

# „THE GOLDEN AGE“ OF ZAGREB’S COLLECTIVE HOUSING BLOCK: THE „MARKET“ DESIGN AND CONSTRUCTION BETWEEN 1955-1974

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<sup>1</sup> I want to cordially thank the reviewers of this article for making it more pleasant to read. Additionally I want to express my gratitude to the “National and University Library in Zagreb” [Croatian: “Nacionalna i Sveučilišna Knjižnica u Zagrebu”], where I was provided with all the possible help in researching the topic.

<sup>2</sup> In the early 1960s, when the seminal housing estates of “New Zagreb” were near completion (“Savski Gaj”, “Trnsko”), the Croatian architectural community started extensive reviewing and analysis of completed, built and designed Collective housing blocks in emerging housing estates throughout the city, until the fall of “Croatian Spring” in the late 1971.

<sup>3</sup> Udo Kultermann praised the prefabricated structural and construction system of „Zapruđe“ housing estate, while Peter Blake criticized the appearance of “New Zagreb” as an “ideal city” yet permanently absent of social life.

<sup>4</sup> Eve Blau and Ivan Rupnik analyzed the architectural construction and aesthetic of “cooperative housing”, while they avoided tackling either the economy foundations of such enterprise or analyzing the correspondent legal frame, like contemporary Building Codes.

<sup>5</sup> Representing the shanty houses serving for the accommodation of workforce for the factory placed on today’s Britanija Sq. [Croatian Britanski Trg], itself being dismantled before 1888.

**ABSTRACT:** From the Khruschev’s visit to Belgrade in 1955 to the issuance of both Yugoslav and Croatian Socialist Constitutions in 1974 and beyond, the star-architects practicing in “private” architectural design offices designed the majority of Collective housing blocks (CHBs). The official rejection of Zagreb’s Regulation Plan in 1953 moved construction of housing estates to the southern bank of river Sava, where a new city was built until mid-1970s, immediately nicknamed “New Zagreb” and consecutively criticized in Peter Blake’s “Form Follows Fiasco” in 1977. Due to the nationalization of apartment houses in 1958, Collective housing blocks remained entirely approved form of collective residence. The standardization of building design and construction industry materialized between 1964-1971. By interpolating Collective housing blocks and housing estates into the city quarters built in period 1880-1945, architects demonstrated exceptional skills in embedding the new structures in old urban fabric. The analyzed period represents a high achievement in the history of Zagreb’s residence construction, consequently referred “the golden age”.

**KEYWORDS:** Late Modern architecture; Housing; Collective housing block; Zagreb; Yugoslavia; 1955-1974

## INTRODUCTION

This paper represents the sequel of the 9th Architecture in Perspective Conference proceeding: “COLLECTIVE HOUSING BLOCKS (CHBs) IN ZAGREB BETWEEN 1945 AND 1955: FROM THE COLLECTIVIZATION TO THE RE-PRIVATIZATION OF ARCHITECTURAL OFFICES” (Kahle, 2017, pp. 188-191) and the prequel of the 16th Conference proceeding: “POST-MODERN TENDENCIES IN SOCIALIST HOUSING CONSTRUCTION: THE COLLECTIVE HOUSING BLOCK IN ZAGREB BETWEEN 1974-1991” (Kahle, 2024, pp. 40-44).<sup>1</sup> It analyzes the typology of Zagreb Collective housing blocks (CHBs) built and occupied between 1955 and 1974, based on reviews in Croatian architectural periodicals serving as primary and secondary sources, namely “Architecture” [Croatian: “Arhitektura”], “Man and Environment” [Croatian: “Čovjek i prostor”] and “Zagreb’s Panorama” [Croatian: “Zagrebačka Panorama”].<sup>2</sup> The topic was not extensively covered in English, except for a few analyses used as arguments in corresponding books (Kultermann, 1965, p. 178; Blake, 1977, pp. 85-87)<sup>3</sup>, further in the extended narrative (Blau and Rupnik, 2007, pp. 203-281)<sup>4</sup> and recently at the MOMA Yugoslav exhibition in 2018-2019 (Stierli and Kulić, 2018, p. 1). The prequel article defined the term “Collective housing block” to distinguish the socialist residential construction after 1945 from the capitalist residential construction before 1945 (Kahle, 2017, p. 178). Besides, the recent meaning of “cooperative housing” is remotely different from the one used in Blau & Rupnik’s book. The timeframe is carefully chosen regarding the important political events. Firstly, in 1956 Yugoslavia did not condemn Soviet intervention in Hungary in the UN Security Council mutually being aligned with Khrushchev after his summit with Tito in Belgrade in 1955. Finally, the promulgation of the new Yugoslav Constitution in 1974 legally ended simulated market economy through introducing so-called delegate system, which devastated Yugoslav economy and consequently brought the country to disintegration in 1991-1992. The period of residential construction in Zagreb between 1955 and 1974 was one of most fruitful in the city history. The economy of Yugoslavia flourished, although not at rates from the first years of socialist rule. New industrial facilities in Zagreb area were still built, although some desired industries were absent. Yet the volume of workforce in Zagreb industrial area still demanded high rates of housing construction, which was achieved by two Yugoslav brainchild inventions of simulated market economy: the so-called “banking credit” economy from roughly

1955 to roughly 1965 and the so-called “market economy” from roughly 1965 to roughly 1975.

## THE SOCIAL TYPOLOGY

The city of Zagreb was incorporated in 1850 by an imperial decree to serve as the capital city of crownland Croatia-Slavonia. The hidden purpose of the incorporation was to operate as the one of approximately fourteen imperial military commanding posts, emboldened with the coming of railway to the city in 1862 and further developed into an important Austrian railway node. The seminal apartment building in the city is a three-story pavilion building flanked easterly of the first railway station, today’s Westerly Railway Station, to accommodate the railway personnel coming from outside Croatia. The seminal Building Code from 1857 prescribed two building typologies: a pitch-roofed attached building inclined on both sides to its neighbors like terraced houses in England to form predominantly rectangular closed blocks, and a pavilion-like hip-roofed detached building, which could be placed more freely on a given plot. After the dissolution of Croatian and Slavonian Military Frontier in 1881 all its military infrastructure was relocated to Zagreb. During the rapid construction after the earthquake in 1880 Zagreb was crowded with barracks complexes, implying accommodation of significant number of officers who rented apartments in the newly built attached apartment houses in Lower Town. In the late 1880s the city was enriched with third building typology, roughly irregular compounds of residential buildings erected without building permits in the “Worker’s Dorm” [Croatian: “Radnički Dol”].<sup>5</sup> At the turn of the century the city approved construction of so-called villa buildings, usually a two-story high semi-detached pavilion residences. Soon the construction of first tenement houses started around the locomotive shop of Hungarian State Railways. These residential typologies were transferred to the period between the World Wars, although with certain exceptions. The railway and military infrastructure from defunct Austria-Hungary, which survived without substantial damages, was incorporated into the armed forces of the new state, who substantially constructed only the “Borongaj” airfield with detached civil and military halves in the 1930s. The general conscription packed former Habsburg military installations in Zagreb with the mass of fluctuating inhabitants, in continuance during the fascist Independent State of Croatia and further during the socialist Yugoslavia. The growing needs of industry and commerce accelerated the construction of all res-

idential building types: apartment houses, tenement houses, villa quarters with tendency to pack the constantly growing number of dwellings into one building, additionally the blooming of self-construction of shanty houses and estates between the railway line Ljubljana-Zagreb-Belgrade and river Sava. Consequently, Zagreb was preponderantly built with one-story residential buildings, yet in the regulated closed blocks of Lower Town and its extensions, a three- to four-story building with two double-room apartments per staircase was the standard.<sup>6</sup> The proponents of the fascist regime during the Second World War confiscated almost all Jewish and Serbian apartment houses and villas, further resided in abducted dwellings until being forced to retreat with Wehrmacht troops in the first week of May 1945. Being outside the law between the World Wars, the revolutionary activists of the Communist Party of Yugoslavia undertook their secret meetings in rented apartments of Lower Town, which consequently made them keen to adopt similar ground plan solutions after they took the power in 1945. The Yugoslav partisans, a genuine Resistance movement although convinced followers of Soviet type of Communism, preponderantly nationalized companies and institutions in 1946, while apartment houses were not nationalized until 1958. They tolerated the plurality of ownership of dwellings and residences, which had at least threefold type: A. the "private ownership" of an apartment, officially called the "floor/story ownership" [Croatian: "etažno vlasništvo", seminally French: "étage" (literally: floor)] to conceal the odious term "private"; B. the "social ownership" of an apartment connected with so-called "tenant's right" [Croatian: "stanarsko pravo"] to live in designated apartment indefinitely and leave it as an inheritance to children and/or grandchildren, where firms and institutions acted as the investors and the landlords of CHBs while their employees were granted with tenant's right; and finally C. the "state ownership" provided for the workforce of Federal Ministry of Defense or Republic (Croatian) Ministry of Interior.

## THE LEGISLATION

The first Zagreb's Building Code was enacted in 1857 by the imperial lieutenancy, while the second was appointed in 1940 by the architectural legal jurisdiction of federal Banovina of Croatia. During the second Yugoslav state building codes were superseded by the so-called "implementing provisions" [Croatian: "provedbene odredbe"] of correspondent General regulation plan. The first Building Code basically stipulated only two kind of buildings, i.e. attached "terraced-like" houses and detached "pavilion-like" houses. Later appeared irregularly shaped houses without building permits, called "illegal houses" [Croatian: "divlje kuće"].<sup>7</sup> An edifice had to have bearing walls from layered bricks with vaulted ceilings only where fire regulations demanded it, while roofs had to be tiled or metal sheathed. The "holzzement" flat roof, in German lands known from 1840s, was preponderantly allowed in 1892 for industrial facilities. The titles of "civil architect" and "civil engineer" were promulgated in 1877 and enforced in 1911 with introduction of a licensing exam ("Rigoros"). The architectural and engineering chambers were introduced in 1924. The first ordinance for reinforced concrete was promulgated in 1910, further amended many times until 1935, when the new Swiss reinforced concrete regulation was literary translated and enforced. The regulation ordinances from 1857 stipulated privately owned lots organized in closed blocks, which was enhanced with regulations for villa estates from 1889 and 1911. The organization of industrial lots was not prescribed, i.e. factories could have been built irregularly-shaped, unless in closed blocks. In 1946 the Parliament of Federative People's Republic of Yugoslavia annulled the legislation after April 6th, 1941, further suspended the legislation before that date and prescribed that sus-

pended legislation is actually valid "until the amending of new, socialist legislation", consequently making chaos in the legal system, e.g. certain provisions of the Law on Building from 1931 and Building Code from 1940 remained valid in Zagreb until 1974. In 1946 the Engineering Chambers in Croatia were abolished too, further the dictatorial Planning Commissions of Yugoslavia and Croatia enforced, and finally all the private companies nationalized or confiscated. In 1948 the so-called "social planning" [Croatian: "društveno planiranje"] was adopted in the administrative process of issuing construction permits, consequently enabling anonymous never-ending allegations which terminated many good projects, while luckier ones were put through due to constant lobbying inside the party. After Tito's break with Stalin in the same year, the economy system was slightly changed to appease the new Yugoslav Western allies, including Greece and Turkey. Between 1952 and 1955, the banking system emerged as the regulator of "self-managed" Yugoslav construction system, consequently enforced the significance of the bank establishment. In the middle of 1960s the "economic subjects" became fully independent, additionally the citizens were allowed to buy an apartment, defined as a "floor ownership" [Croatian: "etažno vlasništvo"]. In the other hand, the construction firms were never re-privatized, while in the early 1950s around 20 architectural offices were given to deserved architects, to be again unofficially re-nationalized in middle 1960s and finally corporatized according to the 1974 Constitution. The principals-namesakes of "privatized" offices were left without real power, because the "workers' councils" [Croatian: "radnički savjeti"] were empowered to make crucial decisions, where the non-professionals possessed the right to vote even in strict professional matters. After the death of Stalin Tito went close to Khrushchev, initially failed to condemn the Soviet intervention in Hungary in 1956 and further bought the Soviet jet fighters in 1962. As a consequence, the apartment houses were nationalized in Yugoslavia in 1958 together with all the building land below (a former owner could retain his own apartment and additionally one more for a family member), although the rent amounts were strictly prescribed and ruthlessly empowered from 1945 onwards. Thus emerged the "social ownership" in existing residential buildings, while the buyers (the investors and later the landlords of apartments) of newly constructed Collective housing blocks were companies and institutions. The administrator of every CHB, called the "House Council" [Croatian: "kućni savjet", probably from Russian: "Zhilischnii soviet"] had the powers e.g. to expel the tenant from the apartment if the public order was violated. The army was exempted and owned apartments or CHBs for accommodation of their officer and petty officer corps. From 1974 the social system was legally engulfed with the so-called "contract economy" [Croatian: "dogovorna ekonomija"], where in the construction field an additional layer, the so-called "self-governing interest community" [Croatian: "samoupravna interesna zajednica"] was added, which basically decided in all important arguments, guided by verified party operatives.

## THE ECONOMY

During the Habsburg rule the seminal levers of Zagreb's economy were the railway and the military. The railway was initially conceived as the unique mean of transportation of military. Later, Zagreb became a transportation nod of Hungarian State Railways with the well designed and built locomotive shop. Consequently the foreign and domestic workforce was attracted, where the first ones were resided in pavilion apartment houses in Trnjanska St, afterwards a blueprint for the majority of city residential buildings preponderantly constructed in 1920s, while the other ones were accommodated in tenement houses in Paromlinska St with flat roofs, a distant cousin of a New

<sup>6</sup> Zweiräumiges Zweispänner in German.

<sup>7</sup> For a prize of eliminating the Croatian (Savka Dabčević Kučar), Slovenian (Stane Kavčič) and Serbian (Latinka Perović) liberal party leaderships.

<sup>8</sup> Croatian and Serbian words for transportation means like truck (kamion, камион) or airplane (avion, авион) came from French (un camion, un avion).

<sup>9</sup> The famous [Half-m]otorway of Brotherhood and Unity Belgrade-Zagreb was built to bind the two most populous (and antagonistic) peoples of the new federation, and according to some, with its enlargement from Zagreb to Kumrovec, to serve Tito's trips with car from the capital to his hometown.

<sup>10</sup> Yugoslavia recognized the German Democratic Republic in 1957.

<sup>11</sup> The formal relationships between the Federal Republic of Germany and Yugoslavia were reestablished in 1968.

<sup>12</sup> The plan was authored by the Architect Bruno Milić from the "Urban Planning Institute of the City of Zagreb" [Croatian: "Urbanistički Zavod Grada Zagreba", local acronym: UZGZ], later Professor Emeritus of History of Urban Planning at the School of Architecture of the University of Zagreb. In 1957 the Architect Branko Petrović emphasized the need of a new urban axis of city development in the north-south direction with consequent construction of housing estates at the area southerly of river Sava, being a member of work group from the "Urban Planning Institute of the People's Republic of Croatia" [Croatian: "Urbanistički Institut Narodne Republike Hrvatske", local acronym: UI NRH] together with colleagues Architects Nenad Korica, Mirko Martić, Radovan Miščević and Fedor Wenzler (Petrović, 1957, pp. 2-3). Probably in 1961-1962 the "Urban Planning Institute of the City of Zagreb" produced and in 1962 immediately published the urban planning study of so called "South Zagreb" [Croatian: "Južni Zagreb"], provided with solution of existing ("Savski Ga", "Trnsko") and future residential estates in the large scale, practically the construction solution for contained residential buildings (Fig. 2).

York tenement house. The officer corps of Habsburg armed forces, known of frequent change of garrisons, were compelled to rent an apartment, usually with female servants from across Croatia-Slavonia. Only the dominion officials or general officers could afford to live in a villa, whether in a whole residence or in the compartmented apartment. As the Croatian-Slavonian dominion capital, Zagreb attracted the consumer-oriented industry, while heavy industry products could easily be accessible from the whole Austria-Hungary via the railway. Thus the city was economically well-developed in comparison with other Croatian cities, even with Belgrade or Ljubljana. Consequently being the most industrialized center of the new Yugoslav state, Zagreb also became its greatest emporium for the import-export trade, due to the economic orientation of Yugoslavia mostly to Germany, Austria and Czechoslovakia, albeit the whole economy was based on a *laissez-faire* principle. The economic ties with Czechoslovakia were especially important, while two countries shared their liberation experiences from Austria-Hungary. Yugoslav-French ties were concentrated in Belgrade due to the Serbia's alliance with France in the First World War.<sup>8</sup> Zagreb maintained its industrial power and tried to enlarge it by a new consumption industries, yet after the World Crisis in 1929 the financial gains and export-import businesses were slowly but conclusively transferred to Belgrade. After enactment of Banovina of Croatia in 1939 as an economically and financially independent entity with fixed duties to the central government in Belgrade, its economy began to corporatize industrial facilities on Croatian level, accelerated after the German proclamation of fascist Independent State of Croatia, where practically all industry served as a supplier of German war efforts. The companies were confiscated from their former Jewish or Serb owners and incorporated into the state-owned holding. After the end of the Second World War in 1945, all the still private-owned industrial and trade companies were either nationalized from previous, also foreign owners or confiscated from persons accused of being the collaborators with former enemies or their quislings, consequently converting into the "state property" [Croatian: "državno vlasništvo"]. The federal planning commission occurred solely responsible for the economic progress, in pushing the development of heavy industry because the existing consumer industry was sufficient for Yugoslav provision needs in the sparse post-Second World War days, further the development of railway as the backbone of transportation of goods and passengers.<sup>9</sup> After the break with Stalin, the "self-government" was incorporated in 1950 in the shape of "workers' councils", obliged in every Yugoslav company or institution, like the party cells. Through these two layers of governing the Party controlled the economy and the society. The thaw with Khrushchev in 1955 and consequent estrangement from the Western allies<sup>10</sup> resulted in the economic decentralization of Yugoslavia, further in the opening of national borders in the middle 1960s for sending the Gastarbeiter to Federal Republic of Germany, while German citizens started having holidays at the Adriatic coast.<sup>11</sup> After the Soviet invasion of Czechoslovakia in 1968 and the suppression of the Croatian Spring in 1971, the new economic system verified in 1974 brought Yugoslavia to a collapse in 1991, due to the substantial halt of foreign credit lines after Tito's death in 1980.

## THE ARCHITECTURAL TYPOLOGY

### Attached Collective Housing Blocks (CHBs) in the old urban fabric

The old urban fabric, built before the end of First World War and comprising attached apartment buildings enclosed in blocks, was preponderant in the Lower Town, yet present in some areas westerly or easterly. The area gradually filled in between the World Wars, yet plenty of unbuilt lots were left at the end of Second World War. These empty lots were gradually built from

1946 with CHBs, where various companies and institutions including the Yugoslav Army, from 1952 Yugoslav People's Army and Ministry of the Interior acted as investors. Initially these CHBs were placed in the manner of old apartment houses, yet soon they started to soften and disappear, by placing the new CHB slabs freely onto the lot, while taking insulation, landscape and assurance of natural ventilation of particular apartments in consideration as much as possible. Thus the standard scheme of two double-room apartments per staircase has been usually repeated, further its derivatives or gallery apartments, known from "Plaslaanflat" or "Bergpolderflat" gallery apartment houses built in 1930s in Rotterdam, Netherlands. All these "interpolations" were designed in Modern Movement manner until the middle 1970s (Fig. 1).



Fig. 1.: Construction of residential towers in Savska St. (Source: [2], p. 37)

### Collective Housing Blocks (CHBs) in new dwelling estates, including CHBs owned by the Yugoslav People's Army and the Ministry of the Interior

The policy of infilling empty plots in Lower Town could not suffice the growing demand for accommodation of workforce caused by constant expansion of industry facilities. A natural solution would be to tear down vast estates of illegal houses in Trnje and Trešnjevka, being self-built between the World Wars and legally foreseen for removal after December 31st, 1948. Yet this was not possible for political reasons, so the authorities chose to build CHBs or micro estates at remaining free land of the area, starting with nine horizontal slabs of five to seven story high in 1945-1946. This method of punctual fulfilment of empty land was favorable in enabling the "red gentrification", a settlement of chosen inhabitants, usually army or police officers or verified party operatives into the existing area inhabited with "class enemy" in order to control them or to overvote them at every future communal or state elections (Fig. 2). In the early 1950s the Mayor of Zagreb Vrčeslav Holjevac decided to push the residential construction to the southern bank of river Sava, a practically unbuilt area, and organize it to the micro rayon principles (Fig. 3).<sup>12</sup> The idea of Zagreb central axis was born, soon the "Freedom Bridge" [Croatian: "Most Slobode"] was constructed in connecting the both banks of river Sava. The area of the future "New Zagreb" [Croatian: "Novi Zagreb"] was formulated as the loosely connected self-sufficient micro rayon estates, equipped with kindergartens, schools, automobile garages and playgrounds, while the particular Collective housing blocks were organized either as the five to ten story horizontal slabs with standard scheme



Fig. 2.: Residential slabs in Vukovarska Ave. (Source: [1], p. 16)

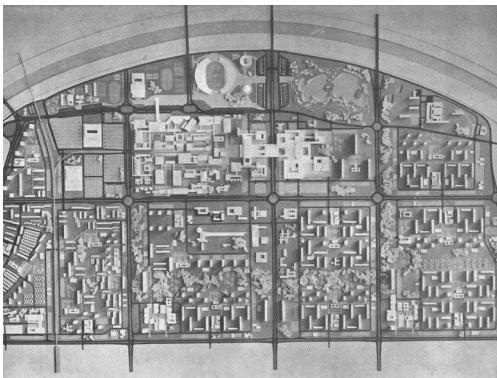


Fig. 3.: The model of the proposed master plan of Novi Zagreb (Source: [2], p. 32)



Fig. 4.: The construction of a residential estate (Source: [1], p. 27)

of two apartments per staircase with sufficient number of individual staircases regarding the given length of the particular slab (Fig. 4), or as the skyscraper-like slabs with the height of fifteen to twenty stories with central core including elevators and four to eight apartments per floor organized around the core (Fig. 5). The land around the slabs was landscaped and organized as a park, while the cars were usually backed to estate's edges. In the New Zagreb area were initially constructed institutional facilities,<sup>13</sup> additionally in the late 1950s and early 1960s estates "Savski Gaj" (Fig. 6) and "Trnsko" (Fig. 7), further in the 1960s "Sopot", "Siget" (Fig. 8) and "Zaprude" (Fig. 9), following by "Utrina" at the beginning of the 1970s and finally "Travno" in the mid-1970s. At the opposite bank were constructed estates of "Folnegovićevo" in Trnje (Fig. 10), "Ravnice" in Maksimir, "Knežija" and "Srednjaci" in Trešnjevka, "Gornja Dubrava" easterly and "Prečko" and "Gajnice" westerly from the city center. All these estates comprised exclusively Late Modern Movement architecture with exclusively flat roofs (Fig. 11).

#### The permitted construction of private homes

In the period from easing the centralist economy in early 1950s until the proclamation of the new Yugoslav Constitution in 1974, private investors were predominantly allowed to build their own house, although without additional apartment/s for rent. Simultaneously existed a lot of craftsmen and tradesmen whom the Party officially allowed but internally hated as the remnants of the old system, comprised of people who

found their luck at the corners of socialist economy, although too unwilling to go to Germany and become the "Gastarbeiter". The last ones frequently sent the majority of their salaries in Deutsch Marks to the homeland, where their private houses were growing, supervised by their remaining family members. Yet the house construction of another kind existed, for the socialist elite of high-ranking party cadre, members of intelligentsia and directors elite from the wealthy firms or banks, although the last ones couldn't be safe from falling into the Party's disgrace. The architectural design of these homes was provided and supervised by the "Designers of objects for citizens and civil legal persons [Croatian: "građanske pravne osobe"]", who were not allowed to design CHBs, not even as the "external coworkers" of just re-socialized former private architectural offices. However, these offices soon flooded the market for private homes with catalogues of standardized homes projects.

#### The construction of private homes without building permit, the so-called "Wild Houses"

The development of the newly planned easterly industrial zone at Žitnjak in the late 1950s and early 1960s attracted huge numbers of workforce, who could not be accommodated in CHBs in vicinity, although the

<sup>13</sup> The "[Yugoslav] Naval Institute" [Croatian: "Brodarski Institut"] and "Zagreb Fair" [Croatian: "Zagrebački Velesajam"].



Fig. 5.: Residential tower in Vukovarska St. (Source: [1], p. 24)



Fig. 6.: The "Februarskih žrtava" [Savski Gaj] estate in Novi Zagreb (Source: [1], p. 28)



Fig. 7.: The "Trnsko" estate in Novi Zagreb (Source: [1], p. 21)



Fig. 8.: Residential towers in the "Siset" estate in Novi Zagreb (Source: [8], p. 51)



Fig. 9.: Residential towers in the "Zaprude" estate in Novi Zagreb (Source: [8], p. 52)

tram line through Vukovar Avenue contemporarily ended in distance of 700 m to the future favela "Kozari Bok". The local owners of agricultural land exploited the opportunity to repeat the process of building illegal houses at Trnje almost forty years ago (i.e. in the 1930s), by chopping their vast agriculture parcels into a myriad irregular lots and illegally sold every of them to the immigrating workforce from Croatia and Bosnia. These new self-builders, being equipped with credits for non-housing purposes, built "wild homes" for themselves and their families, usually a simple rectangular bricked house with hipped roof. At the airborne images of Zagreb from 1968 one can see two irregularly elliptical settlements in the appearance close to "favelas", every of them roughly 500 m long and 300 m wide, called "Kozari Bok" and "Kozari Put", erected without water, sewer or electricity. Both settlements exist today, in the meantime fully sanitized and legalized. The construction of private "wild houses" with-

out building permit was quietly tolerated, not to upset the members of workforce through eviction of their only home and consequently to avoid frictions in the classless society.



Fig. 10.: The "Folnegovićeva" estate in Zagreb (Source: [1], p. 17)

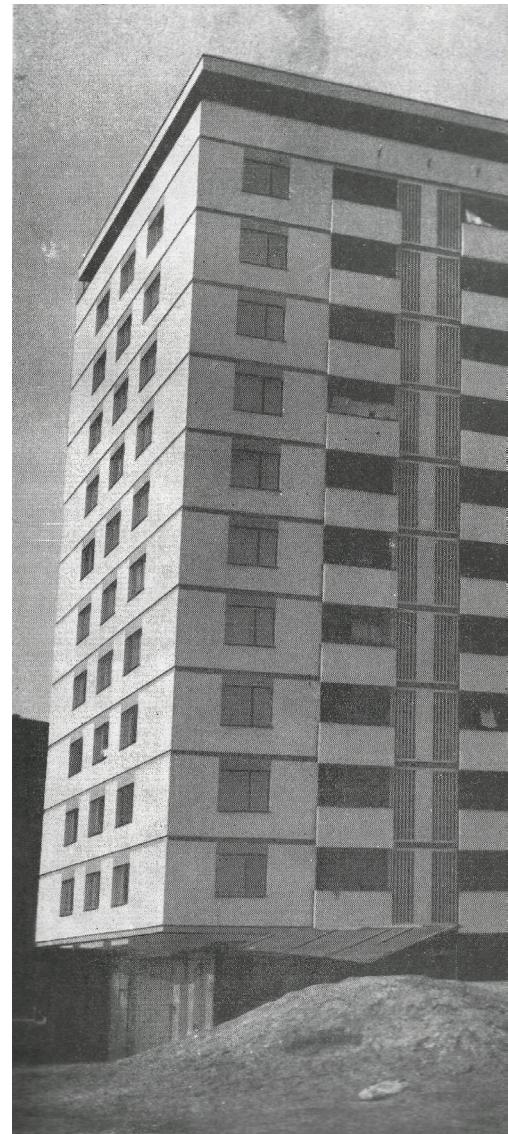


Fig. 11.: Residential tower in Rapska St. (Source: [1], p. 25)

## DISCUSSION AND CONCLUSION

The unbuilt lots in the old urban fabric, preponderant in the Lower Town but present in other areas, were gradually built with CHBs after 1945, initially by mimicking the old apartment houses. Soon the fabric started to soften and disappear by placing the new CHB slabs freely onto the lot or group of lots, by considering insulation, landscape and assurance of natural ventilation of apartments as much as possible. The standard scheme of two double-room apartments per staircase has been repeated, including the gallery flats typology. All these "interpolations" were designed in the Modern Movement manner, consequently making the Lower Town a vivid kaleidoscope of Historicist and Modern styles. Yet the policy of fulfillment of empty plots in the Lower Town could not suffice growing demands for the accommodation of workforce. The disassembling of vast illegal houses estates in Trnje and Trešnjevka was not socially possible, therefore the authorities chose to construct CHBs at the remaining free land. In the early to mid-1950s the Mayor of Zagreb Večeslav Holjevac decided to push residential construction to the southern banks of river Sava and organize it to the micro rayon principles. The idea of Zagreb central axis was born, soon the "Freedom Bridge" was constructed in connecting both banks of river Sava. The future New Zagreb (Fig. 3) was formulated as an area of loosely connected self-sufficient micro rayon estates, equipped with kindergartens, schools, automobile

garages and playgrounds, while CHBs were organized either as a five to ten story horizontal slabs with standard scheme of two apartments per staircase, or as a skyscraper-like slabs with height of fifteen to twenty stories with central core including elevators and apartments organized around the core. The space around these slabs was landscaped and organized as a park, while cars were backed to the edges of an estate. All these estates comprise exclusively Late Modern Movement architecture with entirely flat roofs. The residential production in the period 1955-1974, whether as Collective housing blocks or as private homes either allowed or remained illegal, was maintained regarding the need of the society as a whole. The Sovietization of society in the period 1945-1948 was reverted through gradual decentralization until 1974, enabled through introduction of self-management in 1950, "banking credit" economy in the middle 1950s and "market economy" in the middle 1960s, thus endowed the society with varieties of residential property and housing typology. Additionally, the decentralization brought the conditional re-privatization of roughly 20 architectural offices between 1953 and late 1960s. These achievements were endowed through the simulated market economy, yet they enabled Late Modern Architecture residences of prominent aesthetical values. The architects used the decade of 1950s well, when Croatian architectural periodicals completely covered architectural movements from the Western World, i.e. the Late Modern (Fig. 12), Brutalism, Team Ten and the "Hochschule für Gestaltung" Ulm, to learn from good architectural examples and to successfully implement these architectural fluctuations to their architectural creativity, finally achieving the Modern Movement look of residential buildings, designed as slab-like prisms with flat roofs, placed freely in space, which would finally become a park. Today's appearance of the New Zagreb, despite Blake's criticism which could emerge from a view onto the raw finished buildings and estates, makes that vast area of Modern Architecture the attractive place for living.

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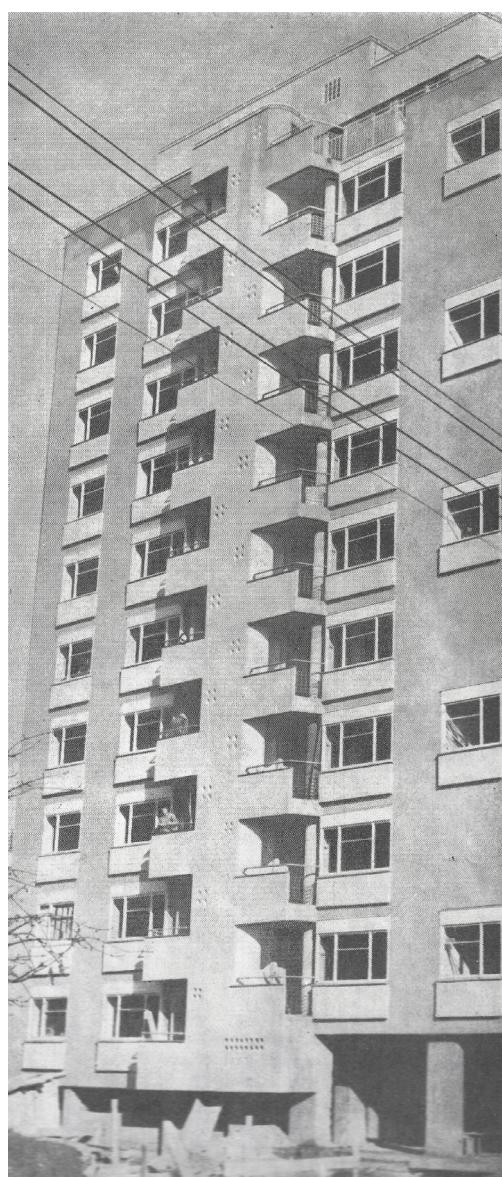


Fig. 12.: Residential tower in Ružmarinka St. (Source: [1], p. 31)

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