riverside space. No similar mistake was made in this respect as in the case of Leeds and Aire in England and Porvoo in Finland, where the expectations of residents in the first stage of the project implementation were not articulated. A similar course, in analogy to Bydgoszcz, although unfortunately only scale pilot, was the revitalization of the Ślepiotka Valley in Katowice - also as part of the REURIS program. The main assumption was to create a recreational green area that would improve the environmental and landscape value of the valley area, and would also positively affect the quality of life for residents. As before, the beneficiaries could speak (Gieroszka et al. 2014), how significantly it improved the quality of social integration, as well as influenced the acceptance of implementation. The side effect of social acceptance is to consider the care of residents in the completed project. Unfortunately, both projects, although successful, are not fully implemented further. The authorities of Bydgoszcz undertook further works related to the revitalization of watercourses in the city, the effects are very positive, but they lack social participation. The situation is more difficult in Katowice. The project for revitalizing the Ślepiotka river valley, as already mentioned, was a pilot project. However, it was not continued (despite high social acceptance) due to the lack of regulation of land ownership rights in the watercourse valley and the lack of funds. According to the implementers, the main effects of both projects are: improving the quality of the landscape, increasing the visual attractiveness of public space, improving the accessibility of rivers and canals, creating a positive image of the city, improving the living conditions of residents, increasing ecological awareness, and increasing social involvement (Gieroszka et al. 2014). One should also add effects related to increased integration, acceptance of the place, identity. It is necessary to emphasize positively the results obtained and, at the same time, regret the lack of continuation with such a well-carried revitalization training ground, a prepared ground of social acceptance, worked out and trained implementation team. An example of an unrealized project is the revitalization of the Bystrzyca river area in Lubin. The premise of this project was to open the river valley to the city and restore this space to urban utility with a focus on recreation and leisure, creating a distinct and recognizable city identity, improving the quality of urban space, and increasing the value of the real estate. The project has very interesting assumptions of cooperation with Dutch experts. Based on their methodology focused on issues of safety, quality and feasibility (holistic approach), the Lublin strategy focused on identity, water safety, feasibility, combining initiatives from various levels, preparation of clear guidelines defining the city's development in the context of the river, sharing they know the multitude of participants in the process, support financial applications. However, currently, the project still cannot exit the consultation phase, as in the case of Katowice, the problem is mainly financing.

SUMMARY

Analyzing the examples mentioned, it should be remembered that the revitalization of urban watercourses cannot be successful without considering the needs of the final beneficiaries - residents. In the first place, human needs related to safety, raising living standards, creating attractive housing and recreation conditions as well as shaping public space using the vicinity of water should be considered (Lorens, 2004). It should be remembered that water is an element of the city in which its inhabitants form, and not the city is a riverside element with the addition of people.

Opportunities, given by space with a river, that is riverside space, are vast and diverse; undoubtedly, phenomena occurring in such an area cannot be analyzed without considering a local community of this region (East 2016), as this community is one of its elements, an “agent” which develops the mentioned space in a positive or, sadly, negative way.

REFERENCES

Anderson, E.P., Jackson, S., Tharme, R.E., Douglas, M., Flotemersch, J.E., Zwarteveen, M., Lokgariwar, C., Montoya, M., Wali, A., Tipa, G.T., Jardine, T.D., Olden, J.D., Cheng, L., Conallin, J., Cosens, B., Dickens, C., Garrick, D., Groenfeldt, D., Kabogo, J., Roux, D.J., Ruhi, A., Arthington, A.H. (2019): Understanding rivers and their social relations: A critical step to advance environmental water management. WIREs Water 6, e1381.
DOI: 10.1002/wat2.1381

Barwicka, J., (2010): Water as an urban element (*Original title in Polish: Woda jako element urbanistyczny. Green 2 Ogólnopolski Kwartalnik Architektoniczny, Kraków*). Green 2 Polish National Architectural Quarterly, Kraków, p. 59.

Curda, J., Jansky, B., Kocum, J. (2011): The effects of physical-geographic factors on flood Episodes extremity in the Vydra river basin (*Original title in Czech: Vliv fyzickogeografických faktorů na extremitu povodní v povodí Vydry*). Geografie, 116/3, 335-353.

East, M. (2016): Community-led approaches and interventions for the regeneration of abandoned towns in southern Italy. Ecocycles, 2/1, 18-25.
DOI: 10.19040/ecocycles.v2i1.40

Fijalkowski, W., (1995): City with its back to the river - materials from the scientific session (*Original title in Polish: Miasto tyłem do rzeki – materiały z sesji naukowej*). Towarzystwo Opieki nad Zabytkami, Warszawa

Frelich, M., Bzdęga, K. (2014): Management of invasive plant species in the valley of the River Ślepiotka in Katowice – the example of the REURIS project. Environ. Amp Socio-Econ. Stud. 2, 26–37.
DOI: 10.1515/environ-2015-0035

Friedman, Z., (2008): Nilometer, in: Selin, H. (Ed.), Encyclopaedia of the History of Science, Technology, and Medicine in Non-Western Cultures. Springer Netherlands, Dordrecht, pp. 1–22.
DOI: 10.1007/978-94-007-3934-5_9644-2

Gieroszka, A., Markowska, M., Trzaski, L., (2014): Regeneration of urban river valleys as a key aspect of urban policy - experiences from the implementation of the REURIS project in Poland (*Original title in Polish: Rewitalizacja miejskich dolin rzecznych jako istotny aspekt polityki miejskiej: doświadczenia z realizacji projektu REURIS w Polsce*) Problemy Rozwoju Miast 11/2, p.43-55

Jansky, B., Kocum, J. (2008): Peat bogs influence on runoff process: Case study of the Vydra and Křemelná river in the Šumava Mountains, Southwestern Czechia. Geografie – Sborník ČGS, 113/4, pp. 383 - 399

Kizilova, S., 2019. Form and functional features of modular floating structures. E3S Web Conf. 91, 05013.
DOI: 10.1051/e3sconf/20199105013

Langhammer, J., Sitar, J., 2008. Modelling the impact of anthropogenic modifications to river channels on the course of extreme floods. Case study: August 2002 flood, Blanice River basin, Czechia (*Original title in Czech: Modelování vlivu antropogenních úprav koryta toku na proudění při extrémní povodni.*). Geografie – Sborník ČGS, 113/3, pp. 237 – 252.

Lorens, P., (2004): Revitalization of water fronts as part of the process of urban renewal In: Markowska K. (ed.) Space in managing regional and local development. (*Original title in Polish: Rewitalizacja frontów wodnych jako element procesu odnowy miasta In: Markowska K. (ed.) Przestrzeń w zarządzaniu rozwojem regionalnym i lokalnym*). Biuletyn KPZK PAN, z. 211, PG, p. 179-205.

Margul, T. (1995): Holy rivers of the world. In: Kołtuniak J. (ed.) Rivers. Culture - Civilization - History, vol. 4. Śląsk Publishing House, Katowice, pp. 55-74. (*Original title in Polish: Święte rzeki świata. In: Kołtuniak J. (ed.) Rzeki. Kultura – Cywilizacja - Historia, t. 4, Wydawnictwo Śląsk, Katowice, p. 55-74*).

Matouskova, M., (2008): Evaluation of watercourse habitat quality in the context of the European Water Framework Directive: application in various river basins in the Czech Republic (*Original title in Czech: Hodnocení kvality habitatu vodních toků v kontextu Evropské rámcové směrnice o vodní politice: aplikace v rozmanitých povodí v Česku.*). Geografie - Proceedings of CGS (*Geografie – Sborník ČGS*), 113/3, pp. 223 – 236

Matouskova, M., Weiss, A., Matschullat, J., (2010): Ecological survey of river habitat diversity: transboundary cooperation in the Ore Mountains (Krušné hory, Erzgebirge) Geografie, 115/3, 284-307.

Muszynska-Jeleszynska, D., (2013): Riverside areas in terms of development and urban regeneration. In: Journal of Health Sciences, 3/14, 99-107.

Panczewicz, A., (2002): River in urban space. An attempt to determine mutual relations. In: Kołtuniak J. (ed.) Rivers. Culture - Civilization - History vol. 11. (*Original title in Polish*: *Rzeka w przestrzeni miejskiej. Próba określenia wzajemnych relacji. In: Kołtuniak J. (ed.) Rzeki. Kultura-Cywilizacja-Historia, t. 11).* Śląsk Publishing House, Katowice, pp. 179-198.

Piskozub, A. (1993): Great river civilizations (*in Polish*). In: Kołtuniak J. (ed.) Rivers. Culture - Civilization - History (*Original title in Polish: Wielkie cywilizacje rzeczne. In: Kołtuniak J. (ed.) Rzeki. Kultura-Cywilizacja-Historia. t. 2)* Śląsk Publishing House, Katowice, pp. 11-35.

Przewoznik, M., (2005): theoretical aspects of urban regeneration: towards integrated urban and urban nature regeneration methodology (*Original title in Polish: Teoretyczne aspekty przyrodniczej rewitalizacji miast: ku metodologii zintegrowanej rewitalizacji urbanistyczno-przyrodniczej*). Teka Komitetu Arch. Urb. Stud. Krajobr. - OL PAN, Warszawa, 25-34.

Szwed, J., (2016): Contemporary role of boulevard in the city (*Original title in Polish: Współczesna rola bulwarów w mieście.*). Przestrzeń i Forma, 2011/16, 443-446.

Swiatkiewicz, W. (1993): River as a cultural category In: Bożek, G. (ed.): River Cultural Map (*in Polish*). Upper Silesian Cultural Heritage Center, Katowice, pp. 39-44. *(Original title in Polish: Rzeka jako kategoria kulturowa. In: Bożek, G. (ed.): Karta Kulturowa Rzeki. Centrum Dziedzictwa Kulturowego Górnego Śląska, Katowice, p. 39 – 44)*

Wyrzykowski, J. (1994): The river as an object of tourist interest (*in Polish*). In: Kołtuniak J. (ed.) Rivers. Culture - Civilization - History (*Original title in Polish: Rzeka jako przedmiot zainteresowań turystycznych. In: Kołtuniak J. (ed.): Rzeki. Kultura-Cywilizacja-Historia, t. 3, p. 157 – 171 - Wydawnictwo Śląskie, Katowice*), vol. 3, Śląsk Publishing House, Katowice, pp. 157-171.