FIRST STEPS IN URBAN PLANNING OF BULGARIAN CITIES WITH PARTICIPATION OF CZECH ARCHITECTS AND ENGINEERS AT THE TURN OF 19TH AND 20TH CENTURIES

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ABSTRACT

This article focuses on beginnings of the urban planning and first organized planning activities of Bulgarian cities at the turn of 19th and 20th centuries when many Czech engineers and architects participated significantly. A common feature of all Bulgarian cities was irregular structure and build-up area. The main task of the Czech engineers was to cope with this situation and to design modern cities. In general, the original structure did not make planning easy and unambiguous. Planning of the cities destroyed in the Russian-Turkish war in 1877-78 was easier. A possibility to apply a new city structure freely existed in Stara Zagora and partially in Nova Zagora. A usual principle was straightening of the streets where the engineers used original street network and the new modern streets were built according to it, e.g. the centre of Kystendil and the old part of Nova Zagora. These principles were used also in some central parts of Sofia and Plovdiv. The city of Sofia itself is a distinctive example. Although the original structure was preserved during the war and in the first steps the principle of straightening of the streets in the centre was applied, the other parts of Sofia were designed with a new structure and the old city disappeared. Plovdiv is in contrary to Sofia and its original structure was preserved as an old city and the new one was joined to it in neighbourhoods.

KEYWORDS

Urban Planning; Bulgaria; Czech Architects and Engineers; turn of 19th and 20th centuries; Stara Zagora; Nova Zagora; Sofia; Plovdiv;

INTRODUCTION

This article focuses on beginnings of an urban planning and first organized planning activities of Bulgarian cities at the turn of 19th and 20th centuries when many Czech engineers and architects also participated in significantly. The Czech presence became a phenomenon in all cultural fields in Bulgaria at the end of 19th century. Having chosen some illustrious examples, the article tries to make an overview of possible planning principles and attitudes to the original city structure which were applied at that time in Bulgaria. The specific time context requires tracing shortly the distinctive development of the Bulgarian lands and the factors that influenced cultural and social progress in the 2nd half of 19th century in this Balkan country.
METHODS

The followed period and the work of the Czech engineers and architects in Bulgaria have not been researched widely and deeply yet. Some Bulgarian authors have dealt with some of these engineers in their works (e. g. [2] [5] [6] [7] [8] [9] [19]), but nowadays there is no detailed study tracing the work of Czech engineers in Bulgaria. Even in the Czech Republic this topic is known only little. One of the recent attempts was done by an architect David Vávra and his documentary Šumné stopy (2012).

The topic is also the theme of author’s PhD. thesis. This article uses historiographical methods based on a heuristic research and includes some new facts discovered during the author’s research in Bulgarian and Czech archives.

TIME CONTEXT

In 19th century Bulgarian complicated and dynamic evolution went through. It can be generally divided into two completely different periods. The first period until 1878 was a part of much larger period called in the cultural history Bulgarian National Revival (or Bulgarian Renaissance). This period was closely linked to the development of Ottoman Empire and Bulgarian land was part of it (1396-1878). The beginning of this period can be found in the 18th century and therefore in the 19th century the main cultural processes culminated. The Orthodox faith and the family as a main social unit, holding together and handling the family memory and traditions over to the younger generations, helped Bulgarian people to retain their national identity. The whole process of Bulgarian National Revival was linked with total national awareness creating stable school system (around 1820-70), obtaining independence of the Bulgarian church from Greek orthodox church (1871) and gaining freedom, which happened in February 1878 as a result of Russian-Turkish war (1877-1878) when Bulgarians could have a free country again.

The second period began after the Liberation and was characterized by the difficult task of building the new state (broadly speaking from the grounds), returning to the European cultural stage, obtaining national uniting of all Bulgarian lands (which never succeeded completely) and political independence (up to 1908). During the first nine months after the Liberation (from February 1878) there was a temporary Russian government in the Bulgarian lands which established the foundations of all Bulgarian state institutions. Shortly after the Liberation the Berliner congress (June 1878) divided freed Bulgaria into the parts where only Bulgarian Principality and autonomous territory of Eastern Rumelia remained free. These lands were developed in the same direction until they united again in 1885. This period can be characterized initially with fluent continuity of Bulgarian traditions and at the same time rapid pace of progress directed to the high level of West European culture and trying to get rid of everything reminding Orient and the time of Ottoman yoke. This led to full leaving of the traditions. After 1878 a lot of foreign specialists came to Bulgaria, a great deal of them was from the Czech lands (at that time a part of Austro-Hungarian Empire). They brought the progressive ideas and tendencies of the European culture and architecture. [1]

MAIN CHARACTERISTICS OF BULGARIAN ARCHITECTURE AND URBAN PLANNING AFTER THE LIBERATION 1878

A new development of architecture began together with the building of the new state. New solid houses, administrative, school and sacral buildings were built. This gradually changed the visual appearance of the Bulgarian cities. But at that time the main task, linked to the development of the architecture, was to plan Bulgarian cities because their development was not subject to any regulation and urban planning principles during the long lasting Ottoman yoke. During the Russian-
Turkish war (1877-1878) many cities and villages were burnt down. The extant ones retained their typical oriental city structure and appearance with the feature of narrow crooked streets (Fig. 1), which were no more satisfactory for the new architecture, as well as for the new social and economic conditions. So one of the most important tasks of the new state was to organize and solve restoration of the damaged cities and modern planning of survival ones. At the time after the Liberation the first technical offices were established by Russian engineers involved in the planning, but in the first years the planning could begin only in a few cities: the organization of the new institutions was very difficult and the whole process was very slow.

First planning activities (in the cities of Sofia, Plovdiv, Silistra and Rousse) were done by the Russian military specialists who were a part of the Russian army. They were military topographers and engineers, who stayed after the war in the country and helped the temporary Russian government. Later, more active administration began in some cities solving the matter of planning faster. Some of the specialists in this field (particularly engineers and technicians) had stayed in Bulgarian lands even before Liberation and had been involved in designing and building of the so-called railway of Baron Hirsch. After the Russian-Turkish war they continued living and working in Bulgaria. However, there was need of much more specialists and many of them were invited from abroad (mainly from Austro-Hungary, Germany, France, Italy, Russia or neighbour countries as Greece, Serbia, Romania, etc.). Many foreign engineers and architects came to Bulgaria on their own, because the new freed Slavonic country offered a new field for professional work. Statistics show that over 100 foreign specialists worked for first 5-6 years in Bulgaria. The specialists held high and responsible positions such as main city architect or district architect (many of these architects were Czech). These architects solved all questions connected with the building in the city/district as well as the city planning. Another matter was that many specialists were often changed with the new chosen government or municipality and the work started on the planning was stopped, so that the new appointed architect had to start everything from the beginning. Sometimes the ready plan was not realized because of other reasons. [2]

Fig. 1 Typical appearance of the Bulgarian cities after the Liberation: the city of Sofia, old engraving. 
Source: http://stara-sofia.com/gravsharenmost.jpg
In 1881 *Rules for construction of private buildings in the cities of Bulgarian Principality* were approved. They constituted the first legislative document which dealt with matters and principles of city planning. A new requirement of planning was included, that was the geometric principle of city planning (at that time called an „American” or „European” way of planning). In autonomous territory of Eastern Rumelia there had not been any legislative documents till 1885, when Eastern Rumelia united with the Bulgarian Principality. First steps in the planning were based on working out a cadastral plan (most of these pictures of the biggest cities were made by Russian topographers during or straight after the Liberation of Bulgaria) and then the architects draw a new regulation of the city streets. This „regulation” was linked mainly with „straightening” of the crooked streets and defining the spaces for new public buildings. The complex solving the urban planning including city utility came with a new law in 1897. [2]

**CZECH ROOTS OF BULGARIAN URBAN PLANNING**

The biggest part of the foreign specialists came from the Czech lands. The Czech presence in all Bulgarian cultural fields became a cultural phenomenon. [3] [4] Czech technicians worked on planning of about 40 Bulgarian cities and towns e.g. Libor Bayer, Josef Boháček, Jeroným Bohutinský, Václav Havrdã, Josef Jukl, Bohuslav Kočí, Václav Krásný, Adolf Kolář, Jiří Prošek, Václav Roubal, Josef Schnitter, Karel Trnka etc., who worked out the first cadastral and regulatory plans of a big part of Bulgarian cities and laid the foundations of modern urban planning in Bulgaria. In this article the author has chosen some examples that are different, distinctive and use different planning principles: the plans of the cities of Stara Zagora (1879, Libor Bayer), Sofia (1878-1881, Adolf Kolář, Jiří Prošek and Václav Roubal etc.), Nova Zagora (1880-1883, Libor Bayer), Plovdiv (1888-1892, Josef Schnitter) a Kyustendil (1892, Libor Bayer). [2] [5] [6]

![Fig. 2: Original structure of the city of Stara Zagora before the war 1877-1878. Source [2]](image-url)
The planning of the city of Stara Zagora (1879)

The city of Stara Zagora was totally destroyed during the Russian-Turkish war 1877-1878 and after the Liberation and Berlin Congress it stayed in the territory of Eastern Rumelia. The city needed urgently a new plan to be built again. This plan was made by a Czech architect Libor Bayer within two months.

After the Russian-Turkish war (February 1878) the survived inhabitants came back to the destroyed city. A new municipality had to solve a first problem connected with housing. Some of the families settled in some extant Turkish houses, but all the conditions were dismal. At the beginning of 1879 the number of inhabitants increased dramatically because some of the Turks, who had run away during the war, returned and wanted their own houses. The question of planning the city was very urgent. The main problem was how to solve the ownership of all estates. A special commission evaluated the estates according their state before the war and then all of them were expropriated. Many inhabitants did not want to give their estates but after a lot of city meetings all of them agreed (February 1879). The municipality did not have any specialists so they found a Czech technician Libor Bayer (around 1850-1912) working at that time in the city of Tatar Pazardzhik and invited him to become a city engineer and work out a new city plan. [7] [8] [9]

Fig. 3: Regulatory plan of the city of Stara Zagora by Libor Bayer, 1879.
Source: Regional Historical Museum in Stara Zagora
In April 1879 Libor Bayer arrived with his family to Stara Zagora and he started working on the city plan immediately. Because of the housing crisis there was no time to do any detailed research on the earlier situation of the city and in May the plan was finished. Bayer applied a freely orthogonal geometrical network that did not take into account the old streets and buildings. On 21\textsuperscript{st} of May 1879 the municipality accepted the plan and it was sent to the Directory of public buildings of Eastern Rumelia to be approved. Before approving the director Georgi Valkovich sent the main architect of Eastern Rumelia, the Italian Pietro Montani, to Stara Zagora to check the plan properly in situ. On 2\textsuperscript{nd} August 1879 the plan was approved by Montani and then also by the general-governor of Estern Rumelia Alexander Bogoridi by decree No. 194 from 27\textsuperscript{th} August 1879. The final plan was finished in scale of 1:4000 (Fig. 3). After a month on 23\textsuperscript{th} September 1879 the basic stone of the new city with memorable plate for future generations was laid down by Alexander Bogoridi. So at last in 1879 the construction of new houses began and in the end of the year there were about 310 new houses. The beginning was very difficult and there were a lot of people without housing and a lot of complainers. But in some time the plan was realized and the city of Stara Zagora turned into a modern European city. [7] [8] [9] [10] [11]

Fig. 4: The new street network according the Bayer's regulatory plan of the city of Stara Zagora, 1879.
Source: author
Bayer’s plan was worked out in a tersely geometrical way, but it was closer to the planning of the ancient Roman city of Ulpia Augusta Trayana, whose remains lay under the city of Stara Zagora and were exposed during the war. The streets were arranged into a regular orthogonal network and orientated according the four cardinal directions, but with small diversion of 11° in direction North-East and South-West. This brought the city an advantageous South-West position. The streets had three unified widths of 10, 16 and 20 m. The city blocks had also unified 55 m х 120 m with estates with area of 330 m² or 660 m². Exception were three central blocks in the centre of the city designated for the main shopping street (charshiya) with estates of the shops (dyukyans) with width of 4 or 6 m and depth 7,5 m. In the direction of North-South there were a few streets with a width of 20 m. All streets in the direction East-West were at least 14 m in width and one was 30 m in width with the features of a representative avenue. The plan envisaged enough space for squares, City Park, administrative buildings, schools and churches. Originally there were planned 15 squares, but only 9 have been realised. [7] [8] [9] [10] [11] [12]

Planning of the city of Sofia (1878-1881)

During the Liberation the city of Sofia was a small town (Fig. 5) which was chosen as the capital city of Bulgarian Principality in 1879 and as the seat of all state institutions. In first months after the war Czech engineers worked there. The new city plans gradually changed the old Sofia into a new modern city.

After the war the new municipality dealt with working out a new city plan. On 3rd May 1878 the Czech architect Adolf Kolář (1845-1900) was appointed as a main city architect. He had to do all necessary technical works in the city. Kolář began working on the city plan and in the summer 1878 he did research and led the cleaning of the terrain and demolishing of old houses. The plan was finished at the end of the summer, when the first work on the new streets began. This plan does not exist today but we can conclude about it from some reports of municipality from 1878. The plan envisaged new and wider streets and new city parts. However, it did not include the entire city but only its central parts. Therefore, the municipality decided to have a new detailed plan of the whole city been worked. Parallel to the realization of the first Kolář’s plan detailed regulatory plans of each city part were worked out according to Kolář’s initial plan. [13]

On 10th October 1878 Sofia became the seat of the temporary Russian government in Bulgaria. The Russian emperor’s commissar Prince Alexander Dondukov came to Sofia and in a few days approved Kolář’s plan. On 25th January 1879 Adolf Kolář was appointed in the department of public building under the leadership of Prince Dondukov. Another Czech - Václav Roubal (1847-1888) was appointed as the main architect of the city. He continued in Kolář’s work in the city. [13]

On 22nd March 1879 Sofia was proclaimed as the capital city of the Bulgarian Principality (before that time the capital had been the city of Tarnovo, which was the former medieval Bulgarian capital) and in April Prince Alexander Batenberg was proclaimed for the first Bulgarian Prince. By that time the regulatory plans of 6 new quarters had been finished and in May and June another plans were finished: the regulatory plan of square Horse market (by Václav Roubal), Samokovska Street and the regulatory plan of square Rye market (by another Czech engineer Jiří Prošek, 1847-1905). [13]

On 13th July 1879 Prince Alexander Batenberg came to Sofia. A month later after his arrival on 29th August 1879 the New regulatory plan of the city Sofia combining all partial regulatory plans of all city parts was approved by the Building department of Ministry of the Interior and presented to the Prince. This plan does not also exist today. In the first years after the Liberation the planning of the city of Sofia was done by many Czech architects and engineers: Adolf Kolář,
Václav Roubal, Jiří Prošek (supported by his brother Bohdan Prošek), Jeroným Bohutínský, and also Russian engineers Gette, Bergshtreser etc. According this plan, the first steps in planning were created with building of new streets, demolishing of old houses and constructing of new houses and buildings. [13]

Nevertheless, at the end of 1879 a special commission was chosen for working out a completely new city plan. The Russian engineer Nikolay Kopytkin, former gubernia engineer and later main government engineer, stood in the head of the commission. Václav Roubal was the main city architect till the summer 1880 (than he was a deputy of the main architect Licurgo)
Amadey). The new plan was regulatory and it was approved on 10th April 1880. Its main author was an engineer Kopytkin. The plan was later called Batenberg’s plan. This plan envisaged wide streets (up to 28 m) and was based on a geometrical network in that time in Bulgaria called “American” combined with ring avenues. Although, it can be considered that Kopytkin based his plan on already finished works during the first two years after the Liberation. His new city plan began to be realised. [13] [14]

From April 1880 Kopytkin and probably also a city architect Licurgo Amadey and his deputy Václav Roubal worked on a cadastral plan of the city of Sofia (till 1881). This cadastral plan was approved on 2th June 1881. At the end a detailed plan combining the Kopytkin’s regulatory and cadastral plan was worked out. All the three plans – regulatory, cadastral and detailed (Fig. 6) were approved together on 3th September 1881. The realisation of the plan was going on to the first half of 1890s. [13] [14]

Fig. 6: Detailed (combined) Kopytkin’s plan of the city of Sofia, 1881.
Source: Zheleva-Martins D., 2006 Biografiya na Sofiya
The first two city plans - Kolář’s one and the New regulatory plan the city of Sofia does not exist today, but it can be considered that both plans were based on the principle of straightening and broadening the streets. These plans worked with original city structure. The city centre was defined by old important buildings e.g. former Turkish konak (administrative headquarters) later the seat of the Bulgarian Prince Alexander Batenberg, cathedral St. King, city gardens etc. In the city structure there were old important routes (entrance roads to the city), which exist today [13] [14]. Kopytkin’s plan was based on the principles of radial-concentric cities (such as the system of European metropolis e.g. Vienna’s Ringstrasse) combined in inner with geometrical orthogonal networks which did not take into account the old streets and buildings. It is very probable that Kopytkin came out of the first Czech plans in the central parts, in addition he preserved the main city routes leading to the city centre.

Fig. 7: Libor Bayer’s regulatory plan of the city of Nova Zagora, 1881. Source: author
Planning of the city of Nova Zagora (1880-1883)

This city, similarly to the nearest Stara Zagora, was destroyed during the Russian-Turkish war. The need of urgent planning forced the municipality of Nova Zagora to look for an engineer who would plan the city. Making of the plan was given to the main city engineer of Stara Zagora Libor Bayer who worked out the city planning in two stages. First he planned the new part of the city southward (before the war the city had hygienic problems) and then he prepared the complex regulatory plan of the city with its old part.

On 21st August 1880 the plan was approved. Bayer’s plan included the part between the old city and the railway station which was out of the city to the South. It was only a partial regulatory plan of the city. This plan was approved also by general-gubernator of Eastern Rumelia Alexander Bogoridi on 5th May 1881. But housing crisis led to the decision of the municipality of Nova Zagora to plan the whole city. Bayer worked out a new regulatory plan combining his first one with a new regulation of the old city. This plan was approved on 4th February 1883 (Fig. 7). [11] [15] [16]

The new city part of Nova Zagora was based on the same principles used in Stara Zagora – on an orthogonal network. The city had again a diversion of $11^\circ$ in the direction South-West and North-East. The old part was based on the principle of straightening and broadening the old city streets. Both, the old and new parts of the city, were delicately joined. The city obtained a peculiar circuit of orthogonal avenues around the city which led to the railway station. The plan envisaged also a few squares and a city park, but nowadays only one city square exists. [11] [15] [16]

Planning of the city of Plovdiv (1888-1892)

The city of Plovdiv was still a big and important city during the Ottoman period with its well preserved original structure. A problem of the city plan was solved at the end of 1880s. The main architect of the city Czech Josef Schnitter was engaged to work out the regulatory plan of the whole city. He preserved the old city structure and designed new city parts in one complex plan.

In 1887 a special wooden pavilion with diameter 8.5 m was built for Schnitter’s planning in the City park. Before the planning itself it was important to complete a cadastral survey of the city. The work on geodetic survey took place mainly at night using the lightening from lamps and torches (the truth about this fact is that a lot of inhabitants were against Schnitter and his work, because they thought the new plan could change their estates in the city). The plan was finished between 1888 and 1890 and Schnitter began to work on the regulatory plan. The plan itself was a big plate 6 x 7 m and was laid down on the floor of the wooden pavilion. Josef Schnitter worked dressed in white and clean clothes on this plate, he even wore white socks. The work was very hard and the plan was ready about 1891-92 in scale of 1:500. The plan was approved after some changes in 1896. The original plan was cut into pieces and it exists nowadays in Plovdiv archive. In 1906 the same plan was printed in scale 1:5000 (Fig. 8). [17]

Schnitter’s regulatory plan was his masterpiece. He managed to preserve the city history and its architectural authenticity and uniqueness. Schnitter followed maximally the original streets and buildings and the old city structure has been preserved till today. New city parts were designed in a modern way although they honoured the natural, historical and archaeological determinateness (the typical hills, the river). The city got a unique system of four ring avenues orientated according to the four cardinal directions. The new structure was combined with historical routes, including green system and regulation of the Maritsa River. So Schnitter’s plan was the first one which preserved unconditionally the old city structure. [17]
Fig. 8: Josef Schnitter’s regulatory plan of the city of Plovdiv (1891-92), print from 1906.
Source: Maria Schnitter
Planning of the city of Kystendil (after 1892)

The city of Kystendil was a small provincial city near the western state borders with preserved city structure. A city plan was worked out by Libor Bayer who became a city architect in 1891.

Libor Bayer finished the plan of Kystendil about 1892 (Fig. 9). According to the contract with the municipality the city had an older plan, probably a cadastral survey. So Libor Bayer had the opportunity to work in this city with its preserved structure. His new plan combined streets around the borders (pomerium) of the ancient city of Pauthalia and the radial-concentric ring system of medieval Kyustendil. New parts of the city were planned in a geometrical orthogonal network. [18]

A main thing in forming of the city centre was the position of the Pedagogical school (1889-1894, on Fig. 10 signed as No. 1) designed by an architect Fridrich Grünanger (1856-1929). A big square 75 x 75 m had arisen next to the school, situated on the same place where the medieval and renaissance square of the city was (Fig. 10). [18]

Libor Bayer preserved the continuity of the public space of the city. Some old streets were preserved only by their straightening and broadening. The plan was realised partially, only the so called Market quarter was established. In 1906 an architect Christo Kovachevski made some changes of the plan, but in 1909 a new regulatory plan designed by an architect Georgi Nenov was approved.
CONCLUSION

This article has dealt with different examples of Bulgarian city planning provided by Czech architects and engineers after the Liberation of Bulgaria. Choosing the examples, the aim of this article has been to trace the different planning principles used in Bulgaria at the end of 19th century. As it is shown, the Czech engineers and architects participated in most of described examples.

A common feature of all Bulgarian cities was irregular structure and build-up area. The main task of the Czech engineers was to cope with this situation and design modern cities. In general, the original structure did not make planning easy and unambiguous. In many cases entire historic spaces disappeared under the new changes. The planning of the cities destroyed in the Russian-Turkish war in 1877-78 was easier. A rare example, where the original structure was preserved, is the city of Plovdiv.

Making an overview of the principles the following types of planning can be seen:

- **demolished town → new orthogonal city structure** – the city of Stara Zagora

- **demolished town → „straightening “of the earlier streets, eventually combined with new city orthogonal structure** – the city of Nova Zagora

- **extant city → straightening of the original streets (with demolishing of old houses), eventually combined with new city structure** (orthogonal) –the city of Kyustendil and in the most
of other Bulgarian cities

- extant city → new city structure (orthogonal, radial) – the city of Sofia
- extant city → preserving its original structure combined with new city structure – the city of Plovdiv.

A possibility to apply freely a new city structure existed in Stara Zagora and partially in Nova Zagora. A usual principle was straightening of the streets where the engineers used original street network and according to them the new modern streets were built, e.g. the centre of Kustendil and the old part of Nova Zagora. These principles were used also in some central parts of Sofia and Plovdiv. Although many old historical buildings and houses were knocked down, the original street network was partially preserved. After 1881, when Rules for constructing private buildings in the cities of Bulgarian Principality were approved, every new part of the city had to be founded on regular orthogonal network (by „American“ way). It is seen in the city plan of Kustendil, Nova Zagora and Plovdiv. The city of Sofia itself is a distinctive example. Although the original structure was preserved during the war and in the first steps principle of straightening of the streets in the centre was applied, the other parts of Sofia were designed with a new structure and the old city disappeared. These examples are close to other European cities such as Paris, Prague and Vienna. Plovdiv is in contrary to Sofia and its original structure was preserved as an old city and the new one was joined to it in neighbourhoods.

To sum up, the first steps of planning of Bulgarian cities were connected with the conflict of old-new, but the contribution of foreign mainly Czech architects is undeniable. Many new regulatory plans enabled a new development of long-lasting stagnating Bulgarian cities and at the end of 19th century a new page in the history of architecture and urban planning in Bulgaria was opened.

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