

Techniques for spatially attractive representation of the historical urban environment. “Urban performance”

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Abstract:

An attractive urban environment is a potential for any historical city's further development, including those in Ukraine. Finding tools and techniques to improve the urban environment and its effective representation should attract different people and funds to this city, thereby stimulating its development. This study presents the method and systematisation of techniques for the spatially attractive representation of the urban environment, which will help improve the quality of a specific place in the city and enhance its positive perception by a person. The project visualisations of the restorative-reconstructive transformation of the Bar and Medzhybizh historical centres, under the author's supervision, are used as illustrations. The technique of activating an “urban performance” is identified as the key. The determination of potential places of impression and their hierarchical allocation, based on increasing emotional impact on pedestrians during the cognitive process in a specific urban space, as well as the actions taking place within it, is proposed. The author organises these places into a spatial “attractiveness grid.” Three types of “urban performance” are identified that require an urban environment organised in a specific way; the author provides recommendations for this.

Keywords:

attractiveness, urban environment, “urban performance”, spatially attractive representation, places of impression

1. Introduction

The topic of enhancing the attractiveness of urban environments remains relevant for many historical cities in various countries, including Ukraine, which has 403 historical settlements [1]. In Ukraine, as a result of the war, these cities currently have varying degrees of destruction, and accordingly, their activity and the attractiveness of life. In post-war recovery, they will require different degrees of intervention – from complete rebuilding for the destroyed to activation through improving the quality and attractiveness of the urban environment for the less damaged and relatively preserved. In peacetime, all these cities will be guided in their further development and enhancing attractiveness by the need to maintain their historical and cultural heritage, stimulate economic growth through tourism, and increase the quality of life for their residents. Finding tools, including practical techniques, to improve their urban environment and its most effective representation should help address these issues.

Based on the author's previous research [2], we can conditionally generalise the following components of the attractiveness of the urban environment. These are its visual and ecological attractiveness, functional content, equipage, and convenience, which will contribute to its economic and social activity. Thus, an attractive urban environment should be beautiful to evoke positive emotions from its visual perception. It should be ecologically friendly to a person. It should also be multifunctional to meet the needs of different people. And finally, it should be comfortable for physical and cognitive perception. This kind of urban environment will attract various

people with different capabilities and preferences, and thus be socially active and economically profitable.

An indicator of the attractiveness of any urban environment and the activity of life in it is its “urban performance”, which we can define as an action that takes place in a particular time and site due to the interplay and alternation of connections: the observer – the active performer, when they are interested in what is happening. The observers and the active performers, in this case, are ordinary people – the same individuals who are present in this place [2]. Their positive perception of this urban environment and interest in what is happening there lead to the activation of its “urban performance”, which is a key lever in enhancing the attractiveness of any historical city.

For a comprehensive solution, it is necessary to simultaneously address the issues of enhancing the visual, ecological, functional-utilitarian, cognitive, social, and economic attractiveness of the urban environment. The task of the first two components is to attract a person's attention to a specific place. The following two components should help attract different people with various needs to this place, orient them easily, and ensure their stay is comfortable and long. The last two components will become, respectively, a marker of the quality of this place and a source of its development, as well as the development of the historical city as a whole, and improve the well-being of its residents.

As a result, we can create an attractive urban environment that is visually appealing, functionally and physically fulfilling, interesting, and convenient for everyone. It will combine different places with different functions that do not repeat but complement each other, with various high-quality landscaping elements, developed pedestrian areas and public spaces,

preserved and restored historical and cultural heritage, and public urban green areas. The attractive representation of such urban spaces will contribute to the interest and involvement of different people, thereby developing the city's tourism potential and increasing its economic and social activity.

Currently, many different scholars are interested in the issue of urban attractiveness. Among the theoretical studies relevant to the topic raised in this article, we should highlight the following works. Day's [3], Nas's [4], Zumthor's [5], and Holl's [6,7] publications on the emotional impact of architecture and environmental design on humans are essential. Dobson's [8] paper on people's remembering, experiencing, interpreting, and understanding of the city also deserves attention. The works of Lynch [9], Gehl [10], Low [11], and Whyte [12] are valuable: they consider in detail how to create an attractive image of the city, increase its comfort for living and staying, and social activity in urban space. The contributions of Cherkes [13] and Vodzynskyi [14] to preserving the identity of the historical urban environment and architectural monuments' spatial disclosure are essential. Noteworthy is the study by Osychenko and Khliupin [15,16] on determining the most valuable historical sites in the city, their preservation, and possible renewal to draw attention to them and activate them. The studies by Holovatiuk [17,18] on objects-memes in the creation of an attractive urban public space, and comprehensive transformation in unused, degrading landscaped urban areas are interesting, as well as the works by Few [19] on how humans perceive visual elements, and Gregory [20] on the complex, multifaceted process of visual thinking. Also, Siza's [21] experience with an attractive urban environment and active urban life is worth mentioning.

Previous author's studies have also raised the issue of enhancing the attractiveness of the historical urban environment as a key source of its uniqueness [22]. An attractive urban environment is a potential for any historical city's further development.

Such international documents are also worth mentioning as a base for this study: UN Programmes "Sustainable Development Goals" [23] and "UN-Habitat. People-centred smart cities" [24]. They aim to preserve cultural value and improve the quality of the urban environment, especially in historical cities. This study was also carried out within the framework of existing national regulatory documents, namely DBN B.2.2-12:2019 "Planning and development of territories" [25].

Thus, this study aims to improve the tools for enhancing the attractiveness of the historical urban environment, specifically to systematise and demonstrate techniques for its spatially attractive representation, and illustrate them through visualisations of the project concepts for Bar, Vinnytsia region, and Medzhybizh, Khmelnytskyi region, Ukraine, executed under the author's supervision. These techniques make it possible, simultaneously with improving the quality of a particular urban environment, to influence the attractiveness of its perception by a person. Emphasising its most favourable views, creating various architectural and functional scenarios along existing routes of movement in it with an impact on the interest and active participation of different users in them makes it possible to attract people to this environment, as well as adjust their stay in a particular place and, thereby, activate its "urban performance". A positive perception of that place and the urban environment as a whole affects the desire to stay in the city longer and return to it again. It will, in turn, have a positive impact on its economic, social, and cultural development. Thus, it is relevant for many historical cities, including those in Ukraine.

2. Methodology

The article applies an original method for representing the urban environment in three stages: perception, comprehension, and experience of space. Furthermore, the paper discusses various groups of techniques for its spatially attractive representation, which are systematised according to these stages, as well as three types of "urban performance" (daily, periodic, and one-time), the activity of which influences the attractiveness of a given place.

The attractiveness of the historical urban environment can be defined as an external manifestation of the city's use of its properties accumulated over its entire existence, reflected in its visual appeal, interest to different people, and the ease and convenience of perception. The creation of an attractive, holistic image of a given historical city and its urban environment in the mind of a person should consist of individual impressions within specific routes of its disclosure and cognition, quick and comfortable orientation, activity, and interest in the "urban performance" that will be associated with a particular place. The number and vividness of impressions (many and attractive) should be combined with the depth of content (interesting and of high quality). In other words, the city should have many beautiful, well-organised places that are functionally diverse, where it will be interesting and comfortable to spend free time.

The method of an attractive representation of any urban environment is based on a compelling picture and influence on the feelings and behaviour of a person at three successive stages of evaluating the proposed situation, namely its perception, comprehension, and experience. At the stage of perception, the person likes it, is impressed, or remains indifferent; at the stage of comprehension, it is either interesting or not; at the stage of experience, the person either takes an active part or observes what is happening. The goal of an attractive representation of a specific historical urban environment and programming it for an active "urban performance" is to achieve the maximum positive indicators of the feelings it evokes in a person at different stages. Namely: at the stage of perception – I like or am impressed, at the stage of comprehension – I am interested, at the stage of experience – I will take an active part.

Various techniques for spatially attractive representation of the urban environment were proposed to improve efficiency in the first stage. They will simultaneously help improve the quality of a specific area in the city and its positive perception among people. Using the method of generalisation, we systematised the techniques into relevant groups. We singled out four of them as the most relevant for this stage (techniques of morphological determination of places for stopping and moving, techniques for regulating the dynamics of pedestrian movement in the urban environment, techniques for space limitation, and techniques of implementing attraction). These techniques were illustrated through the visualisations of the restorative-reconstructive transformation concepts for the Bar and Medzhybizh historical centres, developed under the author's supervision.

The next two groups – techniques for leading to the place of impression and techniques of functional-spatial connections between places of impression – we singled out for the second stage. Determining potential places of impression was proposed to enhance the emotional impact of the second stage. They were hierarchically allocated according to the increasing strength of the emotional impact on a pedestrian during the comprehension process of a specific urban space and the actions that take place within it. Using the composition method, we formed these places into a so-called spatial "attractiveness grid" [2].

The key technique – activating an “urban performance” – was singled out for the third stage. To achieve maximum positive feelings in a person at the third stage of cognition of the urban environment, which arouses the desire to become an active participant in its “urban performance”, recommendations for its activation have been proposed. Using the classification method, we identified different types of “urban performance”, each with its characteristics and requiring an urban environment organised in a specific manner. Analysis of the urban environment on the example of a city square with the allocation of three zones (CP – central part, BZ – border zone, and CA – connecting area) makes it possible to show their potential activity in different types of “urban performance”, which is the basis for recommendations regarding their possible functional and physical content.

3. Results and discussions

3.1. Systematisation of techniques for the spatially attractive representation of the urban environment

To enhance the most attractive and screen the unfavourable views of a particular urban environment, to influence its positive emotional perception by pedestrians while moving in it, as well as to attract different people and make them feel comfortable staying there for a long time, we propose techniques for its spatially attractive representation. We generalised them into specific groups and systematised them as techniques:

- Morphological determination of places for stopping and moving.
- Regulating the dynamics of pedestrian movement in the urban environment (slowing down or speeding up movement).
- Space limitation.
- Implementing attraction.
- Leading to the place of impression.
- Functional-spatial connections between places of impression (Fig. 1).

As a key technique, we should emphasise activating an “urban performance”, so consider it separately. More details on each of these groups are below. Conventionally, the first four groups of techniques influence and help a person experience the most positive emotions during the initial stage of assessing an urban environment, its perception. The fifth, and especially the sixth, groups of techniques are relevant for the second stage – its comprehension, and activating an “urban performance” is the main one for the third stage – its experience.

To graphically illustrate the proposed systematisation of techniques, renderings from the restorative-reconstructive transformation concepts, which enhance the attractiveness of the urban environment in the historical centre of Bar, Vinnytsia region, and Medzhybizh, Khmelnytskyi region, Ukraine, were used. The conceptual proposals were implemented as part of diploma designs under the author’s supervision at the Department of ITA KNUCA.

3.1.1. Techniques of morphological determination of places for stopping and moving

A person forms an overall impression of the urban environment by different emotions from the alternation of separate scenes on the way – places of impression, that are interconnected in a single storyline and strung on a single pedestrian axis. Places for stopping alternate with places for

directed movement. People perceive them differently. Places to stay are associated with static, and places to move – with dynamics. Different shapes and rhythms evoke the sensation of stopping or moving. Changing the rhythm (facade details, elements of open space decoration, landscaping elements, etc.) can set the desired speed, slow down, or speed up. Thus, a rhythmic series of identical installations, decorating, or landscaping elements directed in a specific direction means movement. Concentrating them in a particular place means stopping.

A dynamic environment calls for movement, while a static environment calls for rest. Dynamic environments are characterised by rhythm, repetition, and shapes such as triangles, trapezoids, and lines. These shapes a person observes when the street perspective discloses a dominant or accent. Static is defined and created by square or round shapes. Therefore, stopping places and elements of their content should have these shapes. It was precisely these forms that we proposed for the decoration elements of the streets and squares of the historical centre of Bar (Fig. 1).

3.1.2. Techniques for regulating the dynamics of pedestrian movement in the urban environment

We can use these techniques to slow down or speed up pedestrian movement in a particular place. In this case, changing the plasticity of building facades and detailing the open-space elements are worth mentioning. The more detailed the division of the facade or the more interesting the shapes of the space elements, the more time it takes for a person to look at them. Consequently, the speed of movement slows down. Conversely, less detailed facades and spaces are less interesting. Their “reading” requires less time and attention, and a person speeds up.

Changing the horizontal division of building facades or space elements to a vertical one is also effective. Horizontal division we associate with a longer distance that we must cover to reach something, so we feel the need to accelerate the movement. The vertical rhythm, on the other hand, always leads to something important, slowing down the movement. These techniques are crucial to account for in cases of new buildings in historical environments, which we also proposed in the concept of restorative-reconstructive transformation of the Bar historical centre.

The artificial narrowing of open space for speeding up movement and the physical filling of the central part of the space for slowing it down are also actual. The physics and psychology of movement are such that it accelerates in narrow spaces and slows down in wider parts, i.e., on a narrow street, the dynamics of movement increase, and in the broader space, the movement slows down. So, if the attractive scenario requires a pedestrian to pass by some part of the space as quickly as possible, it must be artificially narrowed. It can be done, for example, by installing a row of identical installations in this place. Also, to speed up the movement, it is enough to organise terraces on both sides of the pedestrian street, thus narrowing its space. And vice versa, if you want people to slow down and stop, you can create a place to stop by arranging platforms for impressions and comfortable spending some time on the widening, and turns of the street, in the centre of the pedestrian area. The intensity of movement reduces in these areas.

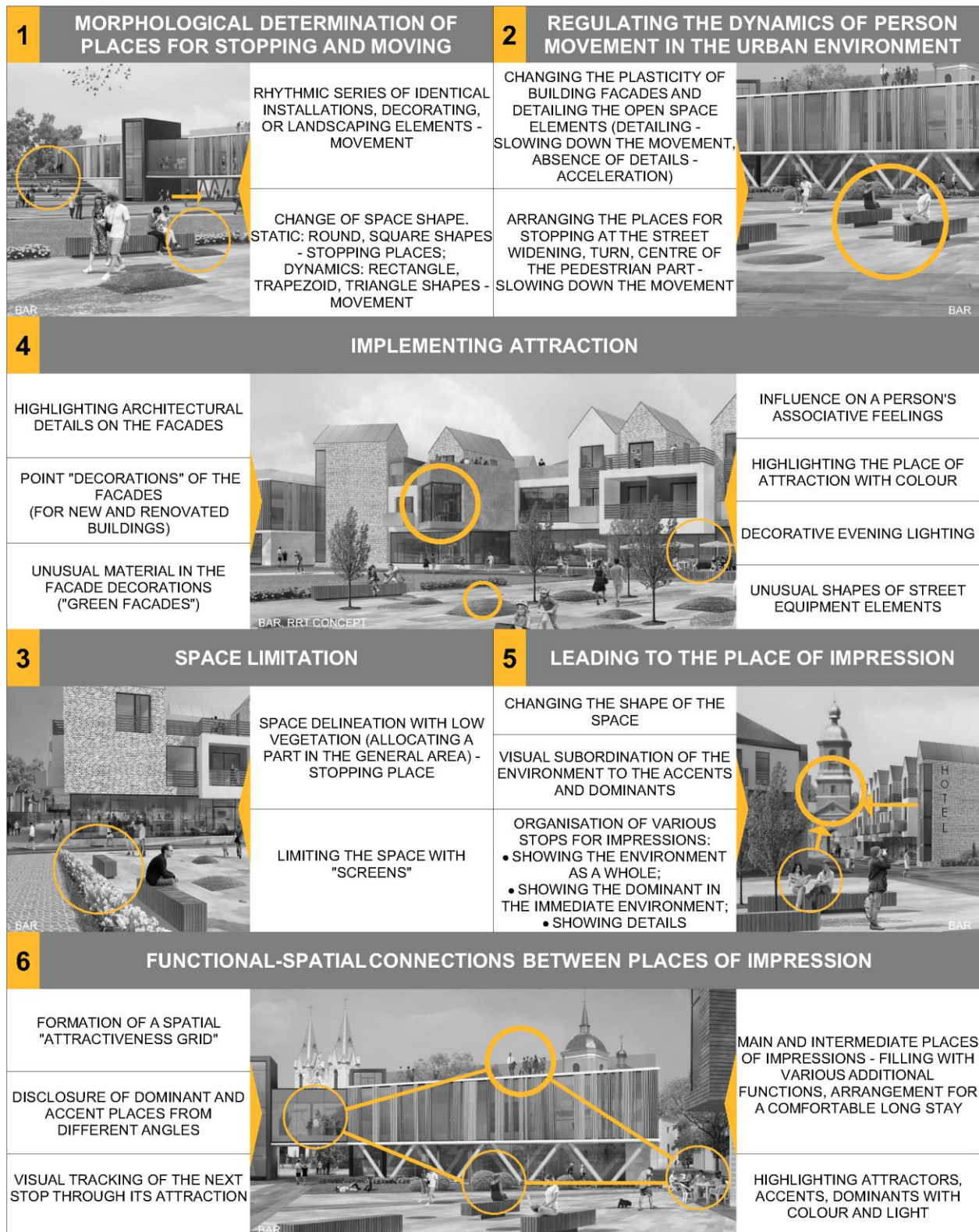


Fig. 1. Systematisation of techniques for the spatially attractive representation of the urban environment. Source: own study

3.1.3. Techniques for space limitation

The alternation of places to move and places to stay for different lengths of time creates a chain of attractive movement in the urban environment. We can adjust the direction of movement. By limiting the space on one side, we set the movement in the free direction. Restricting the space on all sides creates a place for a long stop, encouraging you to stay and explore it, moving within its boundaries. The interest and arrangement of the place determine the duration of the stop.

Space limitation is the separation of different scenes. Certain limitations depend on how independent one scene should be from another. The following techniques are worth mentioning.

Highlighting a part of the space on the way with colour or a step means it is a place to stop. Its purpose is no longer transit, but a place for observation or relaxation, depending on the additional functions we fill it with. We can use such limitations to create places for short-term stops. The transit and stopping areas are divided rather conditionally and can be easily transformed into a single unit if necessary.

Space delineation with low vegetation. This technique highlights a part of the overall scene and delimits scenes that should complement each other. It is advisable to use it to identify places for long-term stays, places for meetings, communication, and open cafes. These can be comfortable places for observation. The height of the limiting equipment (in this case, vegetation) should be no more than 1 meter to allow easy observation from a sitting position. A person sees what is happening around him, but is protected from dynamic traffic. He is in a designated area but still actively participates in the general scene. We proposed such a technique to enhance the market square space in Bar (Fig. 1).

Limiting the space with “screens” is used to close undesirable directions of movement, or separate scenes with different content and emotional load. This technique helps to force people to move in the right direction and attract them to certain places. “Screens” can be created from greenery – trees, bushes. However, such plantings can be both screens and attractors. It all depends on the degree of closure of the scene. When closed by less than a third, it is already an attractor. Behind it or through it (this we can regulate by the height and density of green plantings), a person sees the next hidden scene and wants to see what is hidden there, and what interesting things are happening there. And he goes to this attractor. With a greater scene closure, plantings become a “screen”. Nothing interesting is visible behind them, nothing interesting is happening among them, and the place is not equipped for an extended stay. The person feels the need to move in the other direction, where the next attractor is.

3.1.4. Techniques of implementing attraction

An attractor acts as a link between a person and a dominant, between a person and a scene (place of impression), and between one scene and another (different places of impression). The attractor draws people to a given scene, then leads them to another attractor, and ultimately leads them to the dominant by the most beautiful path.

Attractors can be either material objects or not. Anything that affects various human senses (visual, audio, tactile, olfactory) and evokes positive emotions, such as beautiful buildings, individual highlighted details on them, small architectural forms, light, colour, green spaces, grass, high-quality street pavement, the sound of water, street music, the smell of fresh pastries and coffee. The task of attractors is to attract attention and bring a person to a particular place of impression, which will then remain in the memory. A person remembers the place where the attractors brought him and the emotions that this place evoked.

The existing urban environment of a historical city may remain physically unchanged, but a person’s perception may change depending on its filling with certain elements, details, light, colour, and, necessarily, functions, which, together, will activate its “urban performance”. The scale of these elements and details is essential. Depending on this, they will be accents and form accent-attractive places (where you should stop for a longer time, wait, and relax), or auxiliary attractors, and form guiding attractive places (where to gather, what to see, what to draw attention to), or pointers (where to move on).

The techniques of implementing attraction, which we proposed for enhancing the attractiveness of Bar’s urban environment, include:

- Highlighting places that attract people’s attention with colour or light, and directing their movement to them.
- Highlighting architectural details on the facades.

- Creating of point “decorations” of the facades.
- Use of unusual materials in the facade decorations of the building to draw attention, for example, “green” plant facades.
- Use of decorative evening lighting.
- Use of unusual shapes of street equipment elements (furniture, signs, flower beds, fountains, small architectural forms).
- Influence on a person’s associative feelings, for example, “live” sculptures and “live” street music fix in a person’s memory places to attract attention and areas for spending free time; the sound of water—fountains, places for long rest; green plants—parklets, places for short stops, rest; the smell of baking and coffee—open areas and terraces for cafes, long leisure time (Fig. 1).

3.1.5. Techniques for leading to the place of impression

In an attractive representation of the urban environment, the culmination of a person’s attention should be increasing and maximally revealed in the places for attracting attention and receiving an impression from the accent or dominant. We called them guiding, accent, and dominant attractive places [2]. They should evoke maximum positive emotions and a person remembered through the architecture of the buildings, cosy and comfortable open spaces, various functions, and active “urban performance”.

A so-called spatial “attractiveness grid” is created, where the concentration of impressions, emotions, and memory of the city is growing in its nodes – guiding, accent, and dominant attractive places, and is quieted and evenly distributed in the “connecting” fragments of the urban environment, whose task is to bring you to the place of impression [2]. It is possible through the following techniques, which we also promoted for Bar and Medzhybizh:

- Changing the shape of the space (alternating between narrow – for leading and wide – for impressing).
- Changing the rhythm of the facade division to slow down movement. This technique is particularly relevant when implementing new buildings to enhance the attractiveness of the urban environment.
- Visual subordination of the environment to the accents and dominants regarding the ratio of volumes, detailing, and content. This technique is relevant when introducing new buildings and new elements to fill the spaces.
- Physical and functional filling of the space to organise various stops for impressions, and a gradual approach to the main place of impression through the growth of emotions: showing the environment as a whole, highlighting the dominant in the immediate environment, and revealing its details (Fig 1, Fig. 2).

3.1.6. Techniques of functional-spatial connections between places of impression

These techniques are also crucial for enhancing the attractiveness of the urban environment and creating various architectural and functional scenarios along the routes of people’s movement in it. They, together with the previous group of techniques, also help to enhance the positive emotional impact on people at the stage of comprehending the urban environment. We proposed them for the restorative-reconstructive concepts of the historical centres of Bar and Medzhybizh.

We can carry out the organisation of connections of the places of impression through:

- Formation of a spatial “attractiveness grid”, which involves the location of places of impression in a specific order: pointers – guiding attractive places – accent attractive places – dominant attractive places, at appropriate distances. As well as linking them to existing selected auxiliary attractors, accents, and dominants or creating new ones, if necessary.
- Disclosure of dominant and accent attractive places from different angles. It ensures that a person receives a variety of impressions.
- Visual tracking of the next stop through its attraction. It ensures the cognitive ease of the urban environment.
- Filling the main and intermediate places of impression with various additional functions, and arranging them for a comfortable long stay.
- The highlighting auxiliary attractors, accents, and dominants by filling them with colour and light, rhythm, and pattern of light (Fig. 1).

So, ideally (in the model), the first stop, the auxiliary attractor and guiding attractive place (where a person forms the first impression from the dominant and the environment as a whole) should be at a distance equal to three to four heights of this dominant, but no more than 100 m. From this distance, a person can simultaneously assess the surrounding urban environment, the dominant building, and the activity around it as fully and holistically as possible. A person sees everything as a whole, without details. For a given place (attracting attention and first impressions from the dominant), a person should, firstly, have a picture of a harmonious architectural urban environment, where it is possible to clearly distinguish the dominant, accents, and their ordinary background environment. A person can also assess the quality of this environment in detail. Secondly, from this distance, a person can clearly distinguish movement, perceive a specific scene as a whole, and form first impressions of what is happening there. At this stage, he is an observer of the “urban performance” that is taking place in that scene. The task of this place is to enable the person to evaluate the picture and the action he sees, and to interest him so that he wants to come closer, look at it in more detail, and take part in the action. Some time should be allocated for assessing the situation, and the person should feel comfortable in this place. Therefore, it should be equipped for a cosy stay and observation, regardless of weather conditions. Beyond its primary function as an observation deck, it should incorporate additional features associated with optional social practices to enhance its appeal. From this place, in addition to the perspective of the dominant and the dominant attractive place, the chosen accent and the next place of impression – the accent one – should also be visible. Moreover, the interior space of the surrounding buildings and their “performances” should also be visible in the foreground (if their ground floor is open). If a person is interested, they can go inside the building and stay there for a while.

The next – an intermediate place of impression from the dominant (accent attractive place) – should be formed at a distance equal to approximately two of its heights, but no more than 50 m from it. The place is associated with a particular accent, preferably one that already exists. At this distance, a person should be able to perceive the dominant in the immediate surroundings. In addition to the ratio of the overall volumes, he will be able to assess the expressiveness of the dominant in relation to its immediate surroundings and evaluate in detail the beauty of the accent building and the quality of the environment. For the overall perception of the urban

environment and the formed spatial “attractiveness grid”, the accent place is the most important, as it is the key connecting node and an intermediate place for impressions, and therefore should become a place of interest for long-term spending (Fig. 2).

Firstly, in this place, a person actively participates in what is happening in the middle of this scene. The attractiveness of the environment, the convenience of staying, and interest in what is happening here determine whether a person wants to stay and be an active participant in this “urban performance”. Secondly, being close to an accent building, a person can not only evaluate it in detail but also, with the openness of its ground floor, easily assess the interest of what is happening inside the building. If interested and willing, he can go inside and participate actively in the “inside performance”. And thirdly, he is also an observer of what is happening in the next, dominant, attractive place. His desire to continue exploring the urban environment depends on how much he is interested in its “urban performance”.

Accent attractive places can be several. It is necessary to reveal the dominant from different angles. The additional functions of these places should differ slightly. It ensures the interest and preservation of the urban environment’s multifunctionality.

Thus, in an accent attractive place, in addition to being an active performer in its “urban performance”, a person also becomes an observer for those scenes that open into the interior of the surrounding buildings, as well as into the urban environment – to the dominant or next accent attractive place. They should be formed at a distance approximately equal to one height of the dominant or next accent building, respectively, but not more than 15 m from it. It makes it possible to perceive the details of this building and get a positive impression of it from a closer angle. It should be the next place of impression.

Attracting a person to the next, dominant, attractive place should occur by arousing in him an interest in the details and a desire to see the dominant from a close angle and take an active part in the “urban performance” that is taking place around it. From this place, a person can see the details of the dominant building and its surroundings and assess their beauty and state of preservation. Like an accent attractive place, it is also strategic in the attractive representation of the urban environment, because it is the boundary and connection between the open space of the street or square and the building itself, to which the attractive design leads the pedestrian. Being in this place, as an active performer in its “urban performance”, a person again becomes an observer of what is happening in the building itself. If it is beautiful and interesting there, the person will enter it and become an active performer in the “inside performance”.

Thus, the dominant attractive place is the primary point of attraction and the primary source of impressions. To evoke the most positive emotions in a person from staying in it, we should activate all the criteria of a multi-comfort urban space. It should become a place for long-term leisure activities for a wide range of people. It means being visually attractive, enjoyable (with various functions), easy to perceive cognitively, comfortable and safe to stay in, and convenient for movement. All of this together will attract attention, impress, create an active “urban performance,” and spark a desire to stay and participate, resulting in a wish to revisit this place.

3.2. “Urban performance”: activating, types

We should highlight this technique as the most important for the urban environment’s spatially attractive representation and achieve maximum positive feelings in a person at the last stage

of cognising and evaluating the place – its experience. Nothing draws a person's attention to a particular place like active actions in it. It requires filling it with various functions and creating conditions for a long-term, comfortable stay, ease of information perception, and movement. "Urban performance" indicates the attractiveness of an urban environment and the activity of urban life. Its activation is a determinant of enhancing the attractiveness of a particular place in the city and the city as a whole.

The process of "urban performance" can be described as follows. Let's take the central city square as the place of action. In our concepts, it was the central square of Bar or Medzhybizh. People who come to the square join the action that is currently taking place there. The possibility and activity of the action depend on the quality of the "place", its physical and functional content (an arrangement and variety of functions), the presence of active performers, and the quality of connections (the information perception, the comfort of movement). People who are already on the square or coming to it are or can become active performers or observers of this "urban performance" (Fig. 2).

Those who are in the border area of the square are observers of the action in the centre of the square or its buildings. If they are interested in what is happening and enter the centre of the square or a building, they will become active performers in the action of their choice. At the same time, they are already active performers in the action in the border zone of the square. This action (for example, rest, communication, observation, eating) hinges on the functions available in this zone. The duration of stay depends on the interest and variety of functions, as well as the quality of the area's arrangement. The people in the centre of the square or the buildings surrounding it are observers of the action in its border zone. If interested, they can enter this zone and actively participate in its "urban performance". Therefore, in every urban environment, in this case, on the square, there should be allocated, qualitatively equipped, and conveniently interconnected places for intended active action and observation: the main, secondary, and connecting places for different types of "urban performance".

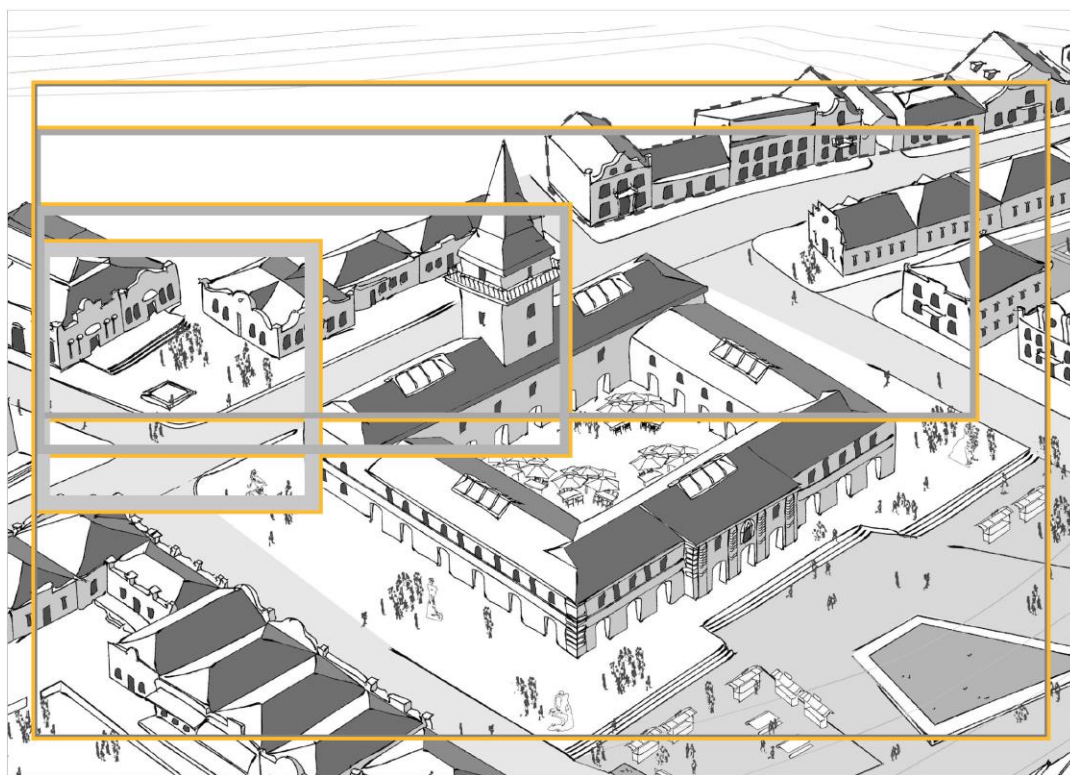


Fig. 2. Concept of Medzhybizh market square rehabilitation and activating its "urban performance". Source: own study

It is possible to distinguish three types of "urban performance". These are daily, permanent (everyday urban actions), long-term periodic (thematic urban events lasting a defined time), and short-term, one-time (urban holidays) [2]. They require an urban environment organised in a certain way. For recommendations, let's consider the example of the city square again, along with the illustration of the Medzhybizh historical centre (Fig. 3).

In the daily permanent "urban performance", the active place that carries the main functional load is the border zone (BZ) of the square and the buildings and blocks that form it. The border zone (BZ) is the main one (Fig. 3). It should have all the functions necessary for the daily life of residents, and their mandatory and optional social practices. The central part (CP) – observation deck for impressions, is secondary, represented by the functions of optional social practices, namely recreation. Finally, the

connecting area (CA) is the territory between the central part and the border zones of the square – between the observers and the active performers of this "urban performance", which serves as a transit, as well as an observation and communication point.

The hierarchy of spaces is entirely different in a long-term periodic "urban performance". The central part (CP) of the square becomes the main place of action. Here, a direct interaction between active performers takes place. All other parts (BZ, CA) should be comfortable for long-term observation (Fig. 3).

During a short-term, one-time "urban performance", active action occurs both in the centre of the square (CP) and in its bordering zone (BZ). The connecting area (CA) of the square loses its transit function and also acquires the role of an active "urban performance".

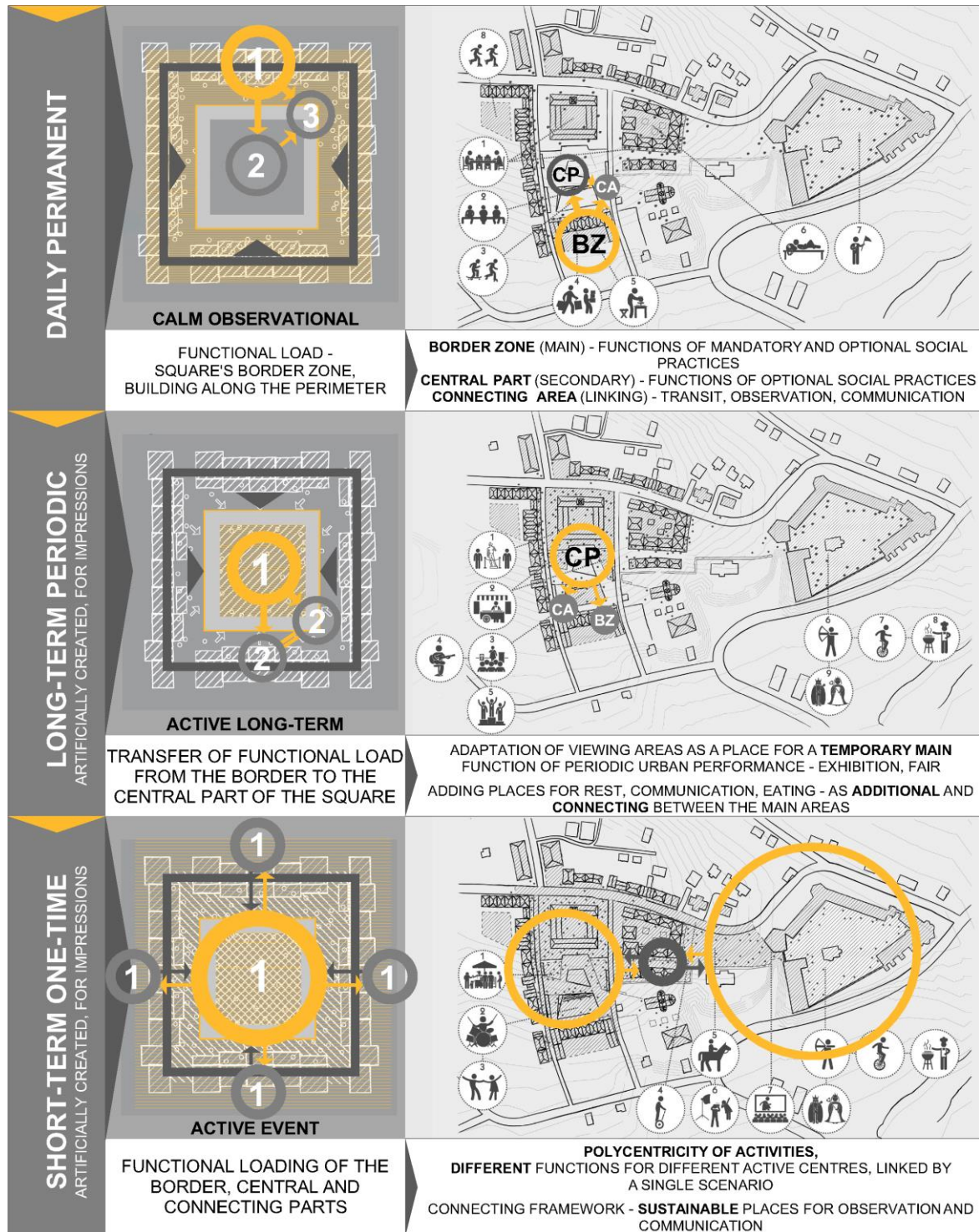


Fig. 3. “Urban performance” types: schemes for organising the urban environment. Medzhybizh historical centre. Source: own study

So, each type of “urban performance” has its characteristics and assumes the presence of a place, an urban environment, organised in a certain way. The long-term periodic and short-term one-time “urban performances” are artificially created for a specific event; they are festive, meant to make an impression. We can designate groups of predominant users of “urban performance” at different time levels: residents on a permanent (long-term) basis and tourists on a short-term basis. The daily permanent “urban performance” is crucial because it takes place in the city every day, and its predominant users on a permanent (long-term) level are residents. Therefore, it is necessary to use the characteristics of the place as a basis to ensure an interesting and active permanent “urban performance” and to develop the

urban environment accordingly. It should also be able to transform for long-term periodic and short-term one-time “urban performances”.

Each type of “urban performance” requires certain qualities of the place. In this case, different functions become active. Places with these functions become more in demand and, accordingly, active. Therefore, to activate the desired “urban performance” in the chosen place, fill it with these functions. And, as noted, the determining factor is the daily permanent “urban performance” associated with places used by people (primarily city residents) in the course of their daily mandatory and optional social practices, namely living, working, moving from work to home, shopping, recreation, entertainment, cultural

pastime, etc. Periodic and short-term “urban performances” reveal and activate places that host optional social practices related to recreation and leisure. For a short-term stay (for tourists), it is essential to fill the urban environment of a historical city with places of active attraction that make an immediate, vivid impression. For a long-term stay (for residents), it is essential to fill it with places where you want to spend your free time each day (Fig. 3).

Thus, based on the proposed techniques of regulating the dynamics of movement, bringing people to places of impression, finding or creating attractors to draw attention to these places, screening unfavourable directions and places, as well as activating the “urban performance”, we can achieve the spatially attractive representation of the urban environment. In the process of a person’s presence in it, there is an alternation of places to stay (squares, courtyards, platforms, terraces) and places of movement (streets). They have different purposes for creating an “urban performance”. Places of movement are links between places of stay. But they should not serve only as transit. They can be uncomfortable for pedestrians because only one movement dominates. It is desirable to combine them with places of different lengths of stay, physically and functionally filling them to transform them into interesting and comfortable connections. To keep people on the street longer, we should shift the emphasis from a place only for movement (transit) to a place of quality long-term stay, especially for pedestrian urban space. The long-term presence of various people in an urban environment will attest to its attractiveness

4. Conclusions

Thus, the proposed method for the spatially attractive representation of the urban environment allows for the emphasis of its most appealing views and the creation of various functional scenarios along existing routes of people’s movement, which affect their interest and active participation in its cognition. It helps draw different people to such places and cities, thereby contributing to their activation and development.

The generalised and systematised techniques for the spatially attractive representation of the urban environment across three stages of its cognition make it possible, while improving the quality of a specific urban environment, to influence a person’s perception of its attractiveness and to activate its “urban performance”. It is precisely that an active “urban performance” is the key to enhancing the attractiveness of the urban environment, starting the cumulative process in the historical city and thus its development. The proposed techniques were illustrated using visualisations from the concept projects of restorative-reconstructive transformations of the historical centres of Bar, Vinnytsia region, and Medzhybizh, Khmelnytskyi region, Ukraine, carried out under the author’s supervision.

The three identified types of “urban performance” – daily permanent, long-term periodic, and short-term one-time – showed that the activity of each type influences the given place’s attractiveness. The daily permanent “urban performance” and its predominant users at the permanent (long-term) level – residents – were distinguished as the primary. Exactly this “urban performance” and its interest serve as a marker of the activity and attractiveness of the existing urban environment, contributing to the improvement of its quality.

Based on the identified techniques and the analysis of the potential activity of different zones of the urban environment in different types of “urban performance”, recommendations were given on the activation of the desired “urban performance” in the

chosen place by organizing it in a certain way, filling it with specific functions and places used by people (primarily city residents) in the course of their daily mandatory and optional social practices. A city square was used as an example to illustrate them.

Each type of “urban performance” has its characteristics and requires certain qualities of the place. In this case, different functions become active. Places with these functions become more in demand and, accordingly, active. Therefore, to activate the desired “urban performance” in the chosen place, fill it with these functions. And, as noted, the determining factor is the daily permanent “urban performance” associated with places used by people (primarily city residents) in the course of their daily mandatory and optional social practices, namely living, working, moving from work to home, shopping, recreation, entertainment, cultural pastime, etc. Periodic and short-term “urban performances” reveal and activate places that serve optional social practices and are related to recreation and leisure. For a short-term stay (for tourists), it is essential to fill the urban environment of a historical city with places of active attraction that make an immediate, vivid impression. For a long-term stay (for residents), it is essential to fill it with places where you want to spend your free time every day.

As a further development of this research, the proposed techniques for the spatially attractive representation of the urban environment can be supplemented with new ones. Their application can be practical for different cities, not just historical ones, and further study can be conducted in this direction.

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