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Form-based codes versus urban revitalization of historical city centers. Opportunities and dangers

Introduction

The inspiration for the consideration of the spatial form-based codes was, on the one hand, a reflection on the current directions of revitalization activities and transformations of specific areas in Polish cities and available design tools, and on the other hand, willingness to lean on – repeated in the ongoing debate on urban development – arguments regarding the need to develop new methods of integrated planning that respond to the high dynamics of multidimensional transformations [1]. Also contributing to the topic was the widespread belief that [...] *the revitalization of Polish cities is a lagging process compared to the practice of other countries* [2, p. 10], as Piotr Lorens¹ points out, which provides an opportunity to learn from the experience gained and to modify it, if necessary, for adaptation in local solutions. Interest in the above-mentioned issues also stems from general – national and European – urban planning guidelines, formulated, among others, in *The Agenda 21* [3], *The Habitat III Agenda* [4], *The New Athens Charter* of 2003 [5] or *Krajowa polityka miejska 2023* [National Urban Policy 2023] [6]. The cited documents emphasize the need for multidimensional revitalization based on the assumptions of sustainable development, and also draw attention to the need for ap-

propriate action in historical city centers, pointing to their crucial importance for the preservation of the European cultural heritage. The analysis of opportunities and threats arising from the use of the spatial form-based codes in urban revitalization, carried out in the course of the research, also results from the citation of these issues in the publication by Michał Domińczak – *Nowa urbanistyka. Metodyka i zasady projektowania według SmartCode* [New Urbanism. Methodology and principles of design according to the SmartCode] [7]. Reflection on the assumptions of this methodology and its universality and applicability also in Polish local conditions is the main objective of this study. The author draws attention to the challenges associated with the search for effective tools and methods used in the urban planning, designed for activities related to contemporary transformations of historical urban areas. The author's considerations are based on the questions: Can the spatial form-based codes be an effective tool in the revitalization of urban space? Is there a potential for this solution – what opportunities and what risks does it bring?

Challenges of revitalization

Cities and, above all, historically formed urban complexes are currently undergoing extremely intensive transformations. This process is particularly evident in the face of the dynamic technological development, ongoing demographic processes, widespread disintegration of urban structures, and new circumstances related to changes caused by the climate crisis or pandemic, among others. Among other things, it is becoming a challenge to reorganize the space and functioning of cities so that they provide comfort, safety and a high quality of life for residents.

In the field of urban planning and architecture, the directions of these multidimensional transformations in spatial terms can be assigned to two main zones of activity:

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¹ As Lorens points out: [...] *The revitalization of Polish cities is a lagging process compared to the practice of other countries, especially Western European or North American ones. As a result, the authors of revitalization projects can benefit from the methods and experience already developed, although, as the first experiences indicate, it is rather necessary to build our own model of planning and implementation of revitalization activities, specific to our economic and political realities, on the basis of the knowledge developed in other urban centers* [2, p. 10].

1) in the existing urban structure, and 2) in previously non-invested areas, often arising in the suburbs of urban organisms (as a result of the “urban sprawl” and the so-called sub-urbanization). In terms of strategy and group of program activities, the conservation and revitalization activities undertaken in the existing urban complex occupy a special place. The urban revitalization itself [...] *is becoming an increasingly important element in the process of development and transformation of Polish cities*, as Lorens points out [2, p. 19]. By the historically and culturally defined context, however, many of the revitalization activities require very careful identification of problematic issues and addressing appropriate organizational and spatial solutions. As numerous examples show, only coordinated and unit-directed solutions can successfully revitalize a degraded space by [...] *redefining the attractiveness of a place through functional, socio-economic and aesthetic adjustments* [8, p. 27].

The revitalization, in spatial terms, should be understood as the restoration of urban values, including (often lost in a degraded area) significance in the city structure, providing the basis for revitalization on many levels of activity, including social and economic. Izabela Mironowicz points out that [...] *revitalization does not necessarily mean the restoration of previous development, but only the value restoration to a specific place in the entire functional and spatial structure of the city. Thus, the transformation of a certain urban structure affects the transformation of the entire functional and spatial structure of the city* [9, p. 103].

Planning and design tools

In view of the challenges indicated above, it is reasonable to search for and identify effective design and planning tools used in the revitalization activities. They could contribute to improving the quality of the space of Polish cities, especially their historical downtowns². These issues are widely taken up in the works on the Polish ground by, among others, Sławomir Gzell [10], Piotr Lorens [11], and Zbigniew Zuziak [12]. As a result, it becomes necessary, also in the field of urban planning, to recognize emerging innovative models of action, represented by the parametric urban design³, space syntax⁴, and many others. Also included in this group are the form-based codes [14], popularized since the 1980s⁵, and represented by the SmartCode [15], promoted, among others, by the founders of the New Urbanism. The subject of these considerations is an attempt to analyze the possibility of their application on the Polish ground, especially in the revitalization

of downtown complexes. These considerations will be supplemented by a reflection on the application of spatial form-based codes in the renewal of historical urban space.

The New Urbanism

To outline the issue at hand in a bit more detail, it is first necessary to recognize the circumstances that contributed to the establishment of the New Urbanism methodology, as the context of its emergence is of great importance. To do this, it is necessary to go back to the 1970s, when a movement called the New Urbanism was beginning to take shape in the United States, riding the wave of post-modernism⁶ and modern historicism⁷. It was associated, as the name suggests, with a new way of thinking about the city, caused by negating the principles of the modernistic space design. It manifested itself in a declared opposition to uncontrolled suburban sprawl and the common model of the city spatial structure – based on mono-functional zones. The common model of American cities emerging at the time consisted of a service and business center (the so-called downtown, Central Business District – CBD), little supplemented by intensive residential and mixed-use buildings, with suburbs with extensive single-family housing stretching to the horizon, without any identifying elements. And it was the desire to find solutions to reduce and, in a sense, order this spatial chaos and extensive, amorphous urban structures that lay at the genesis of the New Urbanism.

To this end, the movement’s creators, starting from the inspiration of the Ebenezer Howard’s garden city model and adding further modifications, proposed a return to the planning and architectural tradition of the late 19th and early 20th centuries – both in the functional and spatial layers of city planning, i.e., the quarter development with an accompanying model for organizing the life of the local community. Eventually, a model referred to as the neotraditional planning was created, defined on two levels: 1) the urban planning and 2) architectural planning. The first one refers directly to the forms of traditional urban layouts, i.e., primarily quarter buildings. The second one refers to the formal layer of the development itself – through references to the local building patterns. The combination of these elements was one of the solutions to increase the effectiveness of multidimensional actions taken in the urban space – both in the creation of new urban layouts and the revitalization of existing ones. All the principles and guidelines that guided the founders of the New Urbanism were cataloged in

² Among other things, in addition to the municipal revitalization program, the local revitalization program, and in the face of widespread urban planning regulations in local development plans.

³ Parametric urban design using computer tools (CAD, GIS, databases, etc.).

⁴ The theory of space syntax proposed in 1984 by Bill Hillier and Julienne Hanson. Cf. [13].

⁵ The idea of creating a code of spatial forms is associated with the development in 1981 of an urban layout project in the spirit of New Urbanism – Seaside in Florida.

⁶ Postmodernism – in its program cutting off from modernist concepts of a space organizing, emphasizing in architectural forms the need to freely juxtapose various cultural themes and simplified, redefined contemporary historical forms, so as to compile them and give them new meaning. Cf. [16].

⁷ Modern historicism, associated with the negation of the principles of modernism, it postulates the search for local values in the way of creating spaces associated with a given place. A distinguishing feature is the narrative nature of the structure, evident in the numerous references to traditional forms, which are specific to a given city, region, community, among others. In architectural creation, it manifests itself in the continuation of themes inherent in the existing natural and cultural context of the place, such as the Stągiewna Street in Gdańsk.

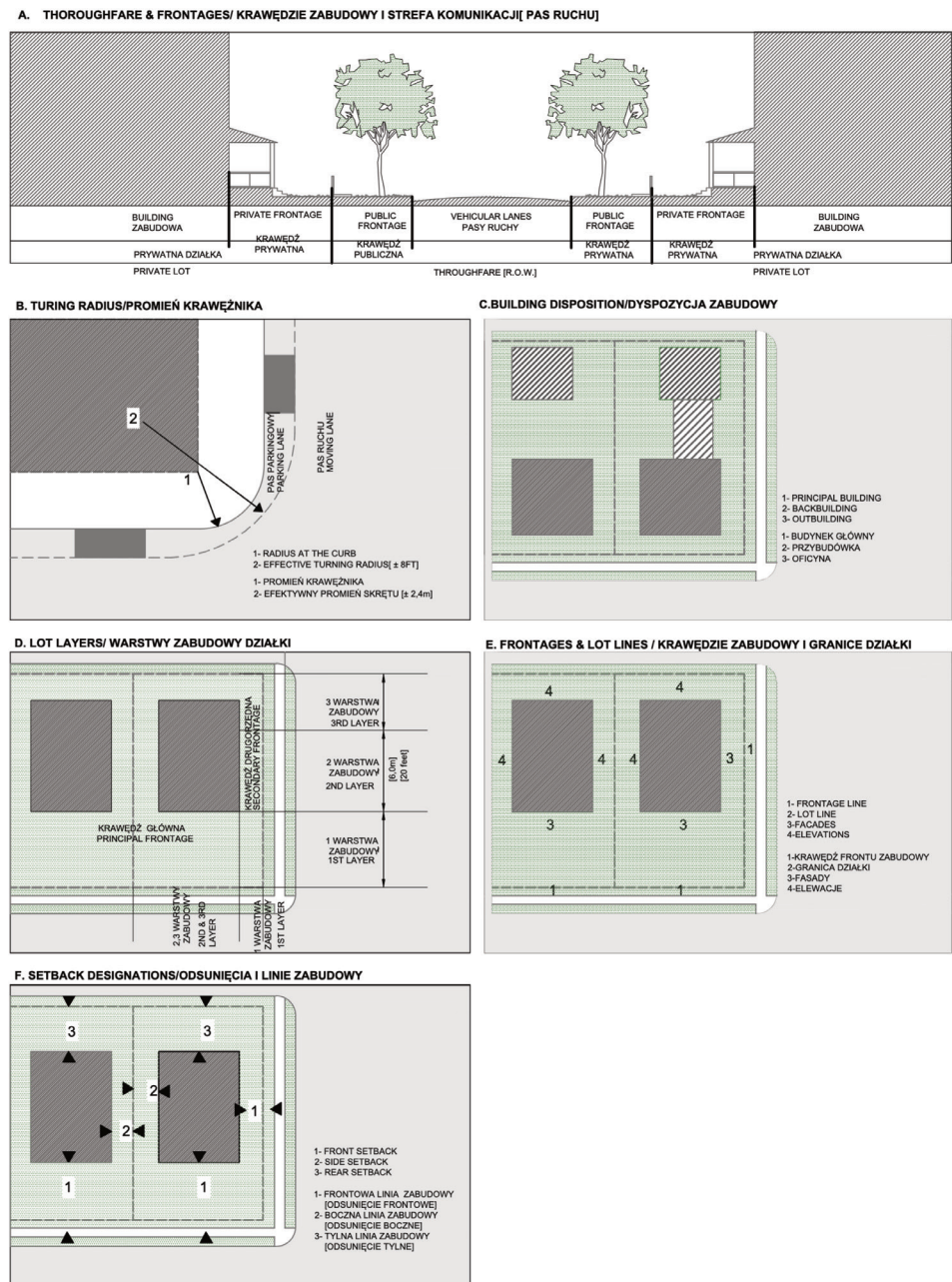


Fig. 1. Graphic diagram showing the assumptions of the SmartCode defined for the project of revitalization of the city of Bellevue, Kentucky, USA, in terms of the interface of architecture and urbanism of the so-called frontages (elaborated by M. Wiśniewska based on the CNU materials [19])

II. 1. Schemat graficzny pokazujący założenia SmartCode'u zdefiniowanego dla projektu rewitalizacji miasta Bellevue w stanie Kentucky, USA, w zakresie styku architektury i urbanistyki tzw. krawędzi (oprac. M. Wiśniewska na podstawie materiałów CNU [19])

the 27 points of the New Urbanism Charter [17]. It defines a list of urban actions to be considered in relation to the various elements of action, grouped in relation to the main urban and architectural issues: the scale of the region (metropolis, large and small city), district, quarter, street or, finally, individual buildings. The overriding goal of such a multifaceted action was to seek optimal forms of organization of urban layouts: settlements and neighborhoods – both in the spatial, functional, communication, and social layers.

SmartCode

The next step to realize the aforementioned assumptions was the development of integrated design, planning and architectural methods, which were then solidified in the form of the spatial form-based code model – the SmartCode [14], [18]. It was to be understood as an innovative, creative method of spatial and urban planning, which re-

lates to the use of the relationship between architecture and urbanism. It translated into a direct relationship between building façades and the urban space (Fig. 1). This was implemented, among other things, not only by defining in detail the location of the building on the plot, but also through precise guidelines for the solution of the front façade – in the spatial layer – such as the composition of the porch, the choice of a specific color scheme, the way of arranging the front space within the plot, or the proportions of the individual elements of the building body: the height of the individual floors, the attic, the form of the roof, etc. (Fig. 2).

This non-standard model, which is a juxtaposition of architectural and urban solutions⁸, was intended by its creators to contribute to more effective construction of

⁸ The comprehensiveness of the method was built up, complementing it with, among other things, a transect and the charette workshop.

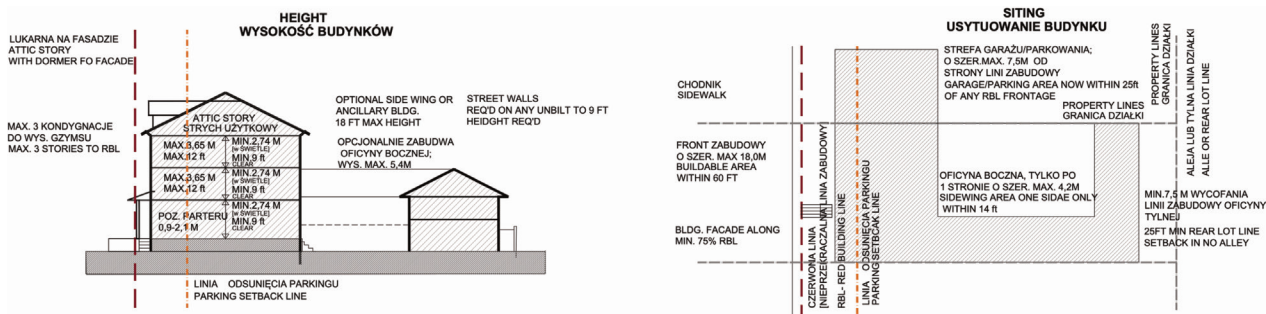


Fig. 2. The example of the SmartCode guidelines formulated within the framework of the regulatory plan of the West Main Street in Peoria: a) in terms of the height of the buildings on the plot and b) in terms of the building location on the plot (Peoria Land Development, USA) (elaborated by M. Wiśniewska based on materials CNU [20])

- II. 2. Przykład wytycznych SmartCode'u sformułowanych w ramach planu regulacyjnego ul. West Main w Peorii:
 a) w zakresie wysokości budynków i b) ich usytuowania na działce (Peoria Land Development, USA)
 (oprac. M. Wiśniewska na podstawie materiałów CNU [20])

the desired spatial structure, [...] *The "New urbanists" recommend that when constructing such architectural codes, local history and architectural identity should be studied, and typical, valuable elements of past developments should be identified. This is because it is assumed that buildings in the New Urbanism settlements must be of the same style (preferably with the historical origin), justifying this with "the need to [ensure] functional and visual coherence" which is a guarantee of "protecting the quality of a public space"* [21, p. 188].

Proposing such a different approach was to be a kind of remedy for the common amorphous structure of American cities. The first realizations, including those in Seaside or Celebration, Florida, were well received by the public, and over time contributed to the spread of this method of shaping the suburban structures of many other American cities (cf. [22]). Among the several hundred layouts implemented using the SmartCode and supported by another project tool transect (Fig. 3), those within the United States predominate, and outside the US. [...] *it mainly covers English-speaking countries or those remaining in an English-speaking cultural circle* [22, p. 89]. As Hanzl pointed out: [...] *this confirms the thesis [that – M.W. note] it is a distinctly American movement, responding to the problems there* [22, p. 89]. Nevertheless, over time, the very idea and models proposed by the New Urbanists crossed geographical boundaries and found adherents also in Europe, e.g. in the projects of Leon Krier, Robin Mananger and Marcus Axelsson, Rob Krier and Christoph Kohl, François Spoerry, and many others⁹. It should be pointed out that also in Poland there was the first realization taking into account the principles of the New Urbanism, i.e. the establishment of the Siewierz Jeziorna eco-town¹⁰.

⁹ The New Urbanism-inspired layouts have been realized, among others, in the Poundbury development complex in southern England, the Nikolaiviertel in Berlin, the Karow-Nord and Potsdam Kirchsteigfeld in Germany, Cergy-Pontoise [Port Cergy] in France, or Puerto de Mogan in Gran Canaria.

¹⁰ Siewierz Jeziorna eco-town – designed by a team under the direction of Maciej M. Mycielski. Due to the fact that it concerns

Spatial form-based codes and revitalization

The spatial codes dominate in two main types of urban areas. The first is the suburbs area, the so-called suburbia – planning in these areas lies at the genesis of the entire movement and it is directly related to countering suburban sprawl. The second type of areas came within the scope of interest of the New Urbanists a little later, and is related to the revitalization and development of inner-city areas. The issue of revitalization and the idea of implementing the New Urbanism principles resounded in this regard directly at the 7th Congress of the New Urbanism¹¹ in Milwaukee in 1999 [24]. At that time, two types of activities in the existing urban structure were distinguished: 1) projects that lead to the revitalization of downtown areas financed by private funds, 2) highly subsidized urban projects supported by government programs [24].

Since the New Urbanism also makes use of the revitalization term, it should be noted that the term itself is interpreted differently: [...] *not as the transformation of an existing structure, but as the creation of new structures that are "better" in concept* [21, p. 183]. The revitalization of the suburbs¹², therefore, was and is supposed – according to the representatives of the movement – to take place through an integrated approach to the neotraditional urban design. As Hanzl points out, [...] *most projects are the practical implementation of the assumptions of introducing into the existing amorphous development a defined structure of urban character – a grid of streets and squares – enclosed by compact buildings* [22, p. 88]. The application of the New Urbanism principles to the revitalization of downtown spaces in practice includes a wide range of activities: from the modernization of public

a premise created from scratch, on the so-called raw root (the first stage of the premise was realized), in this paper it was only mentioned in the context of the application of the movement methodology itself. Cf. [23].

¹¹ The 7th edition of the annual New Urbanism Congress, its theme was the richness of cities [24].

¹² In this context, the example of urban revitalization of Portland, Oregon, USA, is often cited.

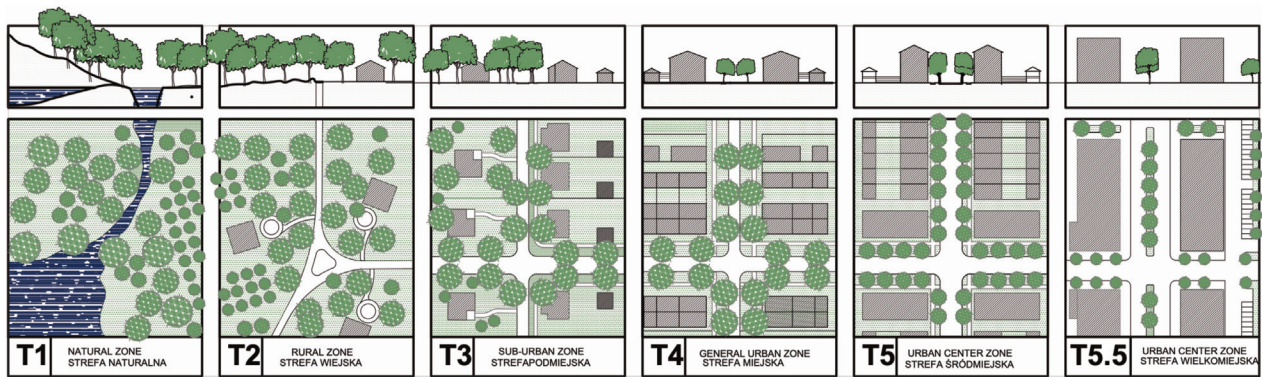


Fig. 3. An example of a diagram of the so-called transect¹³, which representatives of the New Urbanism use as one of the tools to supplement the SmartCode

(elaborated by M. Wiśniewska based on materials by Duany Plater-Zyberk & Company and The Center for Applied Transect Studies [CATS], source: [25])

Il. 3. Przykład schematu tzw. transektu, który przedstawiciele Nowego Urbanizmu wykorzystują jako jedno z narzędzi uzupełniających kodu form przestrzennych

(oprac. M. Wiśniewska na podstawie materiałów Duany Plater-Zyberk & Company oraz The Center for Applied Transect Studies [CATS], źródło: [25])

housing, projects for the renewal of development areas inhabited by ethnic minorities or TOD-type¹⁴ projects at various scales [26]. The spatial design guidelines were compiled in a study titled *Principles for "Inner-City" Neighborhood Design* [27], [28] which was the result of a collaboration between representatives of the New Urbanism, CNU (Congress for the New Urbanism) and the U.S. Housing Urban Department (HUD), and it was published in 2001 [27], [28]. As a result, in addition to the predominant use of the New Urbanism and SmartCode methodologies in suburban areas, the concept has been applied to a lesser extent in existing structures – in the form of urban programs and additions, the so-called in-fills. However, the number of such implementations, including those cataloged in the CNU project database [29], even in the American reality is negligible¹⁵. This group of projects includes, among others, the Crawford Square in Pittsburgh, City Place in West Palm Beach, Highlands Garden Village in Denver, and Park Du Valle in Louisville. Among the projects carried out in the spirit of New Urbanism, there are also examples [...] of the integration of new centers for the identification of amorphous sub-

urban areas, such as the Leon Krier's plan for the Berlin suburb of Tegel district, or projects by Duany Plater-Zyberk & Company [22, p. 88].

The SmartCode and references to local traditions in Polish architecture and urban planning

In the context of the universalism declared by the creators of the New Urbanism, and the potential of the SmartCode model to be applied to existing spatial structures regardless of their location¹⁶, it is reasonable to recognize the possibility of its implementation in the urban revitalization of historic downtowns of Polish cities, taking into account the neo-traditional planning.

Paradoxically, turning to the traditional form of layouts based on the idea of historical references is not a new phenomenon in the land of Poland, and over the epochs it has recurred many times in the domestic building tradition. Therefore, reaching back to examples from history over the past few decades, it is possible to make a theoretical recognition in an indirect way – how such actions were and are evaluated from a temporal perspective, and, as a result, what is the SmartCode potential for contemporary application.

Several main circumstances can be distinguished for the emergence of the concept of reference to local building traditions and historical patterns in the space of Polish cities: 1) through the search for solutions in the reconstruction of cities after the destruction of war, where it appeared as one of the possible scenarios of action (popularized, among others, by Zachwatowicz as an attempt to restore cultural values), 2) as a concept of socialist realism promoted by the authorities of the time (evident in the

¹³ The representatives of New Urbanism, apart from the code of spatial forms, often use the transect as a complement (Fig. 3). They took this concept from the natural sciences, where it is used to describe the form of development of ecosystems. In urban planning, the transect describes a model of spatial organization – from green areas delineating the layout boundaries, through the form of rural buildings to the city center, it is divided into six zones: core (T6), center (T5), city (T4), suburban (T3), rural (T2) and natural (T1). Duany Plater-Zyberk & Company describes this concept as follows: *Transect organizes the elements of urban planning into a useful order; classifying them from village to city. Each urban element finds a specific place on this continuum* [24].

¹⁴ Transit Oriented Development (TOD) – interpreted as a planning model oriented to the optimal use of public transport accessibility.

¹⁵ On the CNU website, which maintains a database of projects completed according to the New Urbanism principles, there are only 7 projects indicated in the field of revitalization.

¹⁶ This approach was inspired by the mentioned Domińczak's publication [7].

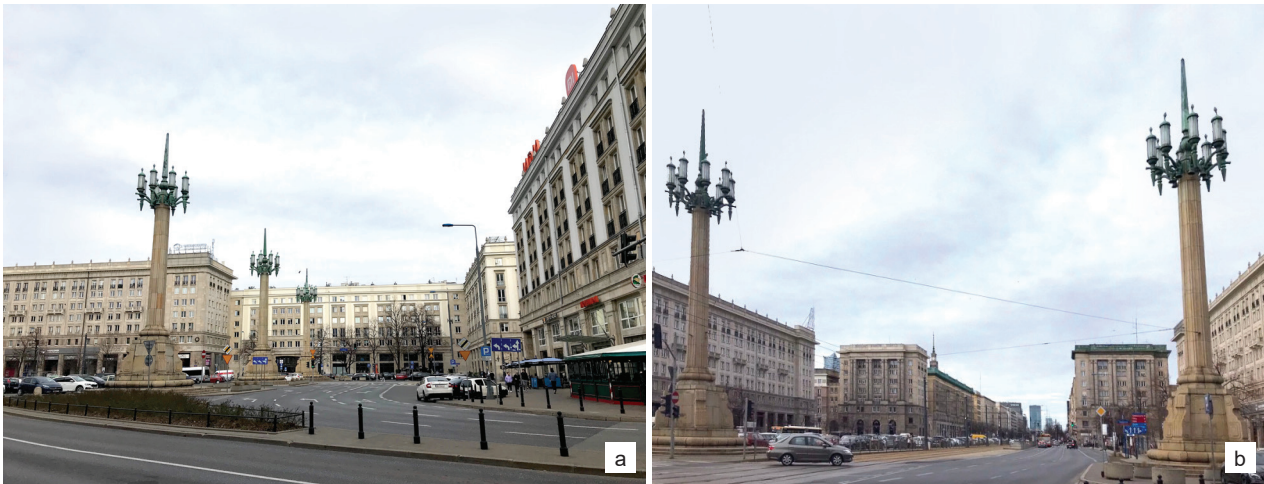


Fig. 4. Marszałkowska Housing District (MDM)

- an example of a socialist realism housing complex erected in 1950–1952, by J. Sigalin, S. Jankowski, J. Knothe and others:
- a) view of the space of Constitution Square and adjacent buildings; in the formal and spatial layer, references to historical details are used,
- b) view of the Constitution Square and characteristic spatial dominants in the form of scaled candelabras (photo by M. Wiśniewska)

II. 4. Marszałkowska Dzielnica Mieszkaniowa (MDM)

- przykład socrealistycznego zespołu zabudowy wzniesiony w latach 1950–1952, autorstwa m.in. J. Sigalina, S. Jankowskiego, J. Knothe:
- a) widok na przestrzeń Placu Konstytucji i zabudowania przyległe, w warstwie formalnej i przestrzennej wykorzystujące nawiązania do historycznego detalu, b) Plac Konstytucji, widok na przestrzeń placu i charakterystyczne dominanty przestrzenne w postaci przeskalowanych kandelabrow (fot. M. Wiśniewska)



Fig. 5. The residential development at the National Education Commission Avenue 98 in Warsaw – an example of the realization of the postmodernism assumptions, characterized by a return to the quarter development with individualized, loosely interpreted, historical detail:

- a) view of the inner courtyard with interestingly arranged green zones and elements of small architecture, b) view of the development from the Artystów Street showing the gradation of the height of the development and illustrating the formal and spatial solutions used (photo by M. Wiśniewska)

- II. 5. Zabudowa mieszkaniowa przy al. Komisji Edukacji Narodowej 98 w Warszawie – przykład realizacji założeń postmodernizmu, cechujący się powrotem do zabudowy kwartałowej ze zindywidualizowanym, luźno interpretowanym, historycznym detalem: a) widok na przestrzeń wewnętrznego dziedzińca z ciekawie zaaranżowanymi strefami zieleni i elementami małej architektury, b) widok na zabudowę od strony ul. Artystów pokazujący gradację wysokości zabudowy oraz ilustrujący zastosowane rozwiązania formalne i przestrzenne (fot. M. Wiśniewska)

construction of Nowa Huta, the Marszałkowska Housing District, or the Palace of Culture and Science in Warsaw) (Fig. 4) and 3) through the spread of the idea of postmodernism in the 1970s and 1980s and the reconstruction of cities using historical styles.

The rationale behind reaching for historical styles, mainly in the first period of postwar reconstruction, was the emotional need to recreate the atmosphere of destroyed cities. For this reason, the prevailing attitude at this stage

was that of prescribing proper reconstruction¹⁷ and restoration of historical centers. Over time, however, this approach was questioned, primarily because of the “artificiality” and the creation of an image that was incompatible

¹⁷ A special case of reconstruction understood in this way is reconstruction understood as the re-building of a non-existent object in its original spatial form.



Fig. 6. Elbląg's Old Town, an example of a retroversion implemented according to the general conservation and planning concept under the direction of M. Lubocka-Hoffman (photo: courtesy UM Elbląg)

II. 6. Elbląska starówka, przykład retrowersji realizowanej według ogólnej koncepcji konserwatorsko-planistycznej pod kierunkiem M. Lubockiej-Hoffman (fot. dzięki uprzejmości UM w Elblągu)

with the historical original character of the old town¹⁸. The result of these treatments was the creation of a kind of “caricature” and [...] *variations on the historical form and old solutions from different eras and styles, adapted to the requirements of modernity*¹⁹ and the emergence of thematized building complexes. Drawing on such a rich and centuries-old tradition, it was and is not [...] *possible to make a precise assessment or valuation of which of these eras is the most valuable* [21, p. 199].

Another impulse to reach for traditional architectural and urban planning forms was the fascination with the post-modernism assumptions, which in Poland fell in the 1980s, applied both in new realizations and in the reconstruction of cities. Examples of new realizations in this context include the Zielone Wzgórza development complex near Murowana Goślina, or multi-family developments solved in the form of closed quarters with internal courtyards in the National Education Commission Avenue in the Ursynów

housing development in Warsaw (Fig. 5a, b). In Polish realities, these activities are concentrated on the urban level, without interfering in the architectural level as much as the representatives of the New Urbanism propose. The solutions used in Poland are much more simplified in relation to the SmartCode and limited to a repetitive architectural form, looking for references in a traditional, freely interpreted detail, which is distant from its historical prototype.

In this activity, at the level of reconstruction of historical downtowns, this approach coincided with a reflection related to the rejection of reconstruction or re-building in the spirit of modernism, and the search for new solutions in the name of the *genius loci* unique building process and the culture of a place in reference to local traditions. The flagship example cited in this context was the reconstruction of Elbląg's Old Town (Fig. 6). The model of reconstruction applied there became popular under the name of retroversion²⁰. It consisted in exposing the value of the

¹⁸ Such an attitude was argued by the difficulty of obtaining comprehensive inventories that would allow faithful restoration and reconstruction of destroyed objects and their fragments.

¹⁹ Cf. [21, p. 195] [note – M.W.].

²⁰ The author of the concept of retroversion was Maria Lubocka-Hoffmann. Examples of the use of retroversion in Poland also include the Old Town in Głogów, Kołobrzeg and Granary Island in Gdańsk.

historical spatial layout, based on the restoration of the original urban structure of Elbląg's Old Town – the former parcel division or height of buildings, but in a post-modern spirit – with a free treatment of details, colors and using a large amount of ornamentation loosely referring to historical styles. As the author of the concept pointed out, [...] *defining the method of retroversion, it can be said that it is a type of conservationist creation that respects historical conditions, but does not reproduce the former development and aims that the newly developed historical area should recreate the former urban landscape and serve modern needs in accordance with the conservation principles* [30, p. 62]. The development of this unique solution for revitalization and preservation activities was preceded by comprehensive scientific research, including archaeological research on an unprecedented scale at the time. And although the arguments indicated in favor of adopting such a model of action seem valid, due to the fact that the result is far from the initial assumptions, it is also often criticized [21]. Opponents of such an action emphasize that the concept was implemented on the basis of [...] *a conservation theory that was superficial and ambiguous in interpretation, ostensibly referring to the history of the place* [31, p. 103] and considerable freedom in the design of buildings using postmodern principles of shaping the development form. The result was a chaotic, ahistorical, mainly stenciled and homogeneous architecture, which not only failed to restore the historical silhouette of the Old Town, but introduced a new, in a sense artificial and alien quality (cf. [31]). Because of the above, the retroversion and related approach to rebuilding the urban structure, according to the historical layout of buildings and according to postmodern codes, is treated by some as the so-called urban kitsch, although it is often well received by the public. This dissonance is due to the fact that retroversion is a method that, on the one hand, reaches for contemporary means of expression – by creating a new value, and on the other hand, it freely draws references to a historical detail, which, however, has no actual historical value (cf. [32]). Retroversion thanks to this is well received by users, because it uses familiar, culturally close formal elements that evoke positive associations. A similar approach and the desirability of searching for references in building forms to local traditions and place identity is also contained in the idea of critical regionalism²¹. Its creators justify this attitude with the need to create individualized, modern architecture that takes into account regional and cultural references. In this way, at the level of architectural and urban planning solutions, in the formal layer, it is possible to build unique spatial relationships between the past and the present.

Conclusions

The issues raised in these considerations are related to the search for an answer to the question of whether reach-

ing for a design tool in the form of spatial codes, both in the urban and architectural layers, can be treated as universal and adaptable also in Polish conditions, especially in view of the challenges associated with the dynamic transformation of historical structures.

Analyzing the assumptions that guided the originators of the New Urbanism and the SmartCode methodology, it can be concluded that they form a comprehensive and consistent method. This was achieved by implementing the principles formulated in the New Urbanism Charter and developing tools in the form of SmartCode, transect or charette workshops, among others, in projects of American layouts. As a result of the compilation of these elements and thanks to the application of appropriate legal solutions in the field of architectural and urban planning regulations, a model more complete than the one prevailing in the Polish planning documents was created.

First of all, the creators of this movement in their concepts refer to a catalog of architectural activities and tools related to, among other things, the form of shaping space at the interface of the scale of the city and the scale of architecture (forms of façades, porches, courtyards at the front of the plot), much more precisely defining them in the planning system²². The foundations of such an approach are rooted in the American legislation, and therefore not only at the level of design methodology, historical tradition, but also relevant legal regulations, significantly different in this regard from European and Polish realities.

Moreover, reaching for architectural references, referring to traditional and historical patterns, embedded in the SmartCode model is not a new concept. It has recurred in various forms several times in the history of urban planning and architecture, as it is evidenced by the examples presented above (including postwar reconstruction, socialist realism, postmodernism, historicism, retroversion or various forms of architectural regionalisms). Analyzing this aspect of the code of spatial forms, today its application seems risky. At the level of implementation, it means, among other things, focusing on the form of the façade using a historical creation.

The cited examples showed that this approach often led to [...] *pastiche and "façadism" falsifying spatial ensembles, as Jan Zachwatowicz already pointed out in the 1960s* [21, p. 200]. This thought is now continued by, among others, Lorens and Martyniuk-Pęczek, who also point out the high risk of creating thematized spaces in this way, [...] *without the [natural] effect of growing structure, with a false history and tradition of the place* [21, p. 190]. At the same time, they emphasize that it is extremely difficult to draw a subtle line between thematic creation and historical reference that [...] *designers very often cross* [21, p. 201], which, in the author's opinion, only confirms the fears of such an application of this model in practice in Polish conditions, especially in downtown buildings with a strong historical tradition²³.

²¹ A concept related to the modern interpretation of regional architecture and "new regionalism", appeared in the 1950s, it was reconstructed in a multifaceted way by Lewis Mumford, and defined by Alexander Tzonis and Liane Lefaivre, then propagated by Kenneth Frampton [33].

²² Such actions are possible also thanks to a different legal system, which enables many of them.

²³ Cf. Lorens and Martyniuk-Pęczek: [...] *Thus, we are witnessing the birth of a new and extremely vital trend in the reconstruction of*

Another argument promoting the model of activities proposed by representatives of the New Urbanism is also its inclusion in the concept of sustainable development. Nevertheless, in Polish and European conditions, it seems that these activities are somewhat differently understood. In Europe, they focus on maximizing the use of space within the city limits and counteracting chaotic and uncontrolled sub-urbanization, while in the US they focus on a chaotic structurization and extensive single-family housing. The most important challenge for shaping urban areas in Poland is sustainable urban development in the form of a balance between activities in the existing structure and controlled development of suburban areas. These measures are implemented by studies, urban planning projects and local development plans, i.e., the viable tools for shaping urban space in terms of urban composition, which, however, should be constantly supplemented by urban policy solutions.

In view of the above, it seems that perhaps instead of directly copying this model, it would be more appropriate to treat the methodology proposed by the New Urbanism and SmartCode as an inspiration to seek new solutions, e.g., by improving imperfect indigenous solutions and being more detailed in the shaping of common spaces, transportation centers or pedestrian and road communication, as well as seeking administrative ways and tools to carry out more integrated activities. Such considerations should be supported in each case by a broad discussion of the role of cultural heritage in contemporary transformations of urban space or the search for contemporary references to the tradition of a place.

historical cities. These tendencies – variously named and described – lead us towards the thematization idea. The basic question, however, is to find the boundary between thematic kitsch and conscious restoration of the space value. This boundary is extremely delicate, and designers very often cross it [21, p. 201].

The thesis on the applicability of the SmartCode in Polish conditions and revitalization of downtown complexes seems doubtful in the author's opinion, as many ambiguities arise. In light of these, first of all, it is necessary to find an answer to the question of whether it is possible to create synthesized spatial codes in urban European layouts shaped over successive eras and marked by an extremely complex, centuries-old and very diverse cultural tradition. There are also reasonable doubts about how the hierarchy of individual historical elements will be evaluated and who will ultimately decide on the architectural form and aesthetic quality of the resulting layouts – concerning not individual buildings, but entire fragments of cities: neighborhoods and districts. This raises further questions: whether, finally, the direction of historical references proposed in the only example of the implementation of the New Urbanism idea in Poland, in the new establishment of the urban complex, i.e., in the Siewierz Jeziorna housing district (cf. [34]), is appropriate and whether, at the level of the architectural solutions applied, looking for the so-called local forms, the intended goal was achieved. Despite the many valuable solutions in the urban layer, is the use of architectural solutions that give the impression of being overscaled and distorted in the sphere of proportions and, however, somewhat accidental in our cultural context, the direction in which native urban planning should follow?

Of course, attempts to answer the above questions encourage in-depth reflection and interdisciplinary discussion. Conclusions formulated in this area should also be supported by appropriate considerations of the role of cultural heritage in contemporary transformations of urban space and the desirability of contemporary references to historical forms.

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Abstract

Form-based codes versus urban revitalization of historical city centers. Opportunities and dangers

The aim of the article is the presentation of new methods and tools applied in city planning and revitalization projects. It is also a result of the wide interests and recognition of contemporary city spaces condition and methods which can be used to successfully shape harmonious urban space and create desirable living conditions for residents that will go forward their everyday needs.

The article draws attention to the challenges related with searching for new, effective tools and methods used in the urban planning in the face of contemporary transformations of historical downtown space, as well as in connection with the need to efficiently revitalize urban spaces in many Polish cities. It shows the complexity of activities undertaken on many levels, focusing on aspects of urban renewal and revitalization processes with the special context of cultural and historical heritage. It is also an attempt to recognize the assumptions of the SmartCode, a special type of form-based code proposed by the New Urbanism, and considers the possibility of the application of the method in local regulations – taking into account the cultural and spatial context of Polish cities. Author searches for an answer to the following question: Can form-based codes be an effective tool in the revitalization of urban, historical space? What is the potential of this tool – what opportunities it offers and what risks it entails?

The reflection on these issues is based on the analysis of the written sources, literature on the subject and analysis of case studies of selected architectural and urban cases. The selected examples are presented in the aspect of application of the local building tradition over the years, and how it can refer to that category in the context of the SmartCode methodology.

For this purpose, selected references were based on the explanations done by town planners and architects to apply the local building and historical tradition in, e.g., the post-war reconstruction of the city spaces, promotion of socialist realism, popularity of postmodernism, historicism, and retroversion. The analyses of this approach led us to look over the similar aspect of the SmartCode methodology. As a result, it is found that this approach [supported by a transect, charette workshops, and by relevant local legal regulations] is a coherent and comprehensive tool in urban planning, successfully applied in the American countries, both in newly designed city spaces and in the transformation of the existing ones.

The important aspect of the undertaken research was the recognition whether it is possible to simply copy that methodology in Poland. After acknowledgment of the subject it should be noted that due to significant cultural differences (e.g., a centuries-old and complex history of urban planning) and a different tradition of building, it can be defined that there is number of threats and fears related to the attempt to apply them directly in the revitalization of the historical space of Polish cities. However, it should be indicated that following on the SmartCode methodology, it can be a valuable inspiration to look for appropriately modified local solutions and it can also be an interesting starting point for a discussion on the role of cultural heritage in contemporary transformations of urban space and the purposefulness of contemporary references to historical forms.

Key words: urban revitalization, SmartCode, planning tools, form-based codes, retroversion

Streszczenie

Kody form przestrzennych a rewitalizacja urbanistyczna śródmieść miast historycznych. Szanse i zagrożenia

Niniejszy artykuł powstał w wyniku zainteresowania możliwościami i aktualnymi uwarunkowaniami rewitalizacji, które mogą prowadzić do kształtowania harmonijnej przestrzeni miejskiej, stwarzającej dla mieszkańców pożądane warunki do życia i realizacji ich codziennych potrzeb. Autorka zwraca w nim uwagę na wyzwania związane z poszukiwaniem nowych, skutecznych narzędzi i metod stosowanych w urbanistyce do trans-

formacji historycznej przestrzeni śródmiejskiej. Wskazuje aktualność i złożoność działań podejmowanych na wielu poziomach, koncentrując się na rewitalizacji urbanistycznej. Artykuł jest także próbą rozpoznania założeń SmartCode'u – kodu form przestrzennych – i rozważaniem możliwości jego zastosowania w warunkach lokalnych przy uwzględnieniu kontekstu kulturowego i przestrzennego miast w Polsce. Celem autorki jest znalezienie odpowiedzi na pytanie o to, czy kody form przestrzennych mogą być skutecznym narzędziem w rewitalizacji przestrzeni miejskiej.

Refleksja nad powyższymi zagadnieniami została oparta na analizie źródeł literaturowych i analizie studiów przypadku wybranych założeń architektonicznych i urbanistycznych na przestrzeni kolejnych epok i kierunków, w zestawieniu z realizacją postulatów nawiązanych do lokalnej tradycji budowania w metodologii SmartCode'u. W tym celu odwołano się do przesłanek podnoszonych przez urbanistów i architektów, a przyświecających powojennej odbudowie założeń miejskich, propagowaniu socrealizmu czy upowszechnianiu postmodernizmu, historyzmu, retrowersji. Doprowadziło to do ukazania metodologii SmartCode'u (uzupełnionej przez transekt oraz warsztaty charette) jako spójnego i kompleksowego narzędzia w urbanistyce. W artykule podniesiono, że jest ono stosowane z powodzeniem w realiach amerykańskich, zarówno w założeniach nowo projektowanych, jak i w transformacji już istniejących. Ze względu na znaczne różnice kulturowe i odmienną tradycję budowania wskazano zagrożenia i obawy związane z próbą ich bezpośredniego przełożenia i zastosowania w rewitalizacji przestrzeni polskich miast – cechującej się wielowiekową i złożoną historią. Podkreślono jednak, że metodologia SmartCode'u może być cenną inspiracją do szukania odpowiednio zmodyfikowanych rozwiązań lokalnych i punktem wyjścia dyskusji na temat roli dziedzictwa kulturowego we współczesnych przeobrażeniach przestrzeni miejskiej i celowości współczesnych nawiązań do form historycznych.

Słowa kluczowe: rewitalizacja urbanistyczna, SmartCode, narzędzia planistyczne, kody form przestrzennych, retrowersja

