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COMPATIBILITY, ADAPTABILITY AND USE OF DIFFERENT TYPES OF GROUND FLOOR HOUSES IN 19th CENTURY TOWN PLANNING – CASE STUDY SUBOTICA

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A lack of knowledge of the history of architecture and town planning in the 19th century resulted in underrated regard towards this historic period and consequently in a devastation of urban and architectural heritage of the 19th century. This research was intended to clarify some segments of the history of architecture and town planning in the 19th century based on the example of Subotica. Research has shown that the basic types of ground floor houses built during the 19th century in Subotica were mutually compatible and that by a simple addition of rooms on the simple base house, more complex base houses could be built. In the same way rural houses could also be transformed into urban ones.

This pattern allowed for utmost rationality of the construction of individual houses as well as of the whole town. The town, due to the application of compatible house plans, reflected a semblance of order which improved year on year, because every house at any given moment represented a finished structure. Simple attachment of building parts also allowed the houses that were located in the middle of the lot to be elongated to the street regulation line. Compatible house plans, as an auxiliary means, facilitated the application of building rules, the realisation of regulation plans and provided continuous development of the town of Subotica in the period of over 150 years.

Key words: architecture, residential buildings typology, urban planning, Subotica, 19th century.

INTRODUCTION

A recent research of the 19th century residential architecture in Vojvodina mostly defined the basic types of residential buildings, both rural and urban. A comparison with the architecture of other areas in the Pannonian Plain clearly reveals that this architecture was not only characteristic of Vojvodina (Barabás and Gilyén, 2004; Fulga, 2009), but also of the entire lowlands. Certain architectural types can also be found in much wider areas, which always brings us to the auestion of how these types of structures were built and above all why. Explanations are usually based on polemics about the available building material, construction techniques known in a particular historical period, the local way of living etc. These explanations however raise a number of new questions such as: why were the same types of houses built with various materials and in different architectural styles, or why did the people of different professional orientation and very different personal needs, ranging from peasants and farmers to intellectual elite, build the same types of houses. The reason for this phenomenon must have had much more serious and deeper causes that were not based on the whim of current fashion trends, or insufficient technical knowledge. An analysis of residential buildings built in Subotica during the 19th century shows that the architecture was largely subordinated to the urban planning of towns and settlements; it was a model of how a collective contribution of all citizens formed arranged towns and settlements.

The research of mutual relations between certain types of houses showed that all applied architectural types of houses were compatible with one another and that complex base houses were formed by a simple addition of rooms to simple base houses, which was widely practised. Such architecture contributed greatly to the constant and continuous development of structures, towns and settlements, and equally well supported the crisis and the periods of

rapid economic growth, at the same time managing rationality and flexibility in town construction, as well as urban arrangement and aesthetic. Compatible house plans and the manner of their application in urban planning contributed to the sustainable development of towns of the 19th century.

ANALYSIS OF THE COMPATIBILITY AND ADAPTABILITY OF DIFFERENT TYPES OF 19th CENTURY GROUND FLOOR HOUSES IN SUBOTICA

Transformation from the two room rural house to the three room rural house

A detailed review of several thousand house plans that have been stored in the Historical

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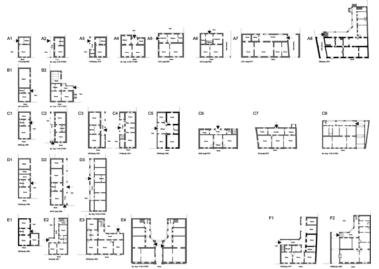


Figure 1. Ground floor plans of different type of ground floor houses in Subotica built in 19th century showing transformation lines from simplest two room rural house to most developed types of urban ground floor houses

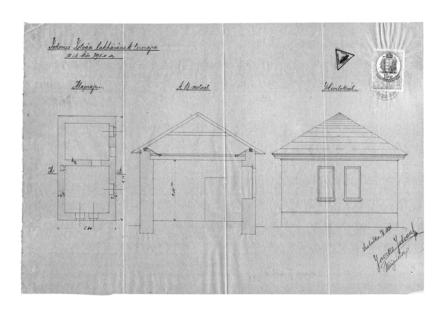


Figure 2. Plan of Stipan Ivković's two room house built in 1881 (HAS, F:2, ép. eng. III kör 4/1881.)

Archives of Subotica for the period from 1875 to 1914 (Aladžić *et al.*, 1997) and plans from previous years identified so far showed that plans of different types of houses built during the 19th century in Subotica were mutually compatible, and that complex ground-floor houses and multi-storey houses could be built by a simple addition of premises to the simplest rural two room house type. Thanks to this way of building, every house owner contributed to urban regulations and planning by directly participating in it with remodellings, additions or construction of their houses.

Based on the preserved building plans, it is evident that in the period from 1778 to 1878, the highest number of building permits was submitted for renovation or upgrading of existing buildings. Every owner made efforts to take all the advantages of the existing structures and to incorporate in the newly planned building as many parts of the old house as possible. Demolition of the existing house in order to build a new one in its place was quite rare, and more often occurred in the last two decades of the 19th century, due to the rapid economic growth that Subotica experienced towards the end of the century, thanks to the introduction of the railroad in 1869.

The simplest house-type built in Subotica in the 19th century was a two room rural rammed earth house consisting of a room and a kitchen

(marked as A1 in Figure 1).2 The kitchen usually had a vent hood. In front of the fireplace there was an antechamber from which one entered the room, and the roof was pitched, covered with reed, with triangular gables, one of which usually faced the street. Stipan lyković built this kind of house in 1881 (Figure 2) according to the design made by architect Jaczko István (HAS, F:2, ép. eng. III kör 4/1881).3 The house was situated in today's 56 Skerlić Street in Subotica. The origins of this kind of two room houses in the Pannonian Plain, as the archaeological research has shown, dates back to the Middle Ages (Benkő, 2009, p. 63-72). South Slavs, fleeing the territories that were occupied by the Turks in the 17th century, settled in the region of Bačka and learned from the natives how to build houses from earth and mud.

The addition of rooms to the two room house base could be performed in length or in width. If the house was lengthened, a stable could be added next to the kitchen (Figure 1 - B1), so that besides people, the livestock, being the main economic support of the household, could also be sheltered in the house. Should another room be added to the two room house towards the inner section of the lot, the result would be the most widespread type of the rural house in Subotica and in the whole region in the 19th century, the so called three room Pannonian house (Figure 1 -C1). The three room Pannonian house is described in several monographs and scientific studies. It consisted of two rooms and a kitchen with a vent hood in-between. As was the case with the two room house, in front of the fireplace with the vent hood there was an antechamber from which the entrance led to the rooms. A triangular gable faced the street and the room overlooking the street was the so-called "clean room." The house was situated adjacent to the neighbour's lot with the blind wall facing the neighbour and the north as much as possible (Barabás and Gilvén. 2004; Peruničić, 1958; Aladžić, 2009 – b).

² Figure 1 shows house bases that the author copied/redrew from the original house plans. The size of individual foundations is not completely but only partially mutually coordinated due to the inability to determine the exact dimensions of the houses, since they are not even mentioned in some projects, and furthermore a different ratio and units of measurement were used in different periods. Based on the presented approximate dimensions, it is still possible to draw conclusions regarding the mutual compatibility of houses, and especially based on plans which show the additions to simple base houses to make a more complex base house. The markings of the original project, deposited in the Fund 2 of the Historical Archives in Subotica, are written under each drawing. The newly planned houses and parts of the houses are marked in red as in original plans, the existing parts are in black and the parts intended for demolition are in yellow.

³ House plans are stored in Fund 2 of the Historical Archives in Subotica (hereafter HAS).

Development of the three room rural house and its transformation into an urban two tract rectangular house

In the 19th century two room houses in Subotica were already very rare. Judging by the shapes of the houses in Kovač's hand-drawn town map from 1778, the two room house was characteristic of Subotica in the 18th century. In the Fund 2 of the Historical Archives of Subotica there are only very few preserved building plans of two room houses from the 19th century. Three room houses were much more frequent. There are several hundred preserved building plans of three room houses in the Historical Archives of Subotica from the 19th century.

Karlo Leopold Kovač's (Carolum Léopoldum Kovács aliter Kovácsik) hand-drawn town map (Dubajić, 1991, Figure 7/a) from 1778 was made on the occasion of the declaration of Subotica, in those days the market town Szent Mária, a free royal town Maria Theresiopolis (Bačić, 1998). The map shows the town before the first planned regulations and testifies that Szent Mária was spontaneously settled (Figure 3). With the exception of several formations of row houses and few urban houses erected in the heart of the market town placed at the street regulation line, the majority of houses were arbitrarily located in the middle of the lot, respecting only the orientation of the blind wall of the house towards the north to provide protection against the dominant north wind.

The Statutes of Maria Theresiopolis from 1779 insisted on the creation of the "inner city." According to the first concept, the "inner city" of the town was supposed to be separated from the rural suburb by walls that Karlo Leopold Kovač illustrated in his map from 1778 as a square drawn across the urban tissue, with the indication of the town gates (Aladžić, 2010, p. 22–27).

After the death of Empress Maria Theresa, Emperor Joseph II abolished the counties and privileges of free royal towns; he split Hungary into ten districts with royal commissioners in charge, thus making the country strictly centralised (Hanák, 1995). The town of Maria Theresiopolis did not have the means to erect the walls nor was there any real need for them, and therefore the concept of the "inner city" changed and was finally defined during the commissioner Scultéty Ferenc tenure, 5 when



Figure 3. Handwritten map of Subotica from 1778 (Dubajić, M. (eds.) (1991) Koreni. Subotica: Istorijski arhiv, Figure 7/a.)

the territory of the inner city was determined in the Plan for the External Arrangement of the Town by six circumferential streets which surrounded the inner city area. The Plan for the External Arrangement of the Town was approved by the Commission for Town Planning in 1820 (Aladžić, 2007 – b, p. 50–60). In the defined inner city, gable-front rural houses could no longer be constructed, but only urban houses with the longer side facing the street front and forming a continuous row of facades on both sides of the street. Thus many building plans appeared in which rural houses were transformed into urban ones using different additions.

After Wüstinger József's First and Second Town Regulation Plans in 1822 were done (Aladžić, 2006, p. 391–399), the geometric regulation of lots began to be applied with the construction of each new structure, therefore many home owners added certain rooms to their houses to elongate them towards the street regulation line, fulfilling the requirements of The Plan for the External Arrangement of the Town, as well as of later by-laws and the Building Rule Book approved for the town of Subotica in 1882 (Aladžić, 2007 – a, p. 9–15).

As an example, in 1870 a poor sharecropper, Rosnyik Elek, submitted an application for a building permit (HAS, F:2, 5062/polg 1870) to

add a room towards the street to his modest two room house (Figure 4). His old house was not situated on the street regulation line, as can be seen from the situation plan. With the addition of a room the house was lengthened in such a manner that its main triangular gable facade appeared at the street regulation line. Situation plans were rarely shown in building plans up to 1882 when the Building Rule Book was approved and they became mandatory. Still, these earlier rare examples bear evidence of slow, several decade long regulations of individual streets and lots that were conducted with every new construction or significant house remodelling since 1822.

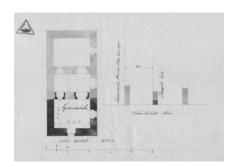


Figure 4. Ground plan of elongation for Rosnyik Elek's two room rural house from 1870 (HAS, F:2, 5062/poig 1870.)

⁴ The Statutes of towns and settlements in Hungary were a sort of orders of local significance in accordance with the State laws and customs, royal orders and local circumstances and customs (Bačić, 1998, p. 21).

⁵ Royal commissioner Scultéty Ferenc was in charge in Subotica from 1819 to 1823 (Aladžić, 2006).

A pantry and a stable were most often added to a three room house-type (Figure 1 – D1), but also another room, and then a storeroom, stable, shed, pantry, laundry room, etc. could be added. In other cases a three room house stood alone, and other auxiliary rooms were built in a separate building in the backyard (as outbuildings). It should be emphasized that it was possible to achieve every developed house-type by the addition of rooms, but the house was also constructed at once as an integral structure. Additions were made to older structures, which in regard to their size and shape did not fulfil the owner's needs or the requirements of building regulations.

A developed version of the two room or the three room house type was a house with a porch, although the porch was applied to other types of houses as well (Figure 1 - A2, C2, D2, E2). Parts of the porch could be closed off to provide for a pantry or a room for a soldier (Figure 1 - A3, C3, C4). The legal status of free royal town dwellers was heterogenic, but there were three main categories: citizens (cives), inhabitants (incolae) and settlers/ newcomers (hospites). The acceptance of inhabitants into the rank of citizens in Subotica was conditioned by having a room for a soldier in the house (Bačić, 1995, p. 40), which is why additions to house base often included rooms for soldiers. In some versions the kitchen could also be moved to the porch.

The three room rural house with a porch built on the lot at the corner of two streets, if the house was at the very corner, could be simply transformed from a rural into an urban housetype. If the door and the window openings were provided on the longer side of the house overlooking the street, and two parts of the porch were closed off to provide room for the pantry and a room for a soldier or some other room - that way a transitional form of a house between a rural and an urban one was obtained. Such a house type could be built on the lots where only one side was facing the street (C6). Further development of this transitional housetype resulted in an urban house with a longer side facing the street, with two longitudinal tracts and three rooms in each tract (C7).

The example of the house of Marija Kolonić from 1862 also shows a transitional form between a rural three room house and a two-tract urban house of the rectangular base (C5). Marija Kolonić submitted a request to add three rooms to her three room rural gable-front house, which would be parallel to the rooms of the three room house (HAS, F:2, 3054/polg 1862). That way the house still remained rural with the triangular gable facing the street front, but nevertheless

what was the entrance to the porch on a three room house now represented the entrance to the shop. The kitchen, formerly placed in-between the two rooms of the old part of the house, was moved to the midsection of the added tract. The old kitchen was transformed into a pantry, and at the end of the new tract of the house another room was added. The house was entered into from the yard, through the kitchen. According to its position on the lot, the house still appertained to the rural type, but its interior organization represented an example of the two-tract groundfloor urban house of the rectangular base. The house was situated in today's 28 Prvomajska Street. Thus, houses of the same form, with the same number and shape of rooms, differed from one another in terms of the organization of their interior space which was adapted to the owner's needs and the obligatory requirements of the Plan for the External Arrangement of the Town, and later the Building Rule Book.

The rectangular type of the two-tract groundfloor urban house was also obtained by the addition of rooms to the two room rural house in its width. Simpler examples of the widened two room houses, as in the case of Joso Peić Tukuliac's house (Figure 1 - A4), built in 1880 (HAS, F:2, ép, eng, VI kör 7/1880), had two rooms overlooking the street, a kitchen with the vent hood adjacent to the rim of the neighbour's lot, which was entered through the antechamber placed in the middle of the vard tract, and there was a pantry on the other side of a vard tract. Therefore the house had two rooms overlooking the street and three rooms overlooking the yard: an antechamber in the middle, a kitchen on the one side and a pantry on the other.

Further widening of the rural two room house led to the design of a more complex urban house-type with three rooms overlooking the street, an entrance hall in the middle of the yard tract, created through modifications to the porch, a kitchen on the one side and a pantry on the other side of the entrance hall. That way, basically, a house-type was obtained (Figure 1 – C7) that could have also been a result of moving the kitchen from the tract with three

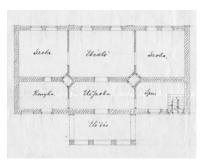


Figure 5. Ground plan of Szakmaiszter István's house designed in 1864 (HAS, F:2, 4311/polg 1864.)

rooms into the tract with the porch, i.e. the transformation of transitional house-types C5 and C6 into C7.

The developed form of the rectangular urban house could have three rooms overlooking the street, with the middle room possibly a dining room, as was the case in the house of surgeon Szakmaiszter István (HAS, F:2, 4311/polg 1864). Szakmaiszter's house got its shape in adaptations in 1864 (Figure 5). During the adaptations, a rectangular porch on the facade facing the vard was added onto a two-tract rectangular house base. The porch on the rectangular base of the two-tract ground-floor urban house could also be longitudinal and it could be built along the yard-side facade, and then some of its parts could be closed off to provide for a pantry or some other room (Figure 1 - C 8).

These types of houses could be built with two flats, as in the case of Molnár Katalín whose house was built in 1863 (HAS, F:2, 1653/polg 1863) in today's Šenoina Street (Figure 6), in close proximity to today's house at number 11. Katalin's house was torn down during the allied bombing in 1944. Since it had two flats, the house was rental (Aladžić, 2009 — a, p. 137—142). It was designed by supervising architect Scultety János.

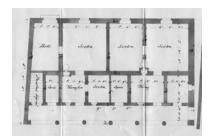


Figure 6. Ground plan of Molnár Katalín's house designed in 1863 (HAS, F:2, 1653/polg 1863.)

The urban house of rectangular base could have four or five rooms overlooking the street and as many rooms in the yard tract of the house, and a gate entrance may also have been built under the house roof. Any type of the ground-floor urban house could have the so-called "dry entrance" or the under-the-roof gate entrance, as shown in the examples A7, A8, C8, E4 or F2 (Figure 1).

Creation of the L shaped urban ground floor house

It was not the objective of this research to analyse every form of the ground-floor 19th century house in Subotica. The basic types of ground-floor houses in Subotica were presented in the study conducted by M. Sc. Nebojša Čamprag (Čamprag, 2007). Surely

there were some innovative designs that did not fall under any of the usual types of houses, especially in the period of the town's economic boom after the 1880s when the western influence began to break through. The aim of this paper was to demonstrate the flexibility of house plans, their compatibility and possibility to change, enlarge and adapt the house form to new needs and situations by means of simple additions and adaptations.

In this sense, another type of house, developed in Subotica in the 19th century, cannot be avoided, i.e. an urban L-shaped house, the socalled "elbow house." The need to transform a rural three room house into an urban house created yet another way of adding onto a rural house, which resulted in the L-shaped type of house. Adding one room along the street regulation line next to the "clean room" of the three room rural house (Figure 1 - C1) led to the creation of the simplest L-shaped housetype (Figure 1 - E1). This room could be a living room, but also a shop or a workshop according to the owner's needs. In 1861 Pertić Alajos added a shop to his three room house (HAS, F:2, 327 polg/1861) in this manner, and Béres István added a blacksmith's workshop (HAS. F:2, 2217 polg/1865) in 1865 (Figure 7).

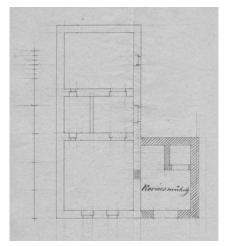


Figure 7. Plan of blaksmith workshop addition onto Béres István's three room rural house from 1865 (HAS, F:2, 2217 polg/1865.)

The developed types of "elbow houses" could have been extended towards the inner part of the lot by the addition of storerooms, a room for the maid, a sleeping niche etc. Besides these rooms, the house could have an open or a closed porch as shown in Figure 1, examples E2 and E3. The one-tract L-shaped house-type with three rooms (E3) overlooking the street could be obtained by adding another room along the street regulation line to the E2 house-type. In certain cases, one of the rooms could have served as a shop (Figure 1 – E3), a lawyer's office, a doctor's office and similar.

Doubling the base of an elbow house and positioning it as a mirror image resulted in the creation of an U-shaped urban house-type that usually had two or more flats intended for rent (Figure 1 — E4). Ground-floor rental houses were built in Subotica in fewer numbers in the 19th century than single family urban homes. An analysis of rental house building plans basically shows that they relied on the basic house-types, and that they were mostly built by doubling or lengthening ground floors of the basic house-types in Subotica (Aladžić, 2009 —a).

Simple additions to the three room rural house could lead to the design of the most developed type of the L-shaped urban house, with the street section divided in two tracts and a onetract yard wing of the house. In 1871 Franzen József submitted an application for a building permit (HAS, F:2, 1425/polg 1871) to make extensions to his ground-floor rural three room house (Figure 1 - F1). In the new planned street tract of the house the construction of two rooms and a shop was envisaged. The inner tract of the street part of the house had a pantry and one room, the purpose of which is illegible in the plan. Behind the kitchen and the room of the old three room house, which were integrated into the new house, the construction of a shed and a pantry was planned, as well as of a porch planned to interconnect all the rooms facing the yard.

In the example shown under the indication F2 in Figure 1, the kitchen was drawn into the yard tract of the house, and a sleeping niche was built where the kitchen would have been if the house had been upgraded from a three room rural house. In the yard tract of the main part of the house there were an antechamber and another room. This elbow house had an enclosed porch, as well as a gate entrance. The owner of the house was Subotica's landowner Halbrohr János. It was built in 1862 (HAS, F:2, 2586/polg 1862), not signed by a designer. but the house has been preserved in its original form and it is today situated in 21 Jakab and Komor Square. Unfortunately, the facade decorations were completely peeled off during various subsequent interventions.

Preserved plans of extensions to the house owned by pharmacist Brenner Josef, today located in 7 Matka Vukovića Street in Subotica, bear evidence of the typical development of the urban house-type in Subotica in the 19th century (Prčić et al. 2006, p. 42–45). According to the town cadastre survey from 1838, the owner of this house was Panto Zarić, a merchant. The house had already belonged to the urban type, with its longer facade facing the street, testifying about the social and material

status of the owner who was one of the rare owners of ground-floor urban houses at that time. Panto sold the house to Brenner Josef, who applied for a building permit in 1867 in order to make additions and adaptations to the existing building (HAS, F:2, 724/polg 1867). The plan was designed by Scultéty János, and it can be seen from it that the house previously had a rectangular base, two tracts and an entrance gate in the middle of the structure. The house, while it was the property of Panto Zarić, was most likely divided into residential and business parts. The west side of the house was designated for living, while in the east side there was a shop with storage rooms for merchandise. In 1867 Brenner closed the entrance gate and used the space of the old entrance for a room. A new entrance gate was built on the east side of the house and a porch toward the yard. The residential part of the house was then widened and was directly connected to the pharmacy positioned at the place of the former Zarić's shop.

With the following addition, in 1870, Brenner's rectangular two-tract ground-floor house with a porch had a vard tract added to it, and thus became an L-shaped house. A new kitchen and auxiliary rooms were built in the vard tract and a new porch was built to be aligned with the new house base (Figure 1 - A8). This ground floor shows how a two-tract ground-floor house with a rectangular base (A7) could have been transformed into a two-tract ground-floor L-shaped house (A8). The plans for the second addition were done by bricklayer Molczer János (HAS, F:2, 596/polg 1870). In 1885 Brenner Josef submitted a building permit request for facade decoration and adaptation of the whole of the ground floor into shops (HAS, F:2, 509/1885). The Town Council did not approve his request claiming that these changes were so significant that there would not be any need to add another storey to the building for quite some time, which was actually the obligation of every home owner in the first building zone of the town, according to the Building Rule Book. The town was divided into four building zones in 1882. Brenner's house was in the first building zone in which only multi-storey buildings of solid materials could be built (Aladžić, 2007 - a).

The second floor of this house was erected in 1922 for the owner Kálmán Szenes, a merchant, according to the design of engineer Oton Tomandl. The rooms on the ground floor were transformed into shops, and the first floor was built as an apartment (HAS, F:47, odl. 296/1922). Thus the house aspect was finally in accordance with the requirements of the Building Rule Book, and it still, although slightly

modified, stands in its place today. After the First World War Subotica became part of a newly formed country — the Kingdom of Yugoslavia, but nevertheless the Building Rule Book of the free royal town of Subotica from 1882 remained in effect regarding the points that were not in contravention of the Building Law of the Kingdom of Yugoslavia from 1931, until new Building Regulations of the Municipality of Subotica came in force in 1938 (Građevinski pravilnik gradske opštine Subotica 1938).

CONCLUSION

The application of compatible house plans allowed owners to elongate their houses and to widen them at any given time, according to their income of financial means and at the same time their houses were a finished structure at any given point and could always be transformed into an even bigger structure by further additions. On the other hand, house plans never limited the creativity in terms of house decoration. Facade screens of houses that basically had equal or similar room layout could completely different decorative characteristics, which contributed to diversity in architectural realisations, and attractiveness of the streets.

Thanks to the application of compatible house plans, the town reflected the semblance of order. because every house in every moment represented a finished structure, and not a halffinished building. Simple attachment of building parts also allowed the houses that were in the middle of the lot to be elongated towards the street regulation line. Street regulation was done in this way according to the town regulation plans for a longer time period, i.e. between the years of 1779 and 1938. The compatible house plans, as an auxiliary means, facilitated the application of building rules, the realisation of regulation plans and provided a continuous development of the town of Subotica in the period of over 150 years.

The addition of rooms made it possible to have a rural house transformed into an urban one if the owner had to do it in order to fulfil the requirements of the Building Rule Book for the zone in which his house was situated, or if he wanted the house to reflect his new social and financial status. This enabled the continuous development of the town as well as the continuous development of houses on certain lots, which could have been added onto along the lot rim, as well as upwards until the structure covered every rim of the lot, with an inner yard, and was several stories high.

This research is a contribution to the beliefs of those who link the beginnings of urban planning

in Yugoslavia to the Building Law from 1931 (Bajić, 2007), because it shows that careful town planning was quite typical for the previous historical period as well. Research of urban and architectural development in the 19th century in Vojvodina can be of crucial importance for future planning (Pantić, 2007). The planning in the 19th century in Vojvodina could be fully understood only through the research of a great number of documents that have not even been preserved for some towns and settlements. Subotica is a good example for doing the research because its Historical Archives keep a large number of documents from the 19th century. In order to fully understand town planning and building in the 19th century, future research would have to include Town Council decisions, individual building permits, letters and correspondence between officials, owners and engineers in charge of town planning. Urban planning in the 19th century Subotica was based on a certain concept, a certain idea about the final objective, and it was put into effect through an array of individual decisions, one of its segments being the application of compatible house plans.

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