The Remains of the Bridges

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Abstract. Bridges are often perceived as a determinant of progress and engineering skills and a symbol of economic potential. The potential of people, city or country - the place where they were created. Therefore, many such bridges have become very important buildings in their cities. They were important both to their originators and promoters, creators and users and to the places themselves that were in some way co-created. For the authors, the city wasn’t and isn’t just an urbanized space, which was created at a specific time and location, yielding to the processes of development, transformation and even devaluation. The city is an expression of spatially realized ideas and decisions made in the field of urban and social development. It was and still is a place of exchange of thought and civilization development, reflecting the ambitions, aspirations and diverse cultures of its inhabitants. It is a place of coexistence of the two spheres: material and human, which together form a complex system with interrelationships, functioning on the principle of feedback, imposing on each other distinguishing marks. The paper tries to answer the question: what traces in the spatial structure of the cities in which they were created, have left bridges that are often outstanding works of technology and art. But the search for these traces concerns the physiognomic and social realm of the city. Therefore, questions concerning them are in the field of spatial identity space. The research focuses on the analysis of archival iconographic materials in the field of construction history and contemporary satellite images from the location of selected bridges. They are supplemented with stories of cultures and people connected with these places. They create a unique story about the traces of bridges in the city. These selected places are Avignon, Carcassonne, Paris, Prague, Mostar, Narni and small and old Polish city Klodzko.

1. Introduction

The main function of the bridge was to cross to the other side, that is the communication link between the areas separated by an obstacle [2]. Such technically feasible connections have over time become not only a measure of progress and engineering skills, but also a symbol of people’s, city’s, region’s and country’s potential.

The linking function has given the bridges a strong symbolic meaning due to the fact that it may be an element connecting two persons or communities that are different or distant from each other.

There are many examples of bridges that have a significant impact on the city’s perception, or even on its urban structure. There are also those which, thanks to their location in cities at cultural or ethnic borders, have more often served as symbolic links. That is why many of the city’s bridges have become the most important buildings in their cities and have even contributed to the place’s image [8].
Sometimes they play a role of the highlights, which attract tourists the most, or are even a characteristic elements of the city’s landscape (icons), thanks to which it is recognized.

2. Bridges as an indication of the city's development

Bridges are often perceived as a determinant of progress and engineering skills and a symbol of economic potential. The potential of people, city or country - the place where they were created. Therefore, many such bridges have become very important buildings in their cities. They were important both to their originators and promoters, creators and users and to the places themselves that were in some way co-created [9].

Almost all major agglomerations are crossed by some larger or smaller water barrier. Nowadays it is said they are cut, but surely the original settlement started only on one side. Not until the bridge leading to the other side had been built, a new space for further development was opened. The efficient functioning of the enlarged urban organism forced in turn the creation of new bridges and accompanying communication arteries, which often determined the entire urban layout of the city.

It resulted both from the above mentioned internal and external conditions, whereby firstly should be included the creation of trade routes in Europe [1]. The use and development of the embankment was also changing, as the number of ferries from the other side of the river did not reach so often. Certainly it is a history of many cities all over the world.

3. City as a place of mutual coexistence of physical and spiritual spheres

Then, what is the city?

In reply to this question, when the first town of Ur in the Sumer's kingdom passed about 4 thousand years, appear many-sided dimensions and meanings. It leads to diversity of points of view and consequent divergences in its definition.

It can be seen as: 'an architectural work, a structure in space, with a large scale that can only be grasped over long periods of time' [7]. Another time it appears as a living organism, which "differs from a machine in that it shows a high degree of internal variability and plasticity" [4]. On the one hand, we are dealing with the material - permanent face of the city, and on the other hand, with the immaterial - changeable character, the essence of which is difficult to define urbanity.

But a city is not only a "structure", an "organism" or a set of material elements. First of all, it is the people who built it, lived in them, changed and improved over the years. The evolution of the concept of city for so many years, it is also the evolution of civilization. The city is the co-existence of two elements: the human sphere - the social one, and the material sphere. Such a dual view is the characteristic of the city's sociology. Aleksander Wallis sees the city as "a system composed of two organically linked, interacting on the principle of feedback, but autonomous subsystems - urban and social" [10].

In this dual system, the urban subsystem is defined as a set of material elements, created both as a result of human activity, including bridges, and forces of nature, together constituting a spatial structure. On the other hand, the social subsystem is composed of the users of the city, whose basic structure is created by its inhabitants [6]. Although each of the subsystems may seem autonomous, there is an obvious interdependence between them. The development of civilisation shows that "the construction of the urban subsystem reflects all the basic differences of the social subsystem (…)" and vice versa "(…) the structure and functioning of society is influenced by the current construction of the city". As a matter of fact, interdependencies are not parallel in time and the spatial structure reacts to changes with a certain delay in relation to the social structure.

For the authors, the city was not and is not just an urbanized space, which was created at a specific time and location, yielding to the processes of development, transformation and even devaluation. The city is an expression of spatially realized ideas and decisions made in the field of urban and social development. It was and still is a place of exchange of thought and civilization development, reflecting the ambitions, aspirations and diverse cultures of its inhabitants.
4. Remain of bridges in the city
The essence for the Authors of thinking about the traces of bridges in the city is the fact that the city is a place of coexistence of the two spheres: material and human, which together form a complex system with interrelationships, functioning on the principle of feedback, imposing on each other distinguishing marks. That is where the question comes in: what traces in the spatial structure of the cities in which they were created, have left bridges that are often outstanding works of technology and art. But the search for these traces concerns the physiognomic and social realm of the city. Therefore, questions concerning them are in the field of spatial identity of space.

The research focuses on the analysis of archival iconographic materials in the field of construction history and contemporary satellite images from the location of selected bridges. They are supplemented with stories of cultures and people connected with these places. They create a unique story about the traces of bridges in the city. These selected places are Avignon, Carcassonne, Paris, Prague, Mostar, Narni, and small and old Polish city Kłodzko.

4.1. Avignon
At Avignon, the bridge was the strategic point of the route connecting Lyon with the Mediterranean ports and an important communication route linking the main town of the historic county of Venaissin, an exclave belonging to the papal Church State, with the Kingdom of France. From the time of its creation (1171/1185), until its destruction by flooding in 1668, it was "anchored" strong on both sides of the Rhône. On the left bank, in Villeneuve-les-Avignon, in the citadel with the tower of Philip IV
the Beautiful from the 13th century, and on the right, in Avignon, the gate tower from the 14th century ‘figure 2’.

![Figure 2. Seventeenth-century engraving showing the bridge between Avignon and Villeneuve-les-Avignon.](image1)

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![Figure 3. Avignon - the body of the Papal Palace crowning the passage through the Rhone.](image2)

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It is worth noting that the majesty of the bridge and its connections is intensified by the shape of the Papal Palace visible from the bridge, making the pilgrims aware of the power of the Pope's institution at that time ‘figure 3’.

### 4.2. Carcassonne

Thanks to its location and construction at the turn of the 13th and 14th centuries by the French kings Louis IX and his successor, Philip III, the city's external defensive walls were considered unrecoverable. Traces of this splendour can still be admired today. But these associations and the interpenetration of symbols were used for the name of the board game ‘figure 4’. And is "carcassonne" today more often associated with the city or with a popular game?
4.3. Paris, with the footsteps of the Romans

Today, the oldest existing bridge in Paris is the Pont Neuf, which was the first undeveloped bridge in Paris, with separated pavements to protect people from mud and horses and provided with lighting. However, the island of Île de la Cité in Paris, overlooked by Notre-Dame, has nine bridges.

Although in Napoleon’s time the third centre of the island was heavily changed by baron Haussmann, who headed the major reconstruction of Paris, the bridges themselves and the accesses to them were intact, even the location of the crossroads connecting the main boulevards of Paris was adapted to them. Comparing the historical map of Paris in 1572 with the attempts to reconstruct the Gallo-Romaine sediments of the 1st century BC, the following six bridges are particularly noteworthy. There are: Pont au Change, Pont Notre-Dame, Pont d’Arcode Pont au Double, Petit Pont i Pont Saint-Michel, all on the axes of the historic castrum. Nowadays, of course, it does not exist, but it leaves clear traces in the construction of the urban structure of the environment ‘figure 6’. Today, they are the diameter axis of the oldest part of the city, which runs perpendicularly to the main axis formed by Rue de Rivoli and Avenu des Champs-Élysées.
Figure 6. Paris - location of the original castrum in the Gallo-Romain period together with the routes to the camp/city. Visible historically well-established fragments of the urban structure around cite and castrum.

4.4. Prague
When the Charles Bridge in Prague was built in the Middle Ages, it was probably not thought of as an icon of the city. Today, however, this object has become one of the most recognizable in the world. It is an integral part of the city. This is thanks to Peter Parler, the author of the extension of St. Wit's Cathedral and Stone Bridge. Works that "merged" in this place with the spatial and social structure of the city ‘figure 7’.

Figure 7. Prague - the world's most recognizable unity of urban structures.

4.5. Kłodzko (Poland), ctrl-c, ctrl-v bridge
St. John's Bridge is one of the most characteristic monuments of Kłodzko, connecting the Old Town with the part of the city called the Sand Island ‘figure 8’. Sources indicate different dates for the start of the bridge’s construction. It can be 1281, which is confirmed by the date carved under the statue of Christ on the cross or 1286, written by the chronicler Georg Promnitz.
The original construction of the bridge was probably completed in 1390 and the characteristic figures on the bridge began to appear from the 16th to the 18th century founded by generous and wealthy townsmen, thus creating a peculiar gallery ‘figure 9’.

Figure 8. Klodzko (Glatz) from the 16th century with the visible St. John's Bridge.

Figure 9. Klodzko, view of the bridge with a gallery of figures.
Among many figures there is a statue of St. Venceslas, the patron of Czech Republic, placed on the south-western side of the bridge opposite to St. Francis Xavery, which was supposed to indicate similarities between the two figures in the compositional and ideological sense. The sculpture of St. Wenceslas was erected in 1715, and both the founder and the artist are unknown. The author presented the saint as a knight holding a banner, which was supposed to be a reference to his famous actions in defense of the sovereignty of the state. And this is the Czech Kingdom, which at that time included Prague and Kłodzko.

In addition, the bridge and the sculptural decoration form an architecturally interesting whole and are very often compared to the Charles Bridge in Prague. It is even sometimes called the Little Charles Bridge.

4.6. Narni

The ruins of a Roman bridge over the Nera River in the Italian town of Narni have attracted landscapers from all over the world for years. Why? Whether for the fact that it is really a beautiful view ‘figure 11’, or for the fact that artistic sensitivity notices an interrupted structure ‘figure 10’, the end of something. Maybe a tragedy embedded in the past and attracting with its unknown history?

Figure 10. Narni - wiring diagram of broken connections.

Figure 11. Narni - a "separate" part of the city..
5. Conclusion - identity of the place

The bridge has been an important symbol in many cultures for centuries. It is a combination of two worlds, a connection in time and space. It could mean justice, stability, fidelity, life, non-sacredness, trial, change, desire, mediation. Undoubtedly, the bridge belongs to symbolic places, if only because it illustrates the border zone, it is something in between, a symbol of division and connection at the same time. It gives an opportunity to cross an obstacle or a border. In symbolism - even on the border of another world. When it is open, it becomes a link, but when we consciously close it, it becomes a symbol of division and a narrow, guarded window for a better world. We now live in a picture culture in which easily recognizable visual symbols are important as a characteristic or symbol of something. Until recently, the icon was only a religious image. Semiotics and linguists began to define some kind of signs in this word - those that resemble their content in their shape. Today, in the case of the city, its icon may be a symbol that visually and verbally presents the values and history of the place. The role of contemporary urban icons is, among others, a source of awareness of the existence of the city and of associations and opinions about it, a means of communication, an element of visual identification, or inspiration for the strategy of creating a brand of cities.

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