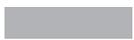


**AUSTRIA-HUNGARY**  
 RAKÚSKO-UHORSKO



**Austrian Empire**  
 Rakúske cisárstvo



**Kingdom of Hungary (1867 – 1918)**  
 Uhorské kráľovstvo (1867 – 1918)



**Condominium of Bosnia and Herzegovina**  
 Okupované územie Bosny a Hercegoviny



**Studied towns**  
 Skúmané mestá

# Urban Typology in the Habsburg Empire, between 1867 – 1918, with a Special Emphasis on Hungarian Towns

Urbánna typológia v rakúsko-uhorskej monarchii v rokoch 1867 až 1918, s osobitným dôrazom na uhorské mestá

Éva Lovra

Modernizácia a procesy urbánnej transformácie na území historického Uhorska dosiahli (prvý) vrchol v období Rakúsko-Uhorska (1867 – 1918). Ústavná konštitúcia dvoch štátov habsburskej ríše, Rakúskeho cisárstva (Predlitavska) a Uhorského kráľovstva (Zalitavska), ktorá vznikla po rakúsko-uhorskom (maďarskom) vyrovnaní v roku 1867, vytvorila podmienky na vznik jedinečnej štátnej štruktúry, ako aj osobitej rozvojovej politiky. Rozmach miest v duálnej rakúsko-uhorskej monarchii nadobudol nové smerovanie, čiastočne pre štátom podporovaný mestský rozvoj (predovšetkým v prípade hlavných miest Viedne a Budapešti), ale aj pre nastupujúci hospodársky rast zalitavských území (Krajín svätoštefanskej koruny). V tomto období sa zintenzívnila tendencia migrácie vidieckeho obyvateľstva do miest. Industrializácia spolu s budovaním infraštruktúry obmedzila dovtedy dominantné vplyvy formovania mesta na základe jeho morfológických daností či udelených privilégií. Moderná mestská infraštruktúra komplexne zasiahla urbánne sídla. Modernizácia ovplyvnila rozvoj miest, akcelerovala ich rozširovanie, vznik nových typov mestských funkcií aj ich celkovú ekonomickú transformáciu. Poznávacie a svetonázorové zmeny prispeli k rozšíreniu myšlienky „moderného mesta“. Vďaka rastu významu priemyselných a obchodných centier sa podnikatelia, obchodníci či robotníci opäť sťahovali aj do miest, v predchádzajúcom období opúšťaných. Smer ich vývoja sa v tomto období značne zmenil, čo ovplyvnilo i premenu samotného mestského tkaniva.

Systematické klasifikovanie (taxonomického označenia) rakúsko-uhorských miest a mestských tkanív má za cieľ opísať a zhodnotiť stavbu miest vybraného obdobia, keďže takýto prístup nebol dosiaľ dostatočne uznaný a realizovaný. Skúmaným obdobím je komplexná etapa európskej histórie s priamym vplyvom na heterogenitu a štruktúrnu zložitost' mestského tkaniva. Po vyrovnaní presadzovalo Rakúsko-Uhorsko relatívne jednotný prístup k urbanizácii a industrializácii, napriek tomu formovanie mestského tkaniva vykazovalo v rôznych častiach impéria protichodné výsledky.

Urbánna analýza skúma urbánne typy, ako aj priestorové vzťahy v hraniciach sídla. Výskum a stanovenie determinujúcej klasifikácie miest sa zaoberá územím historického Uhorska ako celku medzi rokmi 1867 a 1918, a umožňuje tak celostné zhodnotenie výsledkov rozširovania a rozvoja miest.

Najpresnejší výraz týchto snáh ponúka výskum cestnej siete miest, ktorá regulovala či rozvoľňovala nepravidelnú mestskú

štruktúru. Plochý povrch nížin, ktorý nebránil ďalšiemu rozvoju, umožňoval vývoj priamej cestnej siete, vďaka čomu často vznikali vyváženejší radiálny systém ulíc. Mestské ringy (okruhy) sledovali línie záhrad aj pôvodného opevnenia a spolu s radiálnymi cestami vytvárali hviezdicovité usporiadanie mesta. Vznikalo teda prepájaním vnútorného jadra mesta (centrálnych častí) a okrajových častí (lemujúcich centrálnu mestské jadro) a bolo charakteristické práve pre nížinné mestá. Na predmestiach popretínaných cestami smerujúcimi von z mesta pevné línie ulíc nevznikli. Takúto neurčitú cestnú sieť ovplyvnili železničné trate a prísne ortogonálna aj regulovaná uličná sieť tam začala vznikať iba postupne, v rámci budovania robotníckych kolónií.

„Železnica, popri dôležitej úlohe v rámci mestského rozvoja, bola základnou a niekedy dokonca definujúcou časťou systému dopravnej siete miest a vlastne celej (mestskej) štruktúry. Cesta či cesty vedúce k železničnej stanici utvárali dôležité a významné prvky cestnej siete, vznikajúc väčšinou prostredníctvom regulácie či otvorením nových trás.“<sup>1</sup> Cestná sieť historického mesta *civitas* si v rámci mestských hradieb zachovala stredovekú štruktúru. V niektorých prípadoch boli mestské hradby zbúrané, aby vznikol nový priestor na ďalší rozvoj mesta (reprezentatívne budovy a ringy). Ako dokladajú mestské plánovacie mapy, štruktúra cestnej siete v rámci nových mestských častí alebo regulácií sa riadila prísnymi geometrickými pravidlami, často sa zavádzali pravidelné mestské bloky na základe novej parcelácie pozemkov.

Hlavným prínosom výskumu je systematická kategorizácia typov miest duálnej monarchie, ktorú dopĺňa typológia mestského tkaniva medzi rokmi 1867 a 1918. Typy mestského tkaniva skúmaných miest, klasifikované na základe metódy integrovanej mestskej morfológie, sú rozdelené do dvoch základných skupín: tkanivá vznikajúce pred rokom 1867 a typy mestských tkanív rakúsko-uhorských miest. Cieľom výskumu bolo rozlíšiť a definovať typy miest charakteristické pre skúmané obdobie rokov 1867 až 1918. Zásadné pre náš výskum je určenie dominantných a charakteristických typov mestských tkanív pred rokom 1867.

Základné mestské typy však nie je možné klasifikovať bez bližšieho poznania kombinácií a znakov mestských foriem. Rozpoznali sme 41 rôznych rakúsko-uhorských mestských štruktúr (hlavné typy a podtypy). Mestské tkanivá rakúsko-uhorských miest predstavujú aglomerácie od predmestí po mestské centrá, pričom klasifikácia zahŕňa taktiež zóny zelene (vnútorné dvory, nádvorja, terasy). Systematická kategorizácia základných

typov miest je založená na jedinečnej a špecifickej kombinácii mestských tkanív, vzájomných priestorových vzťahov a mestskej štruktúry. Šestnásť rôznych špecifikovaných základných typov je označených číslami. Určenie týchto typov predstavuje základ ďalšej klasifikácie, keďže základné mestské typy, ako naznačuje názov, fungujú ako základné časti kombinácií typov miest v rámci výslednej klasifikácie urbánnych typov.

Výsledná systematická kategorizácia miest vo svojej typológii zahŕňa tak základné mestské typy, ako aj kombinované typy a určenie kombinovaných typov sa premieta do konečnej typológie. Finálna typológia miest vznikla na základe mestskej typologickej matrice a rozlišuje deväť rôznych hlavných typov a tri subtypy, špecifikované deskriptívnymi názvami:

1. Stagnujúce mestá s potenciálom vyplniť mestské tkanivo alebo nezastavané zóny
- 1 a) a b) Polostagnujúce mestá s potenciálom vyplniť mestské tkanivo alebo nezastavané zóny.
2. Regulované mestá s rozvinutou transformáciou mestských tkanív v centrálnych oblastiach s vyplňaním nezastavaných oblastí: typy a) a b).
3. Mestá s lineárnym urbánym vývojom a manifestáciou morfológických období.
4. Mestá s viacerými mestskými ringami a radiálnymi cestami (celková alebo čiastočná transformácia).
5. Mestá s radiálnou cestou a/alebo mestským ringom, ktorých mestské jadro prešlo štruktúrnou a architektonickou transformáciou.
6. Mestá s radiálnou cestou a/alebo mestským ringom, ktorých mestské jadro si zachovalo pôvodné mestské tkanivo a zastavané prostredie, menšie zmeny a výplň sú možné.
7. Mestá s radiálnou cestou a/alebo mestským ringom, mestské jadro s čiastočne zachovaným pôvodným mestským tkanivom a zastavaným prostredím.

8. Mestá s viacerými jadrami bez mestských ringov a radiálnych ciest, determinujúce prvky predstavujú rieky či opevnenia.

9. Uzavreté mesto.

Klasifikácia zohľadnila 70 miest starostlivo vybraných pre potreby výskumu tak, aby bolo reflektované celé územie historického Uhorska. Predstavuje širokú škálu geomorfologického a hydrologického charakteru, vysokú rozmanitosť vývojovej intenzity a úrovne územného rozvoja s cieľom prezentovať a preukázať možnosť vytvorenia urbánnej typológie založenej na koordinovaných atribútoch a podmienkach.

Výskum je zameraný na identifikovanie zhôd a rozdielov medzi faktormi urbánnej identity uhorských miest, ktoré vznikli medzi rokmi 1867 až 1918. Definícia špecifických vlastností komplexných systémov miest Uhorska je možná prostredníctvom skúmania a komparácie s vybranými mestami v rakúskej časti ríše. Táto komparácia zároveň v širšom kontexte poukazuje na štruktúrne zmeny uplatňované počas duálnej monarchie. Práca sa preto komplexným spôsobom usiluje postihnúť štruktúrne zmeny prostredníctvom komparácie vybraných miest v rámci Uhorska a v rámci duálnej monarchie.

Výskum polemizuje s presvedčením, že každé mesto je jedinečné (Benevolo) a prikláňa sa k názoru, že každé mesto možno vnímať ako koláž rôznych typov mestských tkanív, ktorých organizácia vytvára špecifický mestský typ a obraz. Štúdia potvrdila predpoklad, že je možné stanoviť urbánnu typológiu pre uhorské mestá obdobia rokov 1867 až 1918. Klasifikovaniu (taxonomickému určeniu) mestských typov musí predchádzať stanovenie typov jednotlivých mestských tkanív, ich kombinácií a priestorových vzťahov v meste. Typologické paralely, teda podobné typy územia, odkazujú na dobové unifikované plánovacie princípy a na štruktúrne zmeny predurčené procesom urbanizácie a aktivitami mestského skrášľovania.

## Introduction

Establishment of a taxonomy for the typology of urban settlements and urban fabric in the historical and geographical entity of Austro-Hungary is a crucial scholarly task. For one reason, such typology for settlements and urban fabric between 1867 and 1918 has yet been established, and for another, if it addresses the area of historic Hungary as a whole in a comparative manner, it then offers the possibility to bring it into practical use and to evaluate the results of urban development and urban evolution by an integrated morphological approach. The aim of the current paper is to discuss the urban typology in terms of the types that pertain to the selected research territory, and to prove the hypothesis that it is possible to create a taxonomy despite the extensive variation of urban characteristics. The relevance of the topic is deeply embedded in our theoretical and practical knowledge, since Western Europe's traditions and urban planning principles are generally the focus of the academic study of urban design and urban planning that we study in school. Though part of our fundamental knowledge and important to know, these principles should not obscure a knowledge of our own close environment: the Central and East-Central European urban structure, the towns and their characteristic urban fabrics and the urban fabric type and urban taxonomy in general.

The purpose of the typological research is the taxonomic classification of urban forms (and their mutual combinations) based on common, mainly physical characteristics. The aim of the research is to present an urban classification that could define not only a particular town but enable the broader classification of towns in the region of historic Hungary (1867 – 1918) via the matrix of variables.

The given period of 1867 – 1918 represents one of the most productive eras of town building and modernization of the research territory<sup>2</sup>. The urban development of Austria-Hungary assumed a new direction, partly due to the state regulation of town development (in the case of the capitals, Vienna and Budapest<sup>3</sup>); the emerging economic development in historic Hungary and its economic alignment during the era also had a strong impact on the urbanization processes. Launched by the political development of the Ausgleich (1867) and the economic factor of Hungary's belated industrialisation,<sup>4</sup> the evolution of urban spaces began to be determined by new urban patterns, urban fabric, urban types and different town construction.

Classification of the towns in the research territory shows clear results up to the point of the Austro-Hungarian Compromise Agreement (Ausgleich 1867): the towns in low and high relief areas had easily distinguished townscapes and divisions of urban structure. The evolution of urban types later became individuated, due to the multiplied effects of Hungary's increased political autonomy and industrial growth. While modern towns emerged, they remained unspecified in its diversity according to urban fabric types and urban types. The taxonomy took into account the 70 towns from the Historic Hungary (1867 – 1918) selected to cover the entire territory, showing a wide range of geomorphological and hydrological character, a high variety of evolutionary intensity and level of territorial development, to confirm and prove the possibility of creating an urban typology based on coordinated attributes and conditions. A total of ten towns were selected and studied from the former Austrian Empire to present the circumstances of the wider context.

Our fundamental understanding of urban typology was shaped by the study of practice and theory in urban morphology. Cohesion of the urban fabric and urban typology is evident, although its emergence nonetheless requires explanation: after all, the juxtaposition of various urban forms does not necessarily create coherent urban fabric patterns that could be the basfabricis of a fixed typology.

Heterogeneity in urban fabrics hardly allows the creation of a unified system that accurately determines the town as an entity, thus allowing the formulation of a typological system that can define a settlement and use it to classify actual towns.<sup>5</sup> Taking into account the accepted statement and the problem of typology, the decision was made to incorporate within the study an analysis of urban fabrics<sup>6</sup> and their correlation in order to prove that through the functional circumscription of urban fabrics, the classification of a heterogeneous urban typological system can be formed.

As confirmation of our hypothesis, the research showed that the variety of forms and their combinations makes the urban typology undoubtedly difficult to establish, as has been claimed by the conventional descriptions of urban morphology, but that a definition of the appropriate test conditions and properties allows for the generation of an urban typology.

## Methodological Combinations

The analyses focused on the urban fabric, structure, and development of the selected 80 towns of the Austro-Hungarian Monarchy between 1867 and 1918, with special regard to the 70 towns situated within Hungarian territory (1867 – 1918).

The principle of historical stratification<sup>7</sup> was used in the analyses of urban structural changes following their evolution over time.

Examination of the progressive urbanization of the intensively growing towns in historic Hungary required a new method, because of the anomalies caused by the lack of documents of sufficient detail and the lack of relevant methodology adequate for the analyses and taxonomy of the towns in the region.

Use of advanced analytic tools, such as the method of integrated urban morphology<sup>8</sup> and the urban typology matrix, enabled the formulation of a taxonomy of urban fabric types and the urban typology. The integrated method is a new complex urban morphological methodology that can analyze the urban forms and thus establish their typology. The urban typology matrix is based on the combination of urban fabric types and basic urban planning types to define the final urban typology.

After undertaking a general overview of urban morphology-related studies from the early years up to contemporary methods, the Conzenian cognitive approach<sup>9</sup> was considered as most adequate to develop an urban typology practice, while retaining some of the elements of Caniggia's urban morphological practice.<sup>10</sup> The Conzenian approach<sup>11</sup> is applicable with limitation, since the goal of the town-plan analysis<sup>12</sup> is to trace the character of the towns via their elements and development

through time. The characteristics and morphological periods<sup>13</sup> of Austro-Hungarian towns can be identified via the physical organization and historical order of the built environment and spatial system, since each period is recognizable and can be seen through historical stratification.

Using the integrated method, the individual stages of urban-fabric analysis are (1) determination of the street network and street network patterns, (2) determination of plots, buildings and their relationship (with each other and with the street network), (3) examination of plot series and (4) related subsidiary spaces (gaps and areas belonging to building blocks), green spaces and open spaces, and also takes into account the factors of pattern formation and determines the elements accordingly to the factors. The integrated morphological research consists of several aspects related to the creation of a typology for specific urban fabrics and their more complex form, the urban typology: plots; streets and their systems; urban fabric; morphological regions and townscape.

The integrated approach allows for the taxonomic designation of urban fabric types (preliminary result), the urban typology (main result) in the period between 1867 and 1918. The method eliminates data anomalies, which restrain from accurate determination and definition of urban fabric types as crucial attributes in urban typology. Urban fabric typology does not take minor variations into account, but focuses on the dominant characteristics. Based on the integrated method, a total of 41 Austro-Hungarian urban fabrics were identified, defined and divided into main types and subtypes.

The urban typology was created by the urban typology matrix (discussed in the next chapter). Formulation of an urban typology contradicts the accepted urban morphological statements asserting that any typology is impossible due to the high variety of forms and their combinations.<sup>14</sup> The classification includes basic types, combined types and the final urban typology of the selected 70 towns.

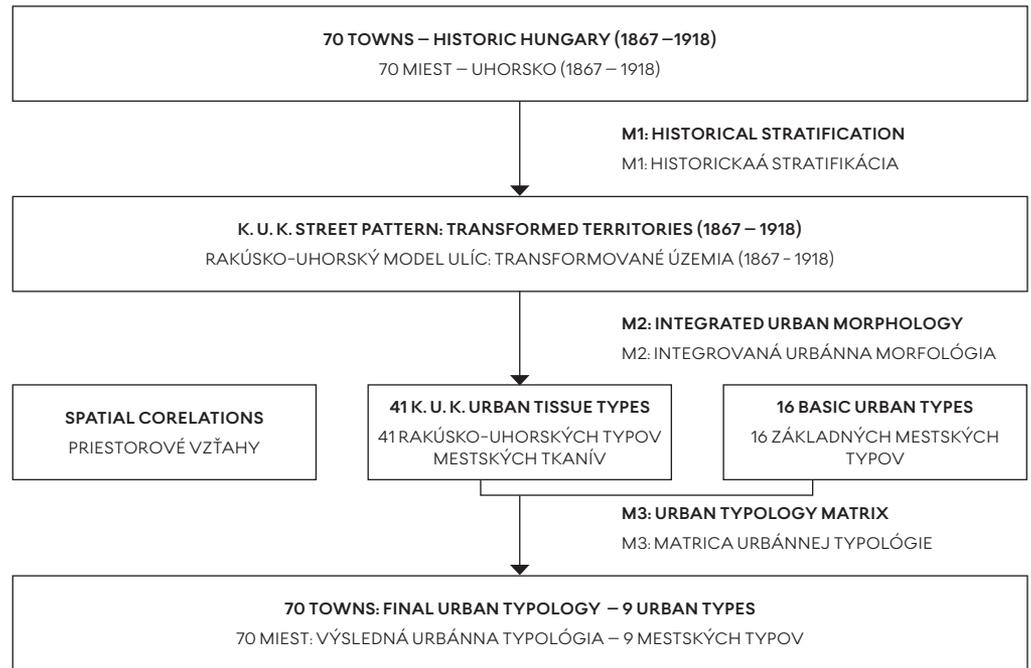
## Urban Typology

The urban typology in the period of the Dual Monarchy can be outlined through the formation of a matrix system of characteristics: using the description and combination of basic urban types and urban fabric types defined by the different features and combination of urban forms, taking into account the dominant urban fabric types (table on page 42 – 46).

The location of parks and green spaces within the town, as well as the relationship between the various types of urban fabric, is significant for the the determination of urban types. In the geographically flatter areas of the research territory, consequently, large forest or meadow parks were formed. The location of these forest parks is not coincidental since their main function was to protect the low-lying towns from wind: trees and bushes creating a natural protection fringe. In some of the studied towns, the centrally located parks were closely connected to the downtown areas (Szombathely, Győr), or located at the edge of the downtown area. In other cases, green areas are situated on the riverbank or along the riverside (Szeged, Szolnok, Novi Sad, Oradea), or configured as parks between the railway station and the town (Kecskemét, Subotica), along with rows of trees siding major streets.

Spatial correlations between urban fabric types and town centers, as one of the determinant conditions along with the inner-urban relationships between the railway (lines and stations), green areas and bodies of water, have great importance in the urban typology. According to the analyses undertaken in the present research, the spatial correlations between the urban fabric (pre- and post-1867) and the town center can determine the direction and type of urban development in the research period and territory. Determination has to take into account that the town's inner districts, which belong to the previous<sup>15</sup> development period cannot be precisely delimited in the plain terrain (partial lack of town walls and characteristic street network), and in many cases, the inner nucleus went through a total transformation. Therefore, the localization of the pre- and post-1867 urban fabric types and street network is crucial for the establishment of the urban typology.

In the urban typology matrix, the basic urban types should be distinguished first, since these types possess unique spatial correlations and strongly determine the urban fabric (through the combination of various historical urban fabrics and specifically Austro-Hungarian urban fabrics) based on their characteristics. The basic urban type group contains those urban types that function as unique and singular cases within the combination and spatial correlations of urban fabric.<sup>16</sup> These towns did not necessarily keep the original, pre-compromise urban fabric, hence regulations, entire transformation, or expansion could act as determinants of classification. Nor do the basic



types reflect individual cases: their classification was performed on the basis of similar/identical types and combinations, taking into account the structural evolution as well.

A higher level of urban typology addresses the question of complex urban types defined through the combination of basic types and urban fabrics. Complex urban types can be created through the combination of basic urban types or could be determined by the combination of basic urban type (types) and urban fabric types (these type or types could be pre- or post-1867 forms that do not determine basic types).

In arriving at a final urban typology/taxonomy of the studied 70 towns, we have defined 9 urban types.

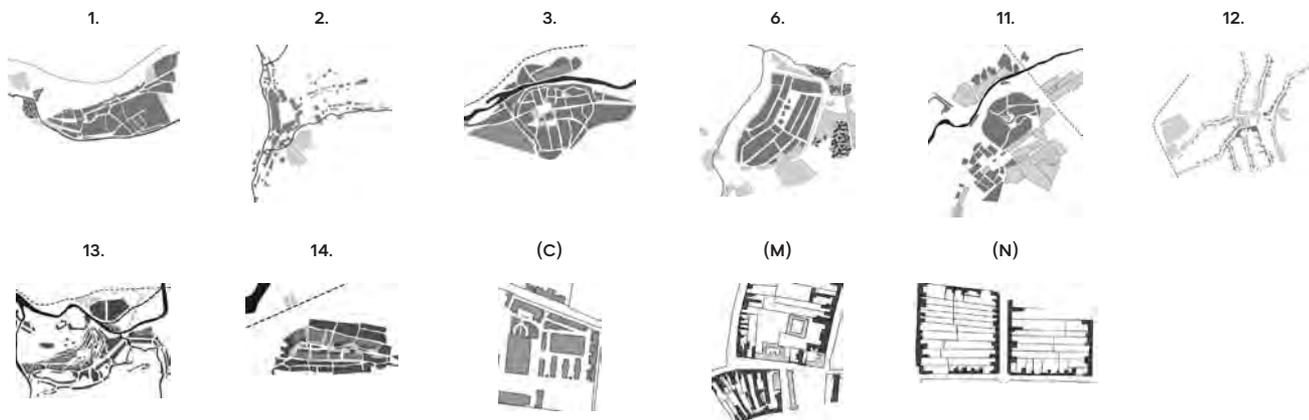
### Final Taxonomy of Urban Types

The urban-type taxonomy reflects the final classifications of the towns. Not only do the selected 70 towns cover the whole territory of the former historic Hungary (1867 – 1918), but they also present a variety geographical and hydrographical conditions and differing percentage levels of urban development in terms of demography and construction volume in the period from 1867 to 1918. Taking the determined basic urban types and our typologies of Austro-Hungarian urban fabric types as important factors in the final urban taxonomy, we made use of them to arrive at a combined group typology. Thematic subgroups are then employed to reflect the identity-creating urban characters, the Austro-Hungarian urban fabric types and the broader category of basic urban types. As such, the combined types are defined as an integral part of the final urban typology. Towns where structural changes were entirely or largely absent, or where the forces of urban transformation in the post-1867 period were manifested only in the form of a single building, small group of representative buildings, integrated into the original urban fabric, form the urban typology we could term stagnant. Transitional groups are possible: some towns have no strong position in the group since the general urban types are formed by the dominant (identity-creating) attributes and the complex character of the towns subsequently provides the opportunity for classification on a larger scale.

The process of classification (1) encompasses the towns in the basic and combined urban type categories, in order to give a wide and full image about the final urban type groups; (2) draws upon the level and nature of urban transformation, and on the relationship of the changes in the original urban fabric and structure; (3) does not take into consideration the built typologies types on the urban periphery (urban fabric created by industrial areas, military barracks, villas, extensive public buildings like hospitals, asylums etc.), since these do not have the influence to create the identity possessed by these towns.. Also, we must keep in mind that in some cases the industrial areas were

## 1. STAGNANT TOWNS

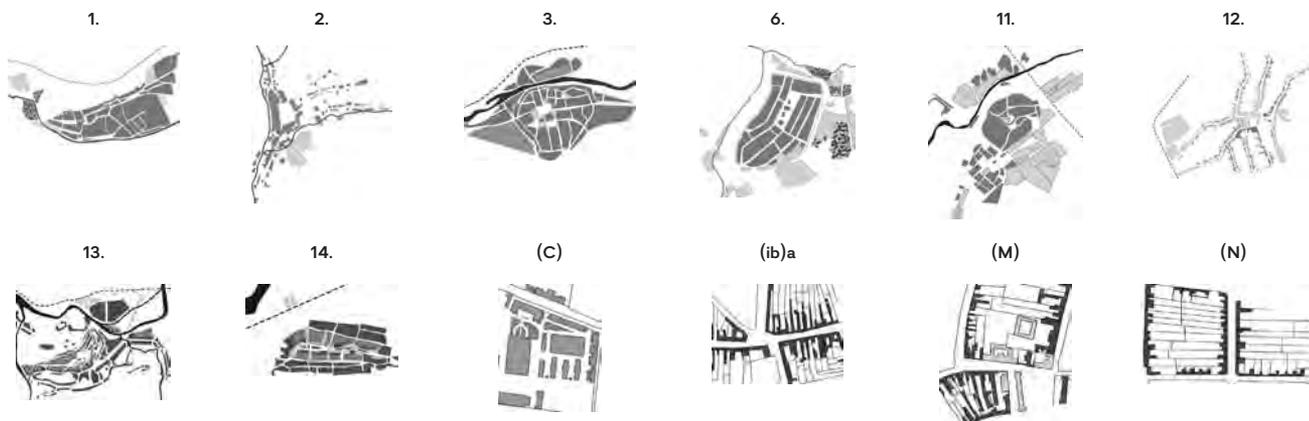
### 1. STABILIZOVANÉ MESTÁ



Kremnica, SK; Baia Mare, RO; Sighişoara, RO; Banská Štiavnica and Banská Bela, SK; Sighetu Marmăţiei, RO; Beregovo, UA; Bistriţa, RO; Orăştie, RO; Sebeş, RO; Miercurea Ciuc, RO; Bardejov, SK; Banská Bystrica, SK; Prešov, SK; Kežmarok, SK; Sabinov, SK; Esztergom, HU; Krupina, SK; Levoča, SK; Modra, SK; Nitra, SK; Trnava, SK; Skalica, SK; Trenčín, SK; Baia Sprie, RO; Mediaş, RO; Sibiu,

### 1A. SEMI-STAGNANT TOWNS, SUBTYPE "A"

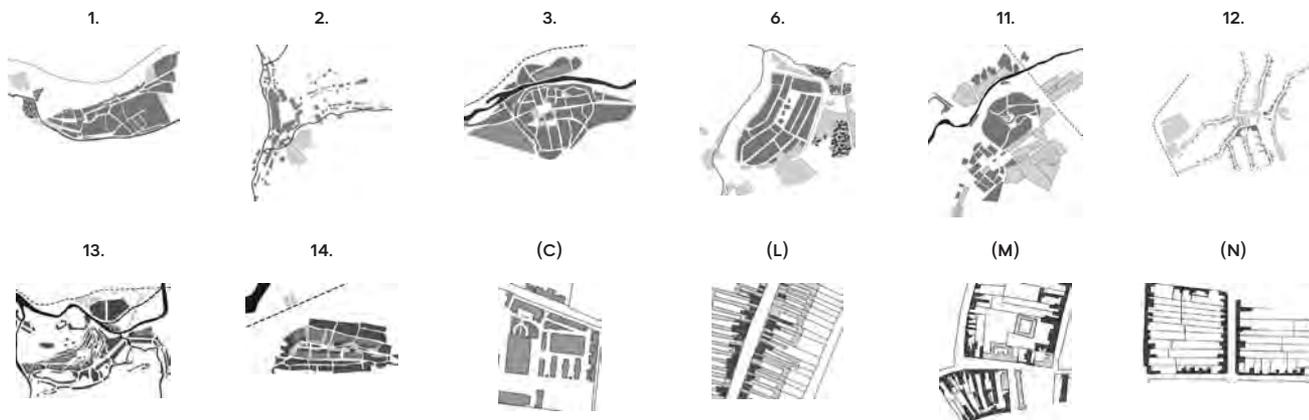
#### 1A POLOSTABILIZOVANÉ MESTÁ – PODTYP „A”



Dej, RO

### 1B. SEMI-STAGNANT TOWNS, SUBTYPE "B"

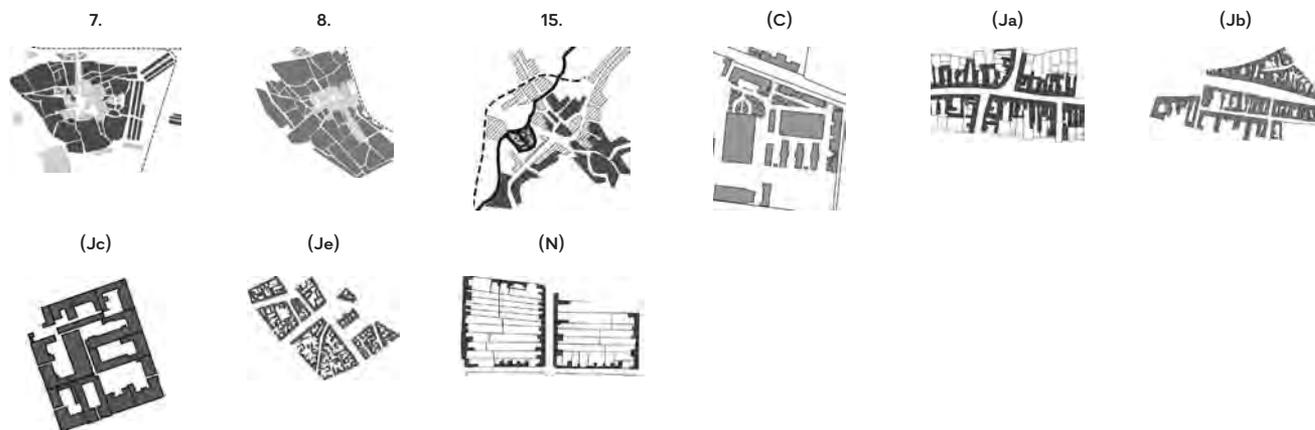
#### 1B POLOSTABILIZOVANÉ MESTÁ – PODTYP „B”



Brezno, SK; Svätý Jur, SK; Zvolen, SK; Pezínok, SK

**2A. REGULATED TOWNS, SUBTYPE "A"**

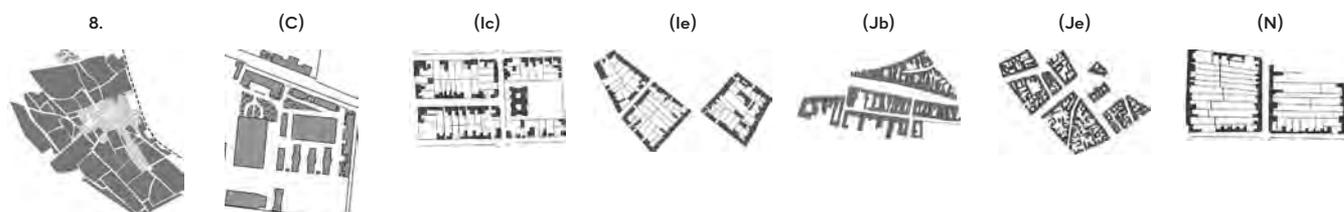
2A REGULOVANÉ MESTÁ – PODTYP „A“



Subotica, RS; Pančevo, RS; Vršac, RS; Senta, RS; Hódmezővásárhely, HU; Baja, HU; Odorheiu Secuiesc, RO; Kecskemét, HU; Târgu Mureș, RO; Satu Mare, RO; Arad, RO; Miskolc, HU; Mukacheve, UA; Komárno, SK

**2B. REGULATED TOWNS, SUBTYPE "B"**

2B REGULOVANÉ MESTÁ – PODTYP „B“



Kaposvár, HU; Zrenjanin, RS

**3. TOWNS WITH LINEAR URBAN DEVELOPMENT TRAJECTORIES AND MORPHOLOGICAL PERIODS**

3. MESTÁ S LINEÁRNYM ROZVOJOVÝM SMEROVANÍM A MORFOLOGICKÉ PERIÓDY

<p>a)</p> <p><b>Medieval tissue</b> Stredoveké tkanivo</p>	<p>(C)</p>	<p>(E)</p>	<p>(F)</p>	<p><b>Housing on slopes</b> Bývanie vo svahu</p>	
<p>Rijeka, HR</p>					
<p>b)</p> <p><b>Medieval tissue</b> Stredoveké tkanivo</p>	<p>(C)</p>	<p>(H)</p>	<p>(Ia)a</p>	<p>(Ja – Jb)</p>	<p><b>Housing on slopes</b> Bývanie vo svahu</p>
<p>Zagreb, HR</p>					

4. TOWNS WITH SEVERAL RING AND RADIAL ROADS (TOTAL OR PARTIAL TRANSFORMATION)

4. MESTÁ S VIACERÝMI RINGMI A RADIÁLAMI (CELKOVÁ A ČIASTOČNÁ PREMENA)

9.



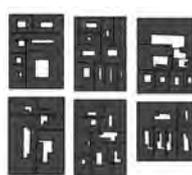
(C)



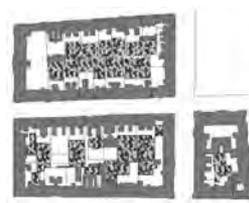
(E)



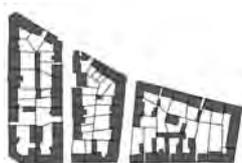
(G)



(H)



(Id – Ie – If)



(Jb)a



(Jc – Jd)



(Jg – Jh)



(N)



Szeged, HU; Budapest (Pest side), HU

5. TOWNS WITH RADIAL ROAD OR /AND RING ROAD, WHERE THE TOWN CORE UNDERWENT STRUCTURAL AND ARCHITECTURAL TRANSFORMATION

5. MESTÁ S RADIÁLAMI A/ALEBO RINGOM, KTORÝCH MESTSKÉ JADRO PREŠLO ŠTRUKTURÁLNOU A ARCHITEKTONICKOU TRANSFORMÁCIU

7.



(C)



(Ed)



(Ia)



(Id – Ie)



(Ja)



(Jc – Jd)



(Je)



Jg(a)



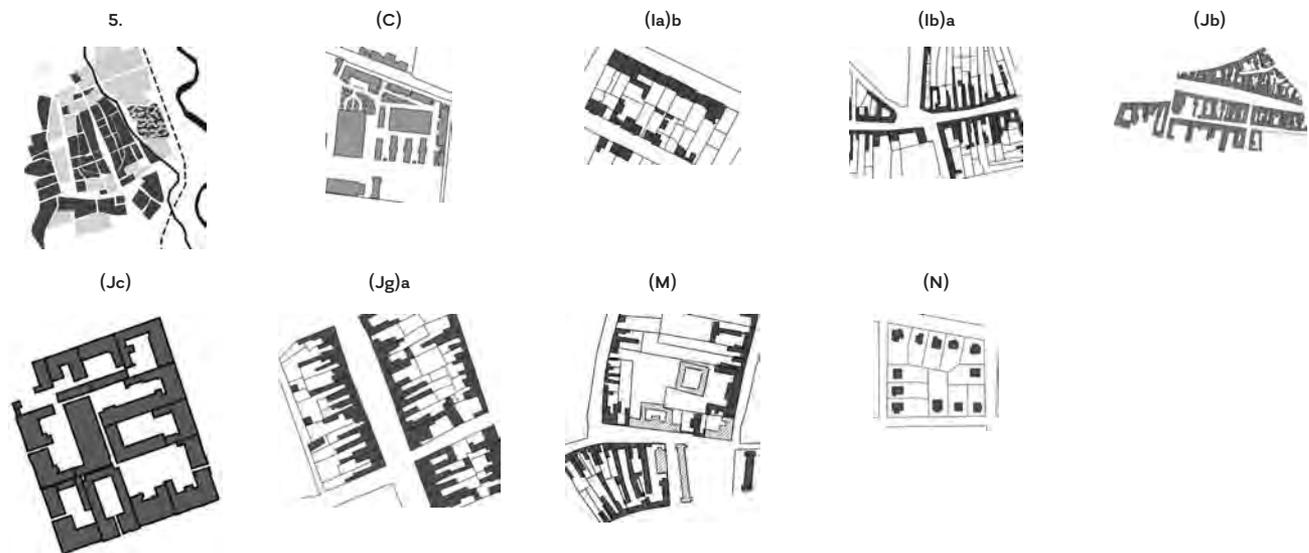
(N)



Sombor, RS; Debrecen, HU; Szombathely, HU; Szolnok, HU; Timișoara, RO

6. TOWNS WITH RADIAL ROAD OR/AND RING ROAD, WHERE THE TOWN CORE KEPT ITS ORIGINAL URBAN FABRIC AND BUILT ENVIRONMENT

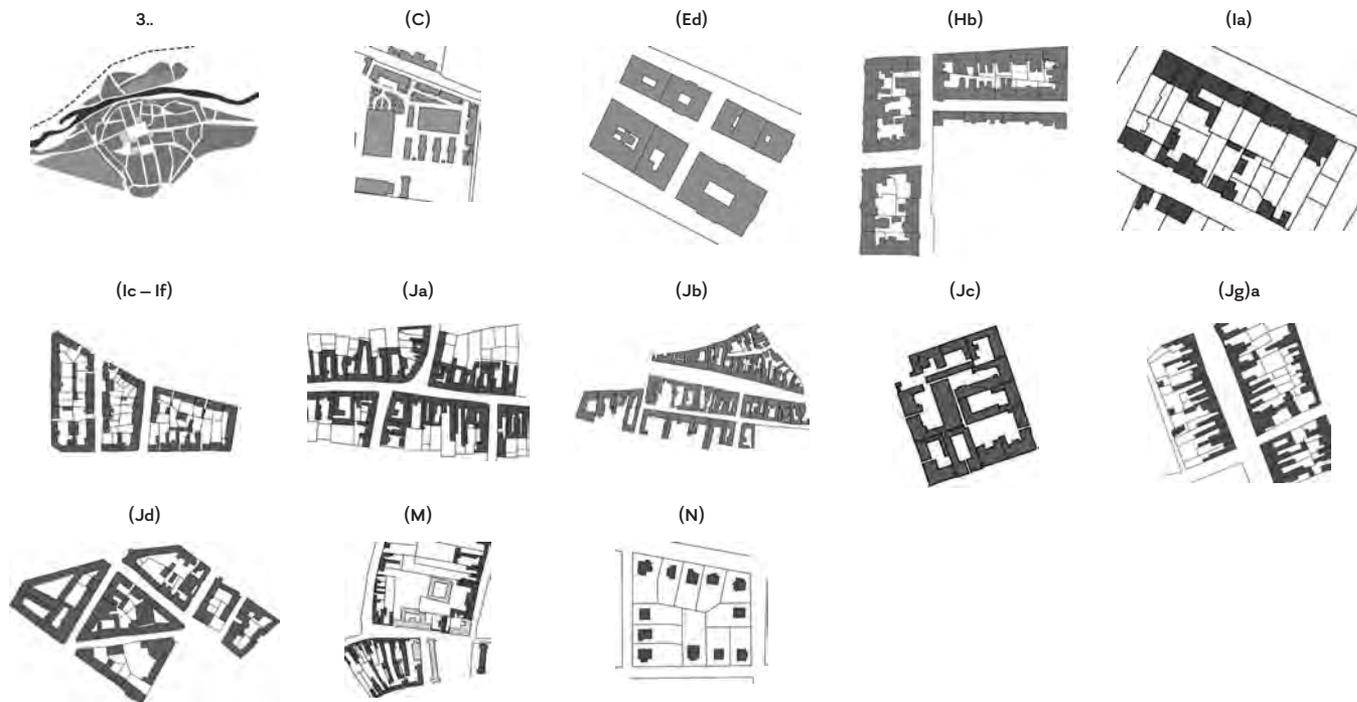
6. MESTÁ S RADIÁLAMI A/ALEBO RINGOM, KTORÝCH MESTSKÉ JADRO SI ZACHOVALO SVOJU PÔVODNÚ ŠTRUKTÚRU A BUDOVANÉ PROSTREDIE



Košice, SK; Sopron, HU; Budapest (Buda side), HU

7. TOWNS WITH RADIAL ROAD OR/AND RING ROAD, WHERE THE TOWN CORE PARTLY RETAINED ITS ORIGINAL URBAN FABRIC AND BUILT ENVIRONMENT. THE GROUP IS A MIX OF THE 5TH AND 6TH GROUP

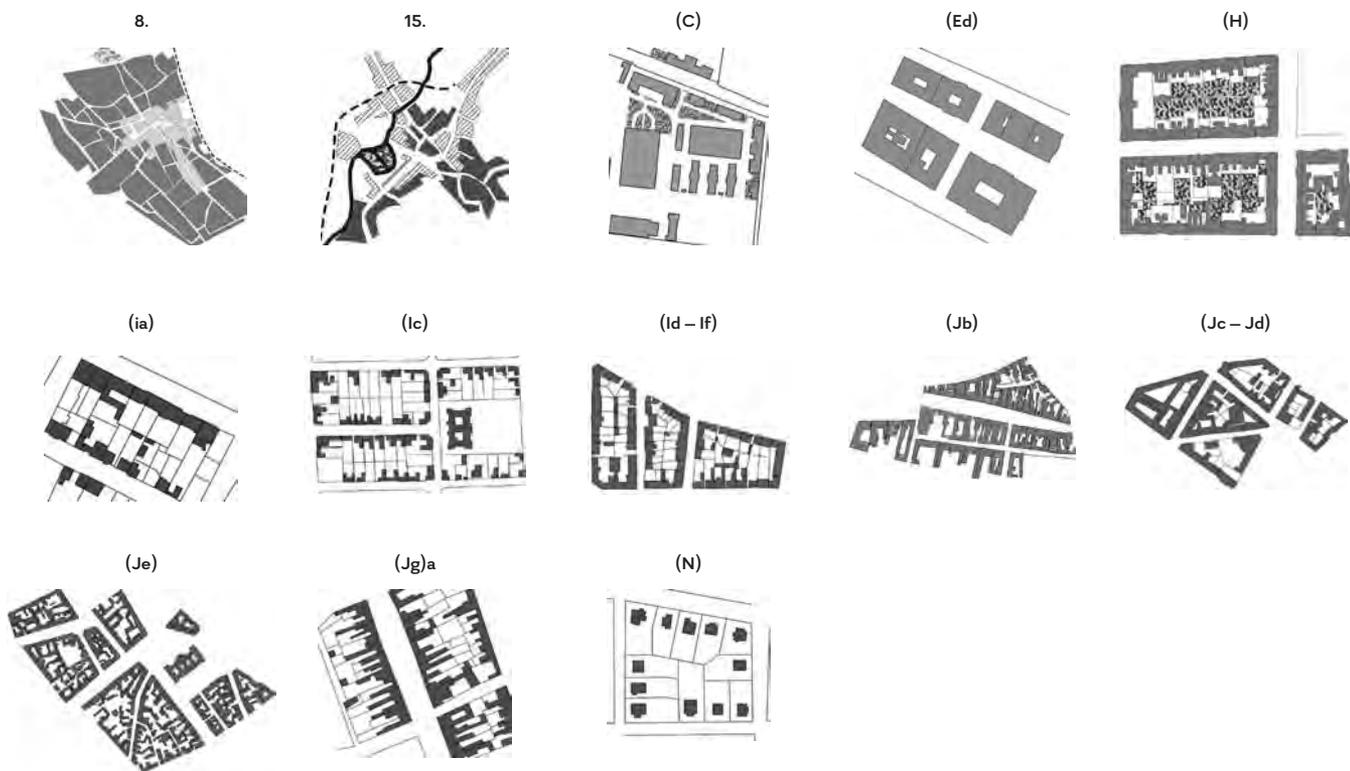
7. MESTÁ S RADIÁLAMI A/ALEBO RINGOM, KTORÝCH MESTSKÉ JADRO SI ČIASTOCNE ZACHOVALO PÔVODNÉ MESTSKÉ TKANIVO A BUDOVANÉ PROSTREDIE; SKUPINA JE KOMBINÁCIOU 5. A 6. SKUPINY



Pécs, HU; Bratislava, SK; Győr, HU; Alba Iulia, RO; Uzhgorod, UA; Cluj-Napoca, RO; Székesfehérvár, HU

## 8. MULTI-NUCLEI TOWNS WITHOUT RING AND RADIAL ROADS

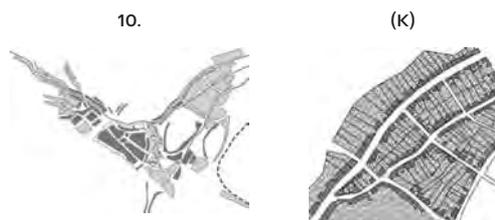
### 8. VIACJADROVÉ MESTÁ BEZ RINGU A RADIÁL.



Novi Sad, RS, Oradea, RO, Osijek, HR

## 9. ENCLOSED TOWNS

### 9. UZAVRETÉ MESTÁ



Braşov, RO

**FINAL URBAN TYPOLOGY MATRIX  
CREATED OUT OF THE BASIC  
URBAN TYPES AND COMBINED  
URBAN FABRIC TYPES, PRESENTING  
THE DOMINANT URBAN FEATURES  
OF EACH TYPE. EACH ROW  
DESCRIBES ONE FINAL URBAN  
TYPOLOGICAL GROUP, CREATED  
BY THE COMBINATION OF BASIC  
URBAN TYPES AND DIFFERENT  
URBAN FABRIC TYPES.**

**VÝSLEDNÁ MATRICA URBÁNNEJ  
TYPOLÓGIE VYTVORENÁ ZO  
ZÁKLADNÝCH URBÁNNÝCH TYPOV  
A TYPOV S KOMBINOVANÝM  
URBÁNNYM TKANIVOM, ČO  
PREZENTUJE DOMINANTNÉ  
URBÁNNE VLASTNOSTI KAŽDÉHO  
TYPU. KAŽDÝ RIADOK OPISUJE  
JEDNU VÝSLEDNÚ TYPOLOGICKÚ  
SKUPINU VYTVORENÚ  
KOMBINÁCIOU ZÁKLADNÝCH  
URBÁNNÝCH TYPOV A RÔZNYCH  
TYPOV MESTSKÉHO TKANIVA.**

integrated into the urban fabric of the wider central area, or the developmental direction of the town was oriented towards the industrial area, causing its integration into the urban fabric. By the end of the 19th century, this tendency led to the limitation of industrial construction within the border of the town (Industrial Law: 1885. Act. XVII.); (4) considers only the Austro-Hungarian urban fabric types using a combination of the basic urban types, since the basic urban types are representative of the pre-1867 urban structure and urban fabric combinations; (5) does not ignore peripheral /satellite towns (worker estates),<sup>17</sup> but considers them as an additional attribute without direct impact on the specified types.

The final urban type groups (table on page 48) established by the matrix analysis of the basic types and Austro-Hungarian urban fabrics (table on page 42 –46):

1. Stagnant towns, with potential infill in the urban fabric or into unbuilt areas (military barracks, industrial buildings, and worker-housing estates, public buildings like hospitals, asylums etc.). No drastic urban transformations, although minor street regulations (street straightening) are possible.

1/a. and b. Semi-stagnant towns, with potential infill in the urban fabric or unbuilt areas (military barracks, industrial buildings, and worker-housing estates, public buildings like hospitals, asylums etc.). Modest urban transformations, although minor street regulations (street straightening) are possible.

2. Regulated towns, with extended urban fabric transformation in the central areas, with infill in unbuilt areas (military barracks, industrial buildings, and worker-housing estates, public buildings like hospitals, asylums etc.) and regulated street network (street straightening). The urban transformation is focused on the central areas, especially oriented towards the main square (former market square) and its surrounding; nonetheless, the regulations were not accompanied by a rearrangement of the plots or only to a limited extent (the original structure of the plots remained). Construction of radial road between the railway station and the town core is possible, but not a requirement. As a result of the regulation, natural springs were regulated or covered, and marshlands drained to acquire land for construction. Subtypes a) and b) went through intense urban reconstruction (urban regulation plan at the end of the 19th century), where the urban core partly kept the original plot structures but the street network was regulated and the newly built areas were dominated by an orthogonal plan (elongated rectangular urban blocks enclosed by streets). If districts in the group a) were constructed according to the orthogonal planning principles, they were placed outside of the central area, but in the case of b), the regulated urban neighborhoods were connected with the wider central area.

3. Towns with linear urban development lines and manifestation of discrete morphological periods.

4. Towns with more extensive ring and radial roads (total or partial transformation). Besides Budapest (particularly Pest side), Szeged underwent drastic urban transformation in accordance with the urban planning principles of the research period. This urban type is characterized by regular simple fabric (a grid created by intersecting radial roads and rings), radial roads and inner and outer ring roads. As for the actual ring roads, they not only bear a representative function but were constructed pragmatically to satisfy the demands of the increasing transport and infrastructural changes. In addition to the urban structure of Szeged, Budapest can be seen as an elaborated version following the original traditions of the rings (inner ring), where the combination with the extant urban fabric underscores a harmony with the pre- and post-1867 structures. Here, the river determines the development direction and creates a unique cohesion between the built environment and the riverbank: of the studied towns, Budapest is a rare example where the river embankments are occupied by representative buildings. The Buda side of the capital could be assigned as well to another group, since the ring was never fully completed and a higher percentage remained of the original structure and urban fabric.

5. Towns with a full radial road or/and ring road. Here, the town core was confronted with major structural and architectural transformation. The ring road may not be as regular as in the case of the previous group: it could be a full circle or partly constructed road, and regarding its conditions of development, it could occupy the site of demolished defensive walls or cover land never occupied by fortifications. In most cases, the radial road serves to connect the town core with the railway station. Timișoara is a special case, since if we consider the proposed urban regulation plan by Lajos Ybl (see the next chapter), the town could be a member of the previous group, but also a

## FINAL URBAN TYPOLOGY

### VÝSLEDNÁ URBÁNNÁ TYPOLOGIA



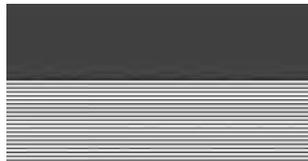
**1. STAGNANT TOWNS, WITH POTENTIAL INFILL INSIDE THE URBAN FABRIC OR INTO UN-BUILT AREAS. 1/A. AND B. SEMI-STAGNANT TOWNS, WITH POTENTIAL INFILL INSIDE THE URBAN TISSUE OR INTO UN-BUILT AREAS**

1. STABILIZOVANÉ MESTÁ, S POTENCIÁLOM ZAPLNIT VNÚTRO MESTSKEJ ŠTRUKTÚRY ALEBO NEZASTAVANÉ PLOCHY. 1A) A B) POLOSTABILIZOVANÉ MESTÁ S POTENCIÁLOM ZAPLNIT VNÚTRO MESTSKEJ ŠTRUKTÚRY ALEBO NEZASTAVANÉ PLOCHY



**2. REGULATED TOWNS, WITH EXTENDED URBAN TISSUE TRANSFORMATION IN THE CENTRAL AREAS, WITH INFILL INSIDE UN-BUILT AREAS. TWO SUBTYPES CAN BE PROPOSED**

2. REGULOVANÉ MESTÁ S ROZŠÍRENOU TRANSFORMÁCIOU MESTSKEJ ŠTRUKTÚRY V CENTRÁLNYCH OBLASTIACH SO ZAPLNIENÍM VOVNÚTRI NEZASTAVANÝCH ÚZEMÍ; MÔŽU BYT NAVRHNUTÉ DVA PODTYPY



**3. TOWNS WITH LINEAR URBAN DEVELOPMENT TRAJECTORIES AND MORPHOLOGICAL PERIODS' MANIFESTATION**

3. MESTÁ S LINEÁRNYM MESTSKÝM ROZVOJOVÝM SMEROVANÍM A PREUKAZOVANIE MORFOLOGICKÝCH PERIÓD



**4. TOWNS WITH SEVERAL RING AND RADIAL ROADS (TOTAL OR PARTIAL TRANSFORMATION)**

4. MESTÁ S NIEKOLKÝMI RINGAMI A RADIÁLAMI (CELKOVÁ ALEBO CIASTOCNÁ TRANSFORMÁCIA)



**5. TOWNS WITH RADIAL ROAD OR/AND RING ROAD, WHERE THE TOWN CORE UNDERWENT STRUCTURAL AND ARCHITECTURAL TRANSFORMATION.**

5. MESTÁ S RADIÁLNYM CESTAMI A/ ALEBO RINGOM, KTORÝCH MESTSKÉ JADRO PREŠLO ŠTRUKTURÁLNOU A ARCHITEKTONICKOU TRANSFORMÁCIOU



**6. TOWNS WITH RADIAL ROAD OR/AND RING ROAD, WHERE THE TOWN CORE KEPT ITS ORIGINAL URBAN FABRIC AND BUILT ENVIRONMENT, MINOR CHANGES AND INFILL ARE POSSIBLE.**

6. MESTÁ S RADIÁLAMI A/ ALEBO RINGOM, KTORÝCH MESTSKÉ JADRO SI CIASTOCNE ZACHOVALO PŮVODNE MESTSKÉ TKANIVO A ZASTAVANÉ PROSTREDIE



**7. TOWNS WITH RADIAL ROAD OR/AND RING ROAD, WHERE THE TOWN CORE PARTLY RETAINED ITS ORIGINAL URBAN TISSUE AND BUILT ENVIRONMENT. THE GROUP IS A MIX OF THE 5TH AND 6TH GROUP.**

7. MESTÁ S RADIÁLNYMI CESTAMI A/ ALEBO RINGOM, KTORÝCH MESTSKÉ JADRO SI CIASTOCNE ZACHOVALO PŮVODNÉ MESTSKÉ TKANIVO A ZASTAVANÉ PROSTREDIE; SKUPINA JE KOMBINÁCIOU 5. A 7. SKUPINY



**8. MULTI-NUCLEI TOWNS WITHOUT RING AND RADIAL ROADS, DETERMINATIVE FORCES ARE THE RIVER AND THE FORTRESS. THE REASON OF THE MULTIPLIED NUCLEI CAN BE DIFFERENT.**

8. VIACJADROVÉ MESTÁ BEZ RINGU A RADIÁLNYCH CIEST, DETERMINUJÚCIMI SILAMI SÚ RIEKY A OPEVNENIA. DŮVOD VIACERÝCH CENTIER MÔŽE BYT RÔZNY.

## 9. ENCLOSED TOWNS

### 9. UZAVRETÉ MESTÁ



**post-compromise urban tissue (1867 – 1918)**

urbánne tkanivo po Rakúsko-uhorskom vyrovnaní



**pre-compromise urban tissue (– 1867)**

urbánne tkanivo pred Rakúsko-uhorskom vyrovnaní



**river**  
rieka



**greenery**  
zeleň

multi-nuclei town. Although the development was never brought to completion, the lines formed by the ring roads (one outer and the inner around the citadel) are highly legible; nonetheless, the relative regularity of the simple urban fabric is what has determined its typological group.

6. Towns with a radial road or/and ring road, where the town core kept its original urban fabric and built environment (minor changes and infill are possible). The ring road is not as regular as in the case of the 4th group: it could be a full circle or only partly constructed road, and could either have been laid out on the site of the demolished fortifications or even in open territory. Again, in most cases the radial road connects the town core with the railway station. The structure remained almost the same, with street regulations having relatively little influence in the simple fabric, but the period also witnessed the raising of additional new districts.

7. Towns with a radial road or/and ring road, where the town core partly retained its original urban fabric and built environment. This group combines the distinguishing features of the 5th and 6th groups, in that these towns kept the original structure (with structural changes possible in the center) but witnessed great change in a high percentage of the built environment. The presence of a ring road or a radial road is not uniformly encountered in all towns in the group; even when present, the ring roads could range from only a fragmentary structure to a full circle (e.g. Alba Iulia), while the radial roads function as a direct contact between the railway station and the urban core (Pécs, partly Bratislava, Győr). The position of Bratislava in this group is less strong, since the town could equally be assigned to group 8.

8. Multi-nuclei towns without ring or radial roads, where the determinative forces are the river and the fortress. The reason for the multiplication of urban nuclei can vary: in Oradea, the attached settlements created the image of patchwork urban fabric, while Osijek originally had doubled nuclei, since the fortress-complex limited the connections between the settlements on the right and left river banks (similar to the situation in Timișoara, but in the post-1867 period the urban districts partly merged). In other towns, like in Subotica, it is possible to discern a multi-nuclei structure, but yet the physical transitions between the sections are smoother as a result of the multi-ethnic structure of the town. Novi Sad is taken as an example because of its uneven development, which created various urban neighborhood constructions.

9. Encompassed town – the case of Brașov.

## The Wider Context

In order to create a wider context for examination of the urban typologies and for urban studies in general, the study has attempted a comparison of the development history and the most important image-creating urban development patterns of 70 towns in historic Hungary, matched with 10 towns in the territory of the Austrian Empire, to show the manifestation of the political and economic power of the Austria-Hungarian Dual Monarchy as projected in urban form, where progressive urban development in the investigated period was the result and consequence of industrialization and the new political status.

The comparison, as well as the final determination of urban typologies, turns its attention toward the main urban identity-shaping urban forms and relationships, as the factors which created the specific character and identity of the town in the given period. The background of modernization represented the same political, economic structure and progress of development. Moreover, similar town planning principles influenced the urban planning throughout Austria-Hungary, whether directly by the theories and practices of Josef Stübben, Camillo Sitte, and Otto Wagner<sup>18</sup> or indirectly by their followers and students, who adhered to the ideas of these major figures and used them in their planning principles.

Sitte's principles of the harmonic picturesque and a well-organized asymmetry were opposed by Wagner. In his ideas of contemporary urban planning, Sitte highlighted three simple fabric systems: the gridiron system, the radial system, and the triangular system. Wagner, however, rejected not only Sitte's approach but the entire the architectural and urban language of the past, and believed in new forms created according to their functions. Wagner's practice, favouring the development and rational (constructional-infrastructure) planning, is known from his submission to an urban design competition, *Moderne Architektur* (1896) and *Die Großstadt* (1911), which was his response to a competition for the general regulation of Vienna. In *Die Großstadt*, Wagner defined the urban block as a new functional form, which were units of aggregation, while the paralleled radial and perpendicularly intersecting streets and squares created by the 'removed blocks' in turn acted as open

spaces. For Wagner the “ideal metropolitan neighbourhood consisted of uniform residential blocks interspersed with monumental public buildings arranged along a central axis of green spaces”.<sup>19</sup>

Vienna was the first representative instance of a modernizing metropolis in the entire Habsburg territory, and had a clear influence on the development of the ring roads on the former defensive zones around the town core (Brno), but also influenced the transformation of already extant rings-formations (L'viv, Graz) and even the establishment of these road types in such cases where there were no defense lines in the past (Budapest's Nagykörút, Zagreb).

As a counterpoint of Vienna, the urban development of Budapest increased starting in the 1870s, emerging as a true metropolis that predominantly following Western traditions of urban development (closely modelled after Vienna). On the Pest side of the later unified Budapest (1872/1873), the inner ring road (Kiskörút) was formed in the line of the city walls, and the main radial roads were established leading to the former gates.

In 1887, the first Urban Development Master Plan was made in Zagreb, which shaped the Zagreb Ring<sup>20</sup> (Lenuci's Horseshoe/Lenujiceva potkova), a framework of park squares around the center of the Lower Town (Donji grad), laid out on hitherto unbuilt land (fields and gardens). Milan Lenuci was a town planner and engineer credited with the idea of constructing the U-shaped green belt around the town center. The parallel between the Viennese Ringstrasse and the Zagreb Ring has been discussed by numerous studies and researchers, including Blau and Moravánszky.<sup>21</sup> The new urban formation was framed by a U-shaped square system (the “green horseshoe”) from the east, south and west, with public buildings situated in the vegetation of the city parks.

Since the topography of Prague and Budapest is similar, the far more divergent social circumstances - the vision of urban self-promotion in Budapest and the obstructed urban development of a still-provincial Prague - nonetheless both resulted in a significant increase in building density in urban centers. During the 19th century, political obstacles stood in the way of Prague's development, since the Austrian government took no action to authorize its urban expansion; hence the central area of Prague remained largely untouched apart from the redevelopment of the town walls and the revitalization of the Jewish quarter.<sup>22</sup>

The beginnings of modern town planning of Ljubljana date back to the period after the earthquake in 1895, which created the opportunity to modernize the town. During the period of reconstruction, Camillo Sitte was invited to work on the urban regulations, while Max Fabiani also proposed his plan on his own initiative, and the planning department of the town also developed its own urban regulation plan. Sitte envisaged the course of development for the next fifty years, but only in the area of the current urban core as circumscribed by the rail line. Fabiani, as a former student and collaborator of Otto Wagner, proposed the construction of a new ring road and an intersecting avenue, accepting his teacher's ideas from *Die Großstadt* and re-shaping them in his urban plan for Ljubljana.

In addition, the urban regulation plan by the town planning department also proposed the construction of a ring road, though in this case adhering to the form of the already established street system. Though the plan was approved for realisation, only a part of the road was ever created.<sup>23</sup> It was only much later, about a decade after the collapse of the Dual Monarchy, that the most internationally renowned Slovenian architect, Jože Plečnik, could play a decisive role in the establishment of modern Ljubljana.

Brno, as an important industrial centre of Austria-Hungary, was a typical town of the 19th century in its planning and architecture. The construction of the Brno ring road followed the model of Vienna (started in 1861, but the final plan was submitted in 1863),<sup>24</sup> and realized in a manner inspired as much by Paris and Barcelona as the Habsburg capital; yet functionally it served as a small version of its larger fin de siècle neighbor to the south, concentrating all of the administrative functions within the area of the removed fortifications.

Linz, in its urban context, showed similarities with Novi Sad and Bratislava, based on the urban structure and the urban type determining elements like the river, green spaces and the railway.

Trieste, has its adjoining ‘counterpart’ of Rijeka in regard to urban forms, natural surroundings, function and specific typologies of Austro-Hungarian urban fabric.<sup>25</sup>

“A special chapter in the history of L'viv's urban development is represented by the laying of a diadem of parks and green spaces (...). Following the model of Vienna's Ringstrasse, a boulevard was laid around the city's historic center”.<sup>26</sup> The town's increasing urban evolution was expressed by the large-scale development of new residential and commercial districts and by mixed-use/

middle-class apartment buildings (influenced by Vienna), as well as a proliferation of public open spaces. Its architectural character and urban planning are dominated by the model of Vienna and its style in the 19th century, with planning activities focused on the central area and the ring road, while other areas were left neglected.<sup>27</sup>

Chernivtsi and Timișoara developed into “provincial metropolises” in the 2nd half of the 19th and especially at the beginning of the 20th century as a result of ongoing urban development and general processes of “modernization”.<sup>28</sup> In Timișoara, the scope of urban planning was limited by the fact that the citadel (Cetate) blocked the continuous spreading of the town and a double nuclei town emerged (axial center: Cetate). Future urban planning aimed to ensure the unified townscape while preserving the citadel in the center, but to create a new urban fabric. The urban development process was indirectly influenced by Budapest, since the town’s urban planner Lajos Ybl worked on the town regulations from his base in the capital. Although Ybl’s plan clearly followed the modern town idea of Wagner with rectangular blocks and a grid street network, as visible in Ybl’s map *Temesvár városbóvítési terve* (1893),<sup>29</sup> his plan was not adopted in full. The final plan in 1911 was a mixed version of Ybl’s strict regular system and a less constricting plan by László Szesztay. Timișoara’s trajectory of urban development displays similarities to Szeged (ring roads, radial roads), yet the dimensions were greater, supporting the metropolis idea. The urban transformation of the other towns in Transylvania (Brașov, Cluj-Napoca, Oradea), where even the ring road idea was adopted from the capital, bears more common traits with the Hungarian towns in Transdanubia.

In the mentioned towns, the fortification walls were demolished with the aim of using the vacant territory for further urban development, but no unified ring road systems were ever built during the research period.

Architectural styles and urban planning practices that were identified in Vienna in the 2nd half of the 19th century were promoted in the smaller imperial towns through the deliberate spread of imperial urban development standards. In this period, the architectural composition and urban structure of Chernivtsi were completed. In contrast to Vienna where the architectural styles were more period specific and often replaced each other, in Chernivtsi the architectural movements were more stable and often coexisted (according to the analyses). The scale of the new developments was not in harmony with the existing built environment.

Examining the mechanism of action, we cannot talk about any immediate and direct effect that shaped the comparison of the “Austrian” and “Hungarian” towns, though to a limited extent a specific “Austrian” influence can be seen through the applications of the theories and practice of Camillo Sitte, Otto Wagner and Josef Stübben.

If we are to speak of an Austro-Hungarian effect, Sarajevo has to be taken as an example and analyzed, since the town found itself positioned between two worlds in its own relatively brief period of Austro-Hungarian rule (1878 – 1918),<sup>30</sup> resulting in a unique mixture of continuing Ottoman traditions and newly introduced contemporary Austro-Hungarian architecture (specifically the central core constructed during the research period). Industrialization reached Sarajevo in the period of the Dual Monarchy and grew further with the introduction of technological innovations (1885: the first tramline in whole Europe was installed), so that the model of its urban modernity relates to the broader context of central and western European urban development in the identical period. The difference between the Oriental and the European urban forms lies not only in the matter of style, but also in scale: the Habsburg-era central core is more compact, consisting of rectangular blocks, in contrast to the winding streets and development in unbroken rows of the Ottoman remains. The town map shows significant differences between the Habsburg and the Ottoman street network: the latter is narrow and irregular in contrast to the wide and regular roads of the investigated era. Moreover, the same period introduced the gradual appearance of planned, open public spaces to the town, smaller in scales compared with other capitals (the site of the green area of park was designated in the 1880s and expanded later). The architecture of Sarajevo shows Austria-Hungarian influence.<sup>31</sup>

In European towns, in general, the specific urban characteristics can be easily distinguished, while in the historical towns of the former Austria-Hungary, especially in the towns of the former Hungarian Kingdom and border towns in the Austrian Empire, numerous overlaps of the different historical structures can be found, often combined with a strong local character. Identification of the urban planning influences is possible, although the common urban development platform and urban forms is recurrent in some of the studied towns. Most frequently, the representative new

avenues, as new accentual axes of the town, connected the railway station and the town core, such roads were created in e.g. Budapest, Kecskemét, Cluj-Napoca, Oradea, Győr, Sopron, Szombathely and Pécs as well. In case of the riverside towns, for the integration of the districts on both side of the river, the bridges played important role (e.g. Budapest, Cluj-Napoca, Oradea, Szombathely). Public construction projects often concentrated on the vacant areas on the site of demolished former fortifications (e.g. Košice, Timișoara, Győr, Cluj-Napoca), or underused market squares in close proximity to the urban core (e.g. Székesfehérvár, Baja, Győr). The regulation of main squares was characteristic in the areas of the Hungarian Plain (e.g. the layout of the main square in Hódmezővásárhely and Kecskemét became rectangular). The orthogonal gridiron system was a favourable form for rapid urban growth, and as such it dominated the structure of the newly planned neighborhoods for decades till the 1880s.

From the middle of the decade, the orthogonal street network has been criticized by the side of the professionals, which created suitable environment for Sitte's principles. Most of the cases, the urban planners, architects were familiar with the urban approaches of Camillo Sitte (Josip Pospošil in Sarajevo, Antal Palóczy in Bratislava and Novi Sad, Lajos Ybl in Timișoara and Lajos Lechner in Szeged etc.), hence the principles of modern urban planning could act as a common platform for the towns in the entire Austria-Hungary, as well as the use of common urban design language (rings, avenues etc.).

## Conclusion

The wide range of the pertinent scholarly literature, as well as the existence of previously unexamined archival materials written in several languages and preserved in various national institutions, has meant the absence of sufficient research that deals with the typology of the towns and the post-1867 Austro-Hungarian urban fabric in a comparative urban morphological nature. No complex study has ever worked towards a general typology, especially of the urban types in the selected territory and period of the study, although studies dealing with individual urban forms can be found. The intention of the current study was to fill the gap in the field of urban morphology, urban typology, since the complex nature of the study and the different layers provide a solid basis for the typological examination (urban fabric typology, urban typology). Within the framework of the present work, the subject of the research, the taxonomic classification of the urban fabric types and urban types shaped between 1867 and 1918 in the territory of historic Hungary, has for the first time been created and defined by urban morphological methods.

In the research, it has been shown that the basic of urban typology is the determination of urban fabric types, their combinations and their spatial-structural relationships. During the research, the urban fabric characteristics were defined, their possible combinations and their structural connections within the urban organisms of the selected 70 towns of historic Hungary (1867 – 1918). Structural connections imply the relationship of the urban fabric with the centre, the railroad and the green areas. On the basis of the examinations, it can be concluded that the relationship between the town centre and the urban fabric is dependent on the nature and direction of urban development between 1867 and 1918 in case of the studied towns.

The study proved that the establishment of urban typology is possible, yet to create an adequate system, the taxonomic designation of urban types has to be preceded by the determination of urban fabric types, their various combinations, and the extant spatial relationships within the town. The collage nature of each town allowed for an examination of the forms of urban areas, and the broader structure has been read as a whole.

The urban typology can be determined by the whole-part (town-urban fabric) and part-whole (urban fabric-town) methodology: the town is determined by urban fabric combinations and inner-town relationships or the urban fabric types can be distinguished by urban analyses (resolution of the town into urban forms). Considering the variables (urban fabric types and combinations, their spatial-structural relationships), 16 basic types and combined urban types can be defined by a combination of basic types or by a combination of both basic types and dualist urban fabric types, while the defined final urban typology is used for categorizing the 70 towns within the set urban typology matrix. The final urban types can be defined by combinations of basic types or combination of basic types and urban fabric types. Within the group of types, the determination of subgroups was a necessity. Nonetheless, the determination of urban fabric combinations and design features has been marked with a sufficient degree flexibility, since the wide variability of

## ACKNOWLEDGEMENTS

The research is part of the author's doctoral dissertation. The current research was supported by the National Talent Program (Nemzeti Tehetség Program – a Nemzeti Fiatalkor Tehetsége), contract No. NTP-NFTÖ-16-0859.

## ING. ÉVA LOVRA PH.D.

Josipa Krasa 4.  
24300 Bačka Toplica  
Serbia

Damjanich u. 32.  
1071 Budapest  
Hungary

lovra.eva@gmail.com

urban structures is encountered found in the territory, according to the urban fabric dominance and urban fabric combinations. In spite of the differences, selection of appropriate indicators (river, urban fabric, railway lines, parks) allows for formation of a subgroup and makes possible the establishment of the typology. Urban regulations led to complete transformation of the urban fabric: in addition to Budapest (combined type), we find the intervention in Szeged (basic type) after the flood in 1879. The urban fabric type combinations of Szeged are reflective of the urban fabric types of Budapest, which belong to the same final urban type group.

The final urban taxonomy derived through integrating both of the basic urban types and the combined types into the typology, and the determination of the combined types interspersed into the final typology.

The study of the given towns not only explores the urban types but also discovers the factors creating urban identity in a wider context, by means of the comparison of the towns of historic Hungary (1867 – 1918) with the towns of the former Austrian Empire. It points out the unity-creating nature of this period (not only in a territorial sense), indirectly refers to the appearance of urban forms, and signifies the dominant trajectories of later urban development. For these towns, their modern image of the town was created, while the built heritage and the inherited town structure together represent a valuable inheritance of the contemporary towns and defines the townscape.

**1** GRANASZTÓI, Pál: *Város és építészet*, Budapest, Műszaki Kiadó 1960, s. 236

**2** The study area is the territory of Austria-Hungary: Cisleithania and Transleithania. Transleithania referred to the Austro-Hungarian Empire east of the Leitha (Lajta) river, and served as an unofficial term for the area of historic Hungary (1867 – 1918). It consisted of the Kingdom of Hungary (including the former Principality of Transylvania, Voivodeship of Serbia and Banat of Temeschwar), the self-governed Kingdom of Croatia-Slavonia (1868), and the free port or free city of Fiume (Rijeka, Croatia). Cisleithania refers to the western Habsburg lands.

**3** In the case of the towns, the internationally recognized name was used. The figure on the page 36 shows also the local names used in the study period together with the country indexes where they belong nowadays.

**4** The industrial revolution in the Kingdom of Hungary occurred with notable delay, in which the country could join only the second wave of the industrial revolution (1871 – 1914), yet this disadvantage was at least partially overcome until the outbreak of the First World War.

**5** MEGGYESI, Tamás, 2009. *Városepítészeti alaktan*. Budapest: Terc.

**6** The current study briefly mentions the defined pre-compromise (before 1867) and dualist (1867 – 1918) urban fabric types, in order to create an adequate background of the urban typology.

**7** Conzen, M. R. G. and Conzen, Michael P. (eds.), 2004. *Thinking about Urban Form. Papers on Urban Morphology 1932 – 1998*. Oxford, New York: Peter Lang, p. 247.

**8** A detailed description of the integrated urban morphology method appears in: LOVRA, Éva, 2016. The 'Modern City': Urban Fabric Typology. Limitations of Caniggian and Conzenian practice and the new typology. *Conference Proceedings – International Conference Contemporary achievements in civil engineering*, 4, pp. 797 – 806.

**9** CARMONA, Matthew, 2003. *Public Places, Urban Spaces: The Dimensions of Urban Design*. Oxford: Architectural Press. 312 p.

**10** CANIGGIA, Gianfranco and MAFFEI, Gian Luigi, 2001. *Architectural Composition and Building Typology: Interpreting Basic Building*. Firenze: Alinea Editrice. 252 p.

**11** Addressing general aspects of the urban morphological analysis, this study differentiates among the town plan, land utilization pattern and building fabric within the townscape. The more important subdivision is related to the town plan, which in the case of the dualist towns is the most important source of the typology.

**12** CONZEN, M. R. G. 1969. *Alnwick, Northumberland: A Study in Town-plan Analysis*. London: Institute of British Geographers 1960. Publication no. 27, reprinted with minor amendments and Glossary.

**13** Morphological regions or townscape units are areas of homogeneous urban form (building and plan type), urban manifestations of diverse social and cultural history (Conzen).

**14** Meggyesi, T., 2009.

**15** Previous: according to the current research period

**16** For a detailed description and definition of the basic urban types see LOVRA, Éva, 2017. Basic Urban

Types – Urban typology between 1867 and 1918. *Conference Proceedings – International Conference Contemporary Achievements in Civil Engineering*, 5, pp. 757 – 766.

**17** These settlements do not have their own identity-creating features, as those were established at the border of the town or areas beyond the railway lines, or in the vicinity of the industrial area.

**18** MORAVČÍKOVÁ, Henrieta, LOVRA, Éva and PASTOREKOVÁ, Laura, 2017. Red or blue? The start of modern planning in Bratislava | Červený alebo modrý? Začiatky moderného plánovania Bratislavy. *Architektúra & urbanizmus*. 51(1 – 2), pp. 30 – 43.

**19** BOHL, Charles C. and LEJEUNE, Jean-François (eds.), 2009. *Sitte, Hegemann and the Metropolis: Modern Civic Art and International Exchanges*. London, New York: Routledge, p. 251.

**20** Blau, E. and Rupnik, I. (eds.), 2007. *Project Zagreb: Transition as Condition, Strategy, Practice*. Barcelona, New York: Actar, p. 58.

**21** The representative functions of the open spaces in the former Austria-Hungary have been studied by European theorists, such as: E. Blau, S. Knežević, Á. Moravánszky, M. Csáky, J. Purchla, F. Achleitner and more.

**22** KOHOUT, Jiří and VANČURA, Jiří, 1986. *Praha 19. a 20. století*. Prague: Naklad. Technické Literaturní, pp. 86 – 90.

**23** Gunzburger Makaš, E. and Damjanović Conley, T. (eds.), 2010. *Capital cities in the Aftermath of Empires: Planning in Central and Southeastern Europe*. London – New York: Routledge, pp. 223 – 241. Blau, E. and Platzer, M. (eds.), 1999. *Shaping the Great City: Modern Architecture in Central Europe*,

1890 – 1937. Munich – London – New York: Prestel, pp. 196 – 200.

**24** KUČA, Karel, 2000. *Brno: vývoj města, předměstí a připojených vesnic*. Praha: Baset.

**25** LOVRA, Éva, 2017: *Urban Fabric Typology and Urban Typology. Typo-morphology of the Cities in the Historic Hungary (1867 – 1918)*. Unpublished PhD dissertation.

**26** Blau, E. and Platzer, M. (eds.), p. 154.

**27** PROKOPOVYCH, Markian, 2008. *Habsburg Lemberg: Architecture, Public Space, and Politics in the Galician Capital, 1772 – 1914*. Lafayette: Purdue University.

**28** Blau, E. and Platzer, M. (eds.), 1999, p. 154.

**29** Maps: Országos Széchényi Könyvtár (TM 169) and Budapesti Műszaki Egyetem Urbanisztika Tanszék Térképtár (Ybl Temesvár 1893).

**30** SPARKS, Mary, 2014. *The Development of Austro-Hungarian Sarajevo, 1878 – 1918: An Urban History*. London: Bloomsbury, p. 116.

**31** The cathedral was constructed with neo-Gothic and Romanesque elements. At the beginning of the Austro-Hungarian period, historical styles or their combinations (Eclecticism) were used; Secessionism arrived at the end of the 19th century, but like in Vienna, the style was primarily used for residential blocks, or only occasionally for public buildings.