Darko Kahle
Architect Zlatko Neumann
Works after the Second World War
(1945-1963)
Original Scientific Papers
UDC 72.038.1(497.5 Z. Neumann)"1945/1963"

Znanstveni prilozi | Scientific Papers

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Fig. 1a Potočnjak, Vladimir; Neumann, Zlatko; Ulrich, Antun; Perak, Dragica: The New Government Presidium Building, the future New Belgrade, YU, 1946-47, first prize competition entry, perspective view

Fig. 1c Potočnjak, Vladimir, Architect-in-Charge; Neumann, Zlatko, Senior Design Architect; Ulrich, Antun; Perak, Dragica: The reinforced concrete skeleton of the New Government Presidium Building after the construction halted in 1949

1b – Model view on the definitive building site, 1947

1b pogled na maketu na konacnoj lokaciji zgrade, 1947.
The article enlightens the virtually unknown work of the Architect Zlatko Neumann after 1945. As one of the design architects of a seminal government building in the socialist Yugoslavia in 1947, he immensely contributed to the suspended beauty of a slender H-beam shape of the today “Palace of Serbia”. In 1954, he effectively started an independent architecture practice as a Central Executive Officer [CEO] of the Architectural Design Office “Neuman” (sic!) and was active there until his retirement in 1963.
INTRODUCTION

UVOD

As the sequel to "Architect Zlatko Neumann: Buildings and Projects between the World Wars", this article reconsiders virtually nonexistent architect's position in the English speaking world after the Second World War [WWII], exemplifying his work after having been released from German prisoner of war [POW] camps in 1945 up to his retirement in 1963 and his premature death in 1969. The backbone of the article are projects and realizations in Zagreb brought to light through the archival documentation contained in the State Archives in Zagreb [DAZG], and additionally through competition entries for the Party and Government Headquarters [HQ] buildings in 1947 (Fig. 1a, 3), which incorporated the regulation plan for government buildings to be situated on yet unbuilt area of future New Belgrade (Fig. 4). The realization of the Federal Government Presidency Building was awarded the first prize (Fig. 1b, c). The Appendix comprises the hopefully comprehensive list of all his projects and realizations from the period.23

The Croatian Modern Movement, or as some authors named it, the Neues Bauen (hrv: Novo gradañje), emerged in Zagreb in 1928 under the influences of various German Modern Movements in the 1920es (Gustav Bohutinsky, Antun Ulrich, Slavko Löwy), Le Corbusier (Ernest Weissmann, later Zlatko Neumann), Adolf Loos (Zlatko Neumann, Vladimir Potocnjak), of Czech Modern Architecture (Marko Vidakovíc, Vladimir Sterk), and finally under the auspices of the Architectural Department at the Academy of Fine Arts under Drago Ibler (Lavoslav Horvat, Štepan Planic, Mladen Kauzlaric, Drago Galic, Aleksandar Freudenreich) and of the Architectural Department of the Technical Faculty of the University of Zagreb (Alfred Albini, Juraj Denzler, Milovan Kovacevic, Edo Schön, Zvonimir Vrklijan).4 In this context, Architect Zlatko Neumann (Fig. 2.) figured as an important connection between the Loossschule and the contemporary architectural scene in Croatia.

1 Kahle, 2015: 28 ff.
2 The numeration of entries continues from the list featured in prequel article thus making the whole.
3 For all the remarkable people involved in shaping this article, I am especially thankful to two skillful professionals of DAZG: Mrs. Štefica Vrhovnik, for her competence in finding lost signatures, and Mrs. Ivana Ciko Vidovic, for her competence to organize occasionally chaotic circumstances for an effective work. Beyond these substantial, other important acknowledgments go to the reviewers and editorial staff for their simultaneous improvement of this article, further to the Chairwoman of DAZG Assistant Professor Dr. Zivana Hodbeli.
4 Compare the full literature reviews in Kahle, 2015: 30-32 and Kahle, 2016, 50-52. For a short biography of Architect Zlatko Neumann, see Kahle, 2015: 32
5 Uchytil, Barisic Marenic, Kamarovíc, 2009, 2011
6 Philips, 1949: 46, explanation of a picture in the upper left corner: "New Presidium rises in Belgrade to house Tito’s government. All the work is done by volunteer student and peasant brigades, as their contribution to Comrade Tito’s Five Year Reconstruction Plan. The signs exhorts: Greater Work for Greater National Honor.”
8 See entry Neumann in the Register of Persons for further clarification.
9 Kulić, 2009: xix, label to Fig. 3.16 (ASCG (srp: Arhiv Srbije i Crne Gore), Fund (ssp: Fond; [the] Projects of the FEC building (ssp: Projekt zgrade SIV), Folder (ssp: Fas-cikla): A6.)
11 He recently summarized the emergence and further construction of New Belgrade as a paradigm of perpetual U-turns in Yugoslav foreign policy from the USSR via the USA up to the Non-Aligned Movement [NAM], an excerpt from still unpublished PhD dissertation “Land of the In-between: Modern Architecture and the State in socialist Yugoslavia, 1945-65”. See Kulić, 2009
12 Kulić, 2009
13 Kulić, 2009: 274, footnote 478
15 I assume that the inheritance documentation of late Architect Zlatko Neumann was still intact in 2008, when his widow deceased. It is not possible to claim where or in which state this documentation currently is, although it is possible that the whole or at least some its parts will come to light in some form.
16 The first Constitution of Federal People’s Republic of Yugoslavia from January 31”, 1946, was written in four languages: Serbian, Croatian, Slovenian and Macedonian.
17 Latin and Serb Cyrillic scripts.
18 It seems that the term “Man & Environment” better describes this journal in English than literally translated as “Man & Space”.
19 Kulić, 2009: 195-196
After the WWII, this Movement was recognized as predominant in the whole Yugoslav area, launching prominent executives, taking lead at important federal competitions (Government buildings in future New Belgrade), and yielding professional journals (“Architecture”) or organizing new schools of architecture in some federal parts (Antun Ulrich, Slavko Lüwy and Valdemar Balley as assistant professors at the University of Skopje).

LITERATURE REVIEW

PREGLED LITERATURE

There is no literature in the English language considering the work of Zlatko Neumann after the WWII. Recently, a valuable monograph was published on a broader subject under the title "Lexicon of Architects – Atlas of 20th Century Croatian Architecture". The famous article in "Life" respecting the influences of Tito’s breakup with Stalin, failed to mention any architects or professionals involved in the construction of, as coined, the "New Presidium [Building]", In various internet sources he is often mentioned as one of the architects of the "Palace of the Federation [FEC]", yet with erroneous transcriptions of his surname as "Najman", "Naimann", "Nojman" or "Neuman". With insight into the archival documentation and the inheritance documentation of the Architect Mihailo Jankovic, Vladimir Kulic revealed construction drawings for the Federal Government Presidency Building [PFG] from 1948 and later the written refusal of the Architect Zlatko Neumann to serve as a consultant to the „Committee for the Revision of the Project of the Building of the [FEC]” without design prerogatives, dated January 10th, 1955. It is possible yet not probable that the architectural historian late Aleksander Laslo contacted the architect when still alive, therefore one has to conclude that Laslo composed articles in visual arts encyclopedias of 1987 and 1996 mostly based on his studying the architect’s inheritance documentation and based on conversations with the architect’s late widow.

The professional literature in Croatian and Serbian from the period started in January 1946 through the emergence of the journal "Technology" as a continuation of the pre-WWII technology journal "Technical journal" with articles from the whole field of technology in both scripts, including some in Slovenian language as well. The specialized architectural journal "Architecture" emerged in August 1947 as a bulletin for architecture and visual arts for the whole territory of Yugoslavia up to 1953 with articles in both scripts and in the Slovenian language too. After that it became a professional journal of Association of Architects from Croatia, where the newly emerged "Man & Environment" was created in 1954 as a monthly issued newspaper. As Kulic pointed it out, in inclusion of foreign contemporary architectural news there is the shift from the Soviet architectural influence through meticulously planted articles upon the Yugoslav architectural heritage in the first years after Tito broke up with Stalin up to the news of the then recent realizations of leading architects of Modern Movement in the Western World. It seemed from the pages of journals and newspapers issued by Association of Architects from Croatia that in the 1950s Yugoslavia fully belonged to the West.

The majority of the projects and realizations of the Architect Zlatko Neumann was found in the signatures of DAZG, however in different collections. The relative incoherence of the documentation itself after 1945 is due to numerous changes of the construction legislations caused by U-turns in foreign policy and
virtual adaptations of the proclaimed principle of self-government. Finally, the late Professor Zvonimir Vrklijan gives us a valuable insight into the state of professional affairs after the WWII in his memoirs.

THE PERIOD FROM 1945 TO 1954


Architect Zlatko Neumann escaped from German POW camps in 1945 and subsequently worked for a few months as an architect for the Western Allies’ occupation troops in Germany21 before returning to Yugoslavia, where he joined a newly founded state-owned architectural office after demobilization. The State Construction Project Institute [of Croatia] SCPI was decreed with the intention to collectivize the majority of architects practicing in the People’s Republic of Croatia.22 Vladimir Potocnjak & Zlatko Neumann together made a semiofficial architectural design team.

A COLLECTIVE DWELLING ESTATE

KOLEKTIVNO STAMBENO NASELJE

Their significant task in cooperation with Gomboš & Kažuljaric was practically the first housing project in Zagreb after the WWII, a collective dwelling estate containing eight buildings situated on an unbuilt, former Wehrmacht estate in vicinity of Moscow St, today Vukovar Ave. The still valid pre-WWII regulation plan from 1940 was used and adapted to make equal distance between the buildings, placed in S-N cardinal axe. Dwelling layouts for each building were taken from usual pre-WWII yard apartment buildings, by coupling two opposite sides with blind walls back-to-back, to have a layout with four dwellings per stairwell with unilateral orientation to E or W respectively, consequently a thorough natural ventilation was made possible only through small ventilation funnels. Contrary to similar Nordic schemes, windows were not

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21 E.g. in one professional review of the current building legislation in 1956 author pointed to the Law of Buildings from Kingdom of Yugoslavia (1931) and the Building Code for Zagreb in 1940 as valid [Šiliard, 1954: 18]. However, the preserved documentation still gives roughly 80% of data to us, if properly read.

22 It is probable that in this period he became acquainted with state of the architecture in the Western World up to the 1945, the data he missed being detained in German POW camps.

23 CEO of this institution was Architect Branko Tukoric, one of the pre-WWII left-wing Croatian architects. The deputy was architect Vladimir Potocnjak, another acquaintance of Zlatko Neumann. He was one of young graduates of the DoA at ZIT whom Neumann recommended to Loos. After practicing for Loos in Paris and Ernst May in Frankfurt am Main, he established his career as a Licensed Architect in Croatia, mostly in Zagreb and Susak area and wrote remarkable articles about Architecture in Croatia between 1878 and 1938. See Potocnjak, 1939: 29 ff. Being expelled by the Ustasha regime in 1943, Architect Vladimir Potocnjak was charged with huge commissions after 1945.

24 As stated in the text, the original drawing documentation mentions only Branko Tukoric as the CEO (hrv: upravitelj) and Vladimir Potocnjak as the designer-in-charge (hrv: odgovorni projektant). In most contemporary publications, these four buildings were pointed out without mentioning its designers. First written attempt dated from the professional journal “Architecture” probably in January 1952, in the article Architects speaking on their dwelling projects (hrv: Arhitekti govore o svojim projektima stanova) where in Latin alphabet order Architects Ivo Bartolić, Kazimir Ostrogovic and Vladimir Potocnjak presented their contemporary dwelling houses. When one analyses this article one can not make a connection between Ivo Bartolic and/or Kazimir Ostrogovic (even Vladimir Potocnjak himself) and these eight buildings [Bartolic, Ostrogovic, Potocnjak, 1952: 20-23, pictures: 24, 25]. Furthermore, the secretary of the editorial board of the publisher was Architect Boro Pavlovic, who later in his eulogy on Architect Zlatko Neumann mentioned the first four buildings as “four blocks built 1946 in (contemporary in 1969) Proleterskih Brigada St (i.e. former Moscow St)” [Pavlovic, 1969: 67; hrv: Vrijeme izdaje se 4 bloka u Ulici Proleterskih brigada u Zagrebu]. Therefore, it seems that the majority of further researchers were deceived with the title of the article and simply attributed these eight buildings to Bartolic, Ostrogovic and Potocnjak as a group.

25 He would later be known as the inventor of substandard, so-called Tukoric-dwellings, containing rooms and spaces of minimal dimensions.

26 The next collective dwelling building, for which BP was issued in 1947 was “Elektrozapad” building at Ibler Sq., designed by Prof. Vrklijan. It continued with the usual pre-WWII layouts with a servant room per each dwelling, therefore made Vrklijan to opt for self-criticism, as driven by the Party. Compare Vrklijan, 1995: 74-75.

27 Dobrovic, 1946: 177. Kulic is suspicious whether architects or politicians invented the term [Kulic, 2009: 130-131], however Dobrovic was the first who put it into circulation.

28 A monumental two 100 meters high skyscraper-like winged ensemble with huge domed auditorium in the centre, in the place of Mestrovic’s monument which stood there. [Dobrovic, 1946: 180-181]

29 **, 1946: 353

30 Kulic, 2009: 145

31 Who as a team designed a tournament hall, published in very first issue of “Architecture”, virtually with no resemblance or reference to Neumann’s work. Compare: Ulrich et al., 1947: 25-26. Two years later Ulrich and Perak together went on to Skopje, to supervise architectural design there and to teach at a newly formed Skopje university.

32 For urban planning purposes they co-opted Architect Branko Vasiljevic, who was particularly named only for the Party Presidency building.
allowed even to dwellings at every corner side (Fig. 5) of the building. Such sparse organization may be attributed to the Architect Branko Tuckoric who signed drawings as a CEO. Original design scheme didn’t contain even balconies, which were added probably on intervention of Gomboš & Kauzlarić, who were not signed on layouts, as was not Zlatko Neumann, who probably designed huge cornices, stairways’ window strips and terrace allotments, in which the first-built four buildings (Fig. 5) slightly differed from the other four, placed similarly in close northern vicinity and built shortly after.

THE PRESIDENCY OF THE FEDERAL GOVERNMENT BUILDING AND BEYOND

ZGRADA PREDSJEDNIŠTVA VLADE FNRJ I OSTALO

Early in June 1946 Chairman of the IUPS, Architect Nikola Dobrović started to reveal his vision of the renewal and reconstruction of Belgrade, publicly coining the terminus “New Belgrade”.

Among the buildings he proposed, the “New Yugoslav Assembly Building at the Kalimėgan (sic)” was to occupy the most honorable position. The nomenclature opted for the erection of three public buildings: The Party Presidency, the Federal Government Presidency Building and the Hotel for the Party and Government executives. In November “Technology” announced three open competitions, each for every building, accompanied with programs and preliminary design sketches for the urban planning of “New Belgrade”, made by the IUPS and designed by Nikola Dobrović himself.

The sketch significantly encompasses the position of the Party and Government Presidency buildings and relates the position of the Party Presidency building with a dome shaped circle to the proposed Assembly building. Further on, at the proposed place of the Government Presidency Building one can find a symmetrical plan layout ensemble, placed exactly on the place and with the main axe oriented exactly in the orientation line of the executed building.

Vladimir Potocnjak and Zlatko Neumann took over the Architects Antun Ulrich & Dragica Perak, another architectural designer duo from the same firm. The placement of their surnames as authors was a hierarchical one: Vladimir Potocnjak was the chief architect and the architect-in-charge for the possible execution, Zlatko Neumann was a senior architect with design authorities close to Potocnjak, whereas Antun Ulrich and Dragica Perak were junior architects. The team competed at least in two competitions, for the Party Presidency Building as a group of five and were awarded with the fourth place and the third prize, whereas for the Government Presidency Building as a group of four they won the first prize.

The problems accentuated by the competition announcements masterly, the architects choose suspended constructivist symbols for the shapes of buildings, namely a slender H-beam layout for the Government Presidency and a C-beam scheme for the Party Presidency. To implicit prevalence of Party over the Government, they gave the main part of Party Presidency an overall height of 15 stories and placed the building to the natural focal point of New Belgrade, to the confluence of the rivers Sava into the Danube, again a suspended statement of the importance of these two rivers for Yugoslavia and importance of the unification of the two polarized parts of the new greater Belgrade – Kalimėgan fortress of the old heritage and the proposed Party HQ of the new ways (Fig. 3 and 4). The Government HQ were placed at the right angle to the W and surrounded by simple cubic design of office or residential buildings.

The Urban potential of the chosen I-beam layout for the Government Presidency building combined with the Dobrović’ planned position of it turned out to be ingenious, enabling practically two focal points: one from the newly planned square avenue from the SSW where the main entrance currently is (Fig. 1a), and the other one from the banks of the Sava river and the Great War Island from the north-northeast (NNE; Fig. 1c). The New (Government) Presidency (Building), as the author of the famous article about Tito issued in “Life” in 1949 coined the terminus, slowly started to
emerge from the Banks of Danube⁴¹, relying on Potocnjak’s skills as the architect-in-charge and on the work of numerous working brigades from all over Yugoslavia. When the works came finally to a standstill due to the definitive lack of funds mostly caused by the blockade after Tito’s break up with Stalin, the structure was finished as a fully reinforced concrete skeleton shaped as an elongated H-beam section. Potocnjak obviously attempted to finish the building, and in the meantime he translated the “Bauordnungslehre”, a famous Neufert⁴² work from 1944 into Serbo-Croatian⁴³, to transplant the efficiency of German planning methods in building construction into the Yugoslav building community. It is probable that Zlatko Neumann helped him with the translation, although he was not credited most probably because of his experience as a POW in Germany during the WWII.

After Vladimir Potocnjak’s premature death in 1952, Zlatko Neumann took his place as the Head of Architecture at the State Construction Project Institute [of Croatia; SCPI], until starting his own independent architectural practices in 1954. It is significant that from the beginning in 1946 until sometime in 1953 the architectural group had its address in one of famous Zlatko Neumann’s buildings, the former Rosinger apartment building in Zagreb, 69 Vlaška St. However, the death of his closest ally of the period and his exclusion from any further involvement in the completion or redesigning of the still unfinished New Government Presidency building⁴⁴ made the appearance of buildings he designed more complicated and filled with virtual nets of brise-soleils, occasionally framed into boxes. One of the first examples is the dormitory of the navy yard in Šibenik, recently an inspiration for a newly erected hotel building which won a recognized international prize.

THE PERIOD FROM 1954 TO 1963

Zlatko Neumann realized two great residential commissions placed by the Executive Committee and Beyond

Znanstveni prilozi

D. Kahle Architect Zlatko Neumann

Fig. 6 Neumann, Zlatko: CAB “Municipality People’s Committee Tresnjevka – Zagreb”, 77-79 Tratinska St & 103 Nova Rd, ZG, HR, 1954-55, perspective of overall Committee Tresnjevka


AND BEYOND


41 It is possible that the new building was to host both Party and Government HQs, at least for temporary. For the completion of the building as the Palace of FEC and its further fate, see Kulić, 2015: 135 ff.

42 Neufert, 1944; Neufert, 1952

43 Kulić: 2009: 274, see footnotes 118&13


45 Hrv: Arhitektonski projektni biro [APB] “Neuman” (sic!) It is paradoxical that in his sole advertisement in “Architecture” during the whole period of office’ existence his name was correctly spelled as Neumann, whereas in the entire documentation submitted to the authorities and later legally enforced as parts of relating BPs and/or OPs the name was misspelled as Neuman.

46 E.g. former owner of a construction company before the WWII Eng. Ferdo Keller, who became Neumann’s frequent structural engineer as the head of the SDO “Keller”.

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Beyond residential buildings, Architect Zlatko Neumann designed in his architectural design office other kinds of edifices, per example kindergartens, primary schools, office buildings, industrial facilities, hospitals and museum pavilions. In spite of being connected with certain professionals, who as the old boys’ network helped him remarkably after the death of his after-WWII accommodator Architect Vladimir Potocnjak, every commission was sui generis in the milieu of the second decade of socialist Yugoslavia, not to speak Zagreb alone. The system of making decisions was very rigid, exhausting and time-consuming, bound with lot of meetings when one was talking too much but deciding too little. E.g. at the first stages of designing Vrbaniceva school, which lasted at least for a couple of years, the main question was how to handle a few landlords of unlawfully built residences before the WWII at the chosen construction site. Consequently, the layout plan was changed four times in eighteen months, with respect to whether these residences will be left or torn down completely. Every single principal tried to enlarge design program, to secure maximum of capacities in the given, always tight budget. The layout of the tuberculosis [TBC] Pavilion at Vinogradska Hospital was changed two times during the design process (Fig. 8 and 9) from the saddle roof to the inverted roof of a regular attached apartment building of the pre-WWII as executed, to the final emergence of the whole flat roof with one additional story when being reconstructed in 1966-67. Therefore he organized his office in an efficient manner, made the drawings and documents, which they produced together, always clean, precise and comprehensible, filled with necessary details and connected with other professionals offices, e.g. for structural design, Heating, Ventilation and Air-Condition [HVAC], etc. etc., to be able to cope with such kind of demands. One can say the organization of his office was a forerunner of today’s Building Information Modeling [BIM], however with typewriters, slide rulers and pens instead of folders instead of solid state drives, finally the books like both Neuferts or Handbuch

**OTHER BUILDINGS**

**OSTALE ZGRADE**

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47 E.g. former building firm owner Eng. Mauricij Stapp after the WWII became a city administration official in Zagreb, further Eng. Stjepan Cernjak, and Eng. Josip Neumann (Najman), former owners of his beloved pre-WWII landlord Friedländer in 1954, yet to be researched, although its design would be very significant for the analysis of his architectural design practices.

48 *** 1963: front advertising pages

49 Laslo, 1987: 458

50 I.e. Croatian State Government; every one of six states which constituted Yugoslavia had its own government, however with significantly less political power than contemporary Länder which constitute Federal Republic of Germany.

51 Laslo, 1996: 629

52 The reconstruction, i.e. putting the whole flat roof to the TBC pavilion was so far the very last architectural commission of Architect Zlatko Neumann, probably as a retiree with his former coworkers for their new design office.
After his return from the confinement in Germany, after the end of WWII, Architect Zlatko Neumann (1900-1969) was demobilized and employed by the State Ministry of Building of People's Republic of Croatia. At the beginning of 1946, he was one of the founder members of the State Construction Project Institute of Croatia, later known as the Architectural Design Institute, together with the Architect Vladimir Potočnjak, serving as the Chief Architect and Architect Branko Tučkoriæ, serving as the CEO, at the address 69 Vlaška St, possibly in the pre-WWII architectural office of Zlatko Neumann. Together with the Architect Vladimir Potočnjak he constituted a mutual architectural team who, in cooperation with other architects, won the first prize for the most ambitious federal building enterprise (Fig. 1a-b-c), the Government Presidency Building in New Belgrade in 1947, today "the Palace of Serbia". The construction started soon with the Architect Vladimir Potočnjak as the Architect-in-charge and the Architect Branko Tučkoriæ as a supervisor in the position of the Deputy of Yugoslav Federal Minister of Buildings. Due to the shortage of funds, the construction was halted in 1951 when the reinforced concrete skeleton of a slender H-shaped building was finished. Until the death of Arch. Potočnjak in 1952 they together designed a few industrial facilities, most notable being the Fish factory on the island Prvić in the same year.

Regarding residential buildings designed by the Architect Zlatko Neumann after the WWII, they can be divided into two groups. The earlier class corresponds to the four southernmost collective housing blocks (Fig. 5) of eight buildings, designed by Architects Vladimir Potočnjak, Zlatko Neumann, Stjepan Gombos & Mladen Kauzlariæ as an improvement of plans probably composed as a compromise between the municipal and the state socialist bureaucracy in 1946. This supergroup of four "star-architects" from before-WWII improved sparse façade design with adding balconies to the already straight-tied layout and diversified other elements such as cornices and stairways fenestration. Highly esteemed within few years after erecting, these buildings may be interesting today only as an entry into monographs of their authors. Later class is more substantial for analyzing his design methods in the housing design. Between 1954 and 1963 he was awarded with three residential commissions, from both the city and state administration. The layouts are more spacious, with generously given standards for socialist countries, with fresh concepts of manipulation with layouts to achieve an unusual solution for a corner building, e.g. molding the layout and placing a central stairway into the wrist of both wings, while placing bathrooms and water closets onto the front façade just right in the middle of the corner (Fig. 6). Such experiments could naturally go on only to a certain limit, beyond that the layouts were rejected as not social or appropriate, as for the first layout solution for the not realized project in Primorska St (Fig. 7). It comprises both usual Raumplan solutions in Zagreb area, namely ventilation shaft for the water closet above the ceiling of pantry for each regular apartment and arranging the doorway with a small staircase because the level of the first story was designed slightly above the ground.

At the beginning of the 1950s, Yugoslav authorities surprisingly approved the founding of a few private architectural offices simply...
called by their head architect. In February 1954, the Architect Zlatko Neumann effectually started an independent architectural practice as the CEO of the Architectural Design Office "Neuman" (sic!). Until his final retirement in 1963, he designed and supervised the execution of nineteen various edifices, among them six schoolhouses. The old boys' network of his pre-WWII colleagues, who at the times were highly positioned in diverse decision-making or advising bodies entrusted him with school design. Design drawings and supporting documentation were ahead of the time in Yugoslavia: complete construction, HVAC and detailing sheets were made either by the design office itself or by corresponding support offices. It can be said that all the involved parties functioned in a way which may be called Building Information Modelling [BIM], however provided by human resources on drawing desks with pens, slide rulers and typewriters. This was necessary due to the rigidly structured decision-making process exercised by the authorities. Common typological characteristics of six schools analyzed are flat roofs, rows of lengthwise windows flanked with vertical pillars making mesh-like surfaces, longitudinal main parts of a building with classrooms oriented to the South thereby ensuring a maximum of insolation to pupils, where, so to speak, he succeeded in making a classroom the living room for children.

The design approach of the Architect Zlatko Neumann started to change significantly before the WWII. Instead of smooth white surfaces extruded with horizontally oriented window stripes, he started to implement three-dimensional meshes of yet suspended either transversal plates or columns and horizontal plates as the arrangement of loggia-shaped balconies in horizontal direction of a particular façade curtain he designed, which he seminally implemented for the street front of the unrealized "Stoeger" project in 1937 [Kahle, 2015: Fig. 16]. His experience of being a POW in WWII certainly added particular conspicuous elements to his design skills, i.e. structural meshes appeared to both directions, three-dimensional boxes emerged on top stories (Fig. 11). In the process of design and execution, meshes started to grow organically (Fig. 8 and 9) or were implemented since the beginning (Fig. 6, 7 and 12). These structural patterns were withheld when schools were designed, as if he tried to spare the children from the real world (Fig. 10 and 11). His 15-story skyscraper-like double-circular tower at the new Zagreb Paper Mill facility is one of most cogenent, conceivable and potent high-rise in Zagreb skyline. (Fig. 13).

The impact of the Architect Zlatko Neuman onto the architectural affairs in Croatia and beyond from 1927 up to 1966 is overwhelming. He managed himself to attend the Loosschule and to be an important collaborator of the Architect Adolf Loos, further he gave enormous efforts to implement his masters’s way of designing to Croatian Modern Movement, having success at least at a subconscious level. Miraculously having survived the Holocaust, he attempted to create new patterns of conceiving Modern Architecture: by suppressing two or three-dimensional meshes on the building envelope, characterizing his emotions forced by fortunes of his life.

[Proofread by GORDANA ĆALIĆ, prof.]
E. Work in various architectural positions for various state-owned collective architectural design offices (1945-1954) [20]

E. Work in various architectural positions for various state-owned collective architectural design offices (1945-1954) [20]

E.1. The House of Culture, Novi Marof, HR, 1945; AL1996
E.4. Four 65 CBHs between Varazdinska St and future "Motorway Zagreb-Belgrade", err. Vrbnik, today 5-8 Gaje Alage St, 5-8 Frana Bosnjakovića St, 5-8 Ivana Stozira St & 5-8 Fausta Vrančica St, ZG, HR, 1946-47 (Chief designer: Arch. Potočnjak, Design team: Potočnjak; Neumann, Z.; Gomboš; Kauzlarić, M.); BP1969; AL1987; AL1996
E.6. The Presidency of the Federal Government Building, 1946-51 (Chief designer: Arch. Potočnjak, Design team: Potočnjak; Neumann, Z.; Ulrich; Perak; Vasiljevčić), project
E.7. The Presidency of the Federal Government Building, 1946-51 (Chief designer: Arch. Potočnjak, Design team: Potočnjak; Neumann, Z.; Ulrich; Perak; Vasiljevčić), project
E.11. The House of Culture, Dvor na Uni, HR, 1952; AL1996
E.12. Fish factory, Prvić Luka, island Prvić, HR, 1952 (Chief designer: Arch. Potočnjak, Design team: Potočnjak; Neumann, Z.); BP1969; AL1987; AL1996
E.14. Workers' wardrobes, textile factory "Victory" (hrv. Pobjeda), 18 Zavrtatica St, ZG, HR, 1952-53; AL1987
E.17. Post Office, Remete, 3 Kameniti Stol St, ZG, HR, 1953-54; AL1996
E.19. Electrical power plant, Perusec, HR, NKY; BP1969
E.20. Aluminum factory building, Sibenik, HR, NKY; BP1969
F. The ADO "NEUMANN", ERR. "NEUMAN" (1954-1963) [20]
F.2. Chemical laboratory building of Cement factory, Dugi Rat, HR, 1954; AL1987; AL1996
F.4. CAB "Municipality People's Committee Tresnjevka – Zagreb", 77-79 Tratinska St & 103 Nova St, ZG, HR, 1954-55 (Phase 1); BP1969; AL1987; AL1996
F.5. TBC pavilion, "Dr Miladen Stojanovic Hospital", today "Sestre Milosrdnice" Hospital, 29 Vinogradska St, ZG, HR, 1954; BP1969; AL1987; AL1996
F.7. Pavilion in the yard of Archaeological Museum, 19 Zrinski Sq., ZG, HR, 1954, project
F.10. AAB "Department for Housing of City People's Committee Zagreb", ZG, HR, 1955-57, project; BP1969
F.12. Garage for the Post office Remete, 3 Kameniti Stol St, ZG, HR, 1957; AL1987; AL1996
G. Work in retirement (1963-1966) [1]
G.1. Reconstruction of TBC pavilion, "Dr Mladen Stojanovic Hospital", today "Sestre Milosrdnice" Hospital, 29 Vinogradska St, ZG, HR, 1964-65

The meaning of acronyms: BP1969 – occurs on the list in Pavlović, 1969: 61 ff.; AL1987 – occurs on the list in Laslo, 1987: 458-459; AL1996 – occurs on the list in Laslo, 1996: 628-629. All entries from all lists are present in this Appendix, except an entry from Pavlović's list because it has not been found in DAZG (Primary school in Kuslanova St).
Cernjak, Eng. Stjepan, LSE (1892-?), former partner of CC "Cernjak & Neumann", after WWII city official
Crniæ", after WWII city official

Gombos, Prof. Eng. Arch. Stjepan, LA (1895-1975), graduated at DoA, BIT in 1921, former partner of "Gombos & Kauzlariæ Architects", after WWII architect employed at SCPI, 1950-54 Professor of Industry Facilities Design at the DoA, SoT, UoZ


Jankoviæ, Arch. Mihailo [-Mika], LA (1911-?),architectural official in the Stately Planning Committee of LA, former pupil of Arch. Aladar Vladimir Baranyai, after WWII architect employed at SCPI, 1950-54 Professor of Industry Facilities Design at the DoA, SoT, UoZ

Kuliæ, Arch. Mihailo [-Mika], LA (1911-?), architect from BG who supervised finishing the FEC building. For further information, see: Kuliæ, 2009: 274 ff

Kauzlariæ, Acad. Prof. Arch. Miaden, (1896-1971), former partner of "Gombos & Kauzlariæ Architects", after WWII architect employed at SCPI, from 1948 Professor of Architectural and Interior Design at the DoA, SoT, UoZ

Keller, Eng. Ferdinand (Ferdo), owner and CEO of CC "Ferdo Keller", after WWII an influential structural engineer, later CEO of SDO "Keller"


Neumann or Rajšek Neumann, Olga [Rajsek, Olga] (1915-2008), fiancée, wife and widow of Architect Zlatko Neumann. After captivation and confinement of her betrothed in WWII, she stayed in their house in Croatia from Holocaust (https://jfr.org/rescur-stories/rajscek-olga/). It is possible that she guarded his architectural studio (69 Vlaska St) too, thus made possible to Tuckoric, Potocnjak and Neumann to organize SCPI in 1946. They married after his return from confinement.

Perak, Eng. Arch. Dragica, nec Gjurjiæevic (?)(1917-?), graduated at the DoA, SoT, UoZ in 1941. After WWII joined with Arch. Ulrich, they together went to Skopje in 1949-53 to practice and teach architecture


Ulrich (err. Ulrih, Ulrich), Arch. Antun (1902-1998), graduated at the Kunstgewerbeschule, today the University of Applied Arts in Vienna in 1927. Between the WW a city official in ZG. After WWII employed at the State Urban Planning Institute in Zagreb, from 1949 to 1953 Prof. at DoA, SoT, UoZ, from 1953 CEO of ADO "Ulrich".


Vilicic, Eng. Arch. Vjekoslav (1907-1995), Branko Tuckoric' brother-in-law and Melita Tuckoric' husband, graduated at the DoA, SoT, UoZ in 1935. Employed at the Construction company Leo Neuberger, probably a NIC by most of its construction sites before the WWII.

Vilicic (Tuckoric), Prof. Dr. Eng. Arch. Melita (1913-2005), Branko Tuckoric' sister, graduated (Eng. Arch.) at the DoA, SoT, UoZ in 1941. Habilitated at the SoASEGE, UoZ in 1964. Promoted (PHD) at the SoA, UoZ in 1976. Her primary professional and scientific interest was history of built heritage.

"Our Buildmanship / Construction Industry" (?) – the professional journal "Nase gradovenstvo" (hrv, srp, hbs), issued as a bulletin of Yugoslav Federal Ministry of Building from 1947 to 1952, the Editor-in-chief was Eng. Arch. Branko Tuckoric, further incorporated to "Technology"

State, stately, People's Republic of (1945-1965), Socialist Republic of (1965) – referred to each of six constituent parts of Yugoslavia, however with less political influence than the Länder in contemporary Federal Republic of Germany

State Construction Project Institute [of Croatia], later known as the Architectural Design Institute – (hrv: Zemaljski gradbeno projektni zavod Hrvatske, local acronym ZGPZ[H], later known as: Arhitektonski projektni zavod, local acronym APZ), a seminal organizational form of the collectivized Architectural Design Office in the period 1946-53, before atomizing into a cluster of many individualized ADOS or SDOs

State Urban Planning Institute – (hrv: Urbanistiæki institut Hrvatske), a collectivized design office regarding matters of urban planning of Serbia

Numerous journals and periodicals were published regarding architecture and urban planning in Yugoslavia, with monthly newspapers "Arhitektura" (slv, hrv, hbs), issued by the Association of Yugoslav Architects and Urban Planners, "Technology" (hrv, srp, hbs), issued by the Professional Journal "Our Buildmanship / Construction Industry" (slv, hr, sr, sv), and the professional journal "Nase gradovenstvo" (hrv, srp, hbs), issued as a bulletin of Yugoslav Federal Ministry of Building from 1947 to 1952, the Editor-in-chief was Eng. Arch. Branko Tuckoric, further incorporated to "Technology".

Stapp, Eng. Mauricij, former partner of CC "Jurisic, Batusic & Stapp", after WWII city or state official

"Technology" – the professional journal "Tekhnika" (hrv, srp, sv), issued by the Association of Yugoslav Architectural, Structural, Machine and Electrical Engineers from 1946 to 1952, further by the Society of Serbian (?) Architectural, Structural, Machine and Electrical Engineers

Federal Executive Council (hrv: Savezno izvræno vijeæe, local acronym SIV; sv: Zvezni izvræni svet; srp: Savezno izvræno veæe) – the name of the Yugoslav Federal Government between 1953 and 1992

House of Culture – in socialist countries (hrv: Dom kulture, Kotarski zadruæni dom, Zadruæni dom, etc.) the building of a particular county, city or village for socialization of people on common interest, e.g. singing, performing, etc., similar to the club house, but not equal

Institute of Urban Planning of the People's Republic of Serbia – (srp: Urbanistiæki institut Srbije), a collectivized design office regarding matters of urban planning of Serbia

"Man & Environment" – the professional usually monthly newspapers "Covjek i prostor" (hrv, srp, hbs), issued by the Society of Architects of the People's Republic of Croatia (hrv: Drustvo arhitekata Hrvatske, sv: Savez arhitektura Hrvatske, slv: Savez arhitekata Hrvatske)

New Presidium / Presidency [Building] (hrv: Zgradic Presidnje svijeæa [vlade FNRJ]) – a term coined in article about then Yugoslav PM Marshal Tito in journal "Life" in 1949 = The Palace of the Federal Executive Council (hrv: Palaca SIV, srp: Palata SIV, slv: Palata Srbija)

"Our Buildmanship / Construction Industry" (?) – the professional journal "Nase gradovenstvo" (hrv, srp, hbs), issued as a bulletin of Yugoslav Federal Ministry of Building from 1947 to 1952, the Editor-in-chief was Eng. Arch. Branko Tuckoric, further incorporated to "Technology"

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State Urban Planning Institute – (hrv: Urbanistiæki institut Hrvatske), a collectivized design office regarding matters of urban planning on a state level (e.g. Croatia, for Serbia see IUPS)
**ABBREVIATIONS AND SYMBOLS**

**Kratice i simboli**

Acad. – Academician, the title of a member of the Croatian Academy of Sciences and Arts (former Yugoslav Academy of Sciences and Arts)

Arch. – Architect

Ave – Avenue

b. – blue, occasionally black or green number, signed in the below right corner of a signature folder

cca. – circa, about

cf. – compare

deu, de – German language (ISO 639, individual language)

eng, en – English language (ISO 639, individual language)

Eng. – Engineer (architectural, structural, electrical, mechanical)

err. – erroneously

ff. – far forte, m. and continuing (when referencing a whole book or article)

deu, de – German language (ISO 639, individual language)

eng, en – English language (ISO 639, individual language)

Eng. – Engineer (architectural, structural, electrical, mechanical)

err. – erroneously

ff. – far forte, m. and continuing (when referencing a whole book or article)

hbs (deprecated: sh) – Croatian-Bosnian-Serbian language, commonly known as Serbo-Croatian language (ISO 639, macrolanguage)

hrv, hr – Croatian language (ISO 639, individual language)

hun, hu – Hungarian language (ISO 639, individual language)

Ill. – Illinois

m. – meaning

ns, usually 25 to 95 – number of stories given counted as in the US, i.e. first story is the ground floor

pl. – nobleman (hrv: plemeniti)

Prof. – Professor (high school, college, university)

r. – red number, signed in the above right corner of a signature folder

Rd – road (hrv: cesta)

sign. – signature

slv, sl – Slovenian language (ISO 639, individual language)

Sq. – square (hrv: trg)

srp, sr – Serbian language (ISO 639, individual language)

St – street (hrv: ulica)

AAB – attached apartment building

ADI – Architectural Design Institute (hrv: Arhitek- tonski projektni zavod, local acronym APZ)

ADO – Architectural Design Office (hrv: Arhitekton- ski projektni biro, local acronym APB)

AIC – architect-in-charge

Aij – The Archives of Yugoslavia (srp: Arhiv Jugoslovi- je)

AL1987 – entry on appendix list first recorded by (Aleksander) Laslo, 1987

AL1996 – entry on appendix list first recorded by (Aleksander) Laslo, 1996

ASCG – The Archive of Serbia [&] Montenegro (srp: Arhiv Srbije [i] Crne Gore), today The Archives of Yugoslavia (Ai)

BG – Belgrade (srp: Beograd), former capital of YU, today capital of RS

BIT – the Budapest Institute of Technology (hun: Kőzösi József Műegyetem), today BUTE: Budapest University of Technology and Economics (hun: Budapesti Műszaki és Gazdaságtudományi Egyetem)

BL – bilingual

BP – the building permit

BP1969 – entry on appendix list first recorded by (Boro) Pavloviæ, 1969

CAB – corner apartment building

CC – Construction Company, referred to private enterprises in YU between the WW

CEO – the Chief Executive Officer (hrv: direktor, upravitelj, generalni direktor)

CHB – the Collective Housing Block

CMOS – the Chicago Manual of style, recent (16th) edition

DAZS – The State Archives in Zagreb (hrv: Drzavni arhiv u Zagrebu)

DE – Germany

DoA – the Department of Architecture

FEC – the Federal Executive Council

HQ – headquarters

HR, HRV – Croatia, Republic of (ISO 3166)

HVAZ – Heating, Ventilation and Air Conditioning

IL – Illinios, State of the USA

ISO – the International Organization for Standardization

IT – the Institute of Technology


JSAH – The Journal of the Society of Architectural Historians

JLZ – the local acronym (hrv: Jugoslavenski leksikografski zavod) for publishing house in ZG who published mostly encyclopedic works in former YU, later JLZ “Miroslav Krleæa”, today LZ “Miroslav Krleæa”
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Biografija

DARKO KAHLE, PhD, Arhitekt [ARB, United Kingdom], Arhitekt [BYAK, Freistaat Bayern], Licenseo Architect [HKA, Croatia], Senior Research Fellow [MZOŠ, Croatia]; 1989 MArch, 2002 MSc in Architecture and Urban Planning, 2007 PhD in Architecture and Urban Planning [University of Zagreb, School of Architecture, Graduate School of Built Heritage Split]. From 2002: 11 published scientific articles, 4 executed renovation projects & 2 competition projects.

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