

Reversing the Exchange: Yugoslav Architectural Exports to Czechoslovakia

Yugoslavia, Czechoslovakia, Export, Technology, Construction

/Abstract

The paper aims to map out the numerous projects in Czechoslovakia realized by Yugoslav construction companies from the 1960s to the 1980s and offers the preliminary insights into their modes of operation. Due to insufficient archival records, the paper offers a preliminary insight into the matter. However, with the extensive coverage of these projects in the Czechoslovak professional periodicals, it was possible to trace down fifty projects, done by companies from Serbia, Croatia and Macedonia. Interviews with the surviving protagonists and contemporaries of these collaborations provided detailed introspect into the mechanisms of the processes, with local architects typically responsible for the overall design, while Yugoslav companies provided the design development, technological know-how, construction services, and materials. These insights contribute to a growing body of knowledge about the exports of architecture from Europe's socialist half during the Cold War and broadens the narrative of international architectural circulation, while unpacking the usual presumptions on "developed" and "und(er)developed". The paper points to other routes of exchange, based on the cooperation within the socialist world, but nevertheless across a geopolitical division, the one that separated the non-aligned Yugoslavia and the Warsaw Pact-member Czechoslovakia.

/Author

Jelica Jovanović
PhD student at the University of Technology in Vienna
jelilica@gmail.com

Jelica Jovanović (1983) is an architect and PhD student at the University of Technology in Vienna, working as an independent researcher. She graduated with a degree in Architecture from the Faculty of Architecture, University of Belgrade. She is a founder and member of the NGO Grupa arhitekata, within which she has worked on several projects: *Summer Schools of Architecture* in Bač and Rogljevo (from 2010), *(In)appropriate Monuments* (ongoing from 2015), *Lifting the Curtain* (2014-2016, exhibited in Venice Biennale in 2014). She also coordinated the regional project *Unfinished Modernisations* for Association of Belgrade Architects (2010-2012) and worked as a curatorial assistant for the Museum of Modern Art in New York (MoMA) for the exhibition *Toward a Concrete Utopia: Architecture in Yugoslavia, 1948–1980*. She is a twice-elected secretary general of DOCOMOMO Serbia, for which she is also working as a project coordinator and web editor. She is also the coauthor of the book *Bogdan Bogdanović Biblioteka Beograd - An Architect's Library* with Wolfgang Thaler and Vladimir Kulić, as well as the coauthor of the web page *Arhiva modernizma* with Ljubica Slavković. She is also an OeAD One Month Visit scholar (Austria) and SAIA (Slovakia) scholar.

Introduction

While wandering around Kobylišy neighborhood in Prague, one building in exposed concrete caught my eye. Although appearing generic to an extent, its facade contained both custom-made elements and prefabricated panels shaped in uncommon ways. The difference was subtle, but to my eyes it was clear that these panels differed from the kind of prefabrication one normally sees in the Czech Republic or Slovakia. In Belgrade, however, it would be at home, a conspicuous hybrid between, for example, the now demolished Embassy of the Federal German Republic and New Belgrade's Block 22 neighborhood. Both examples share some key features with their counterpart in Prague, including slender *brise-soleils* and "pliers" holding the structure in place, all executed in exposed concrete. In technological terms, the building appeared to be an instance of semi-prefabrication, which was indeed often used in Yugoslavia, hybridizing a cast-on-site load bearing structure and a façade constructed with small-scale prefabricated elements and a curtain-wall for the envelope. Of course, I could not be sure. But my gut instinct wasn't wrong – a few months later I accidentally saw a Facebook post, crediting the design to a forgotten Belgrade architect, Jovan Jovanović, and identifying 1974 as the year of construction. The building's previous owner, the Chemopetrol-Benzina petrochemical company, had sold the building to the Czech Social Security Administration, which allowed the newspaper to reveal the name of the architect, but not other details of its construction.¹ Praguers suggestively nicknamed the building "Drákulov" for its unusual silhouette reminiscent of a gothic castle. To this day I have not fully uncovered the details of its provenance: the Social Security Administration keeps it classified for security reasons. Other archival sources have been destroyed or lost or disorganized for decades, a common condition of post-socialism in both post-Yugoslav and post-Czechoslovak countries. [Fig. 1]

I went to Prague via Bratislava, to study and compare the development of Yugoslav and Czechoslovak mass housing in second half of 20th century.² Based on the long history of interactions and cooperation between the two countries,



1

1 Kateřina Menzelová, "Drákulov Změnil Majitele," *euro*, November 6, 2002, <https://www.euro.cz/archiv/drakulov-zmenil-majitele-808066>, accessed January 5, 2020.

2 The research *Mass Housing of (Czecho)Slovakia: Housing Developments in the Second Half of 20th Century and the Role in the European and Global Exchange of Technologies* has been done within scholarships Action Austria – Slovakia, Co-operation in Science and Education, supervisor Lubica Vítková (2014-2015) and *Industrial Housing of (Czecho)Slovakia: Post-War Housing Production - Origins, Technology and Methodology of Housing for the Masses* within the The National Scholarship Programme of the Slovak Republic for the Support of Mobility of Students, PhD Students, University Teachers, Researchers and Artists, supervisor Henrieta Moravčíková (2017).

Fig. 1

Architect Jovan Jovanović, Former building of the Chemopetrol-Benzina Company, today Czech Social Security, popularly named Drákulov, Kobylišy, Prague, 1974-1979 (Photo: Jelica Jovanović, 2015)..

I expected to find that technology transfers went from the more developed to the less developed economy, i.e. from Czechoslovakia to Yugoslavia, as had indeed been the case throughout the late 19th and the first half of the 20th centuries.³ As it turns out, the assumption was wrong: not only did Yugoslavia develop its own path to mass housing by the 1960s, just like Czechoslovakia had done somewhat earlier in the century, but my research uncovered an unexpected direction of technological transfer, from Yugoslavia to Czechoslovakia and to other Second World countries.⁴ Considering that for decades Czechoslovakia was more advanced in terms of industrial and infrastructural development, that it had expertise built through a strong network of schools of technology, and the history of knowledge transfers between the two countries, it would have been expected for Czechoslovakia to export to, rather than import expertise from Yugoslavia. However, it was the Yugoslav construction companies and their architects who participated in Czechoslovakia's post-war architectural production, not the other way around.⁵ After the collapse of Yugoslavia in the 1990s, this entire segment of the country's architectural culture went into oblivion. Contours of the wider story have been uncovered recently, most notably the extensive Yugoslav projects in the countries of the Non-Aligned Movement (NAM), which followed a more visible vector of export given the role of Yugoslavia in the movement. In contrast, projects completed in Eastern Europe completely vanished from memory.⁶ However, as I have found out, they were not forgotten in their host countries like Slovakia: the architectural imports from Yugoslavia, as my colleagues assured me repeatedly, survived as common knowledge both among the professionals and the historians.⁷

This paper maps out a number of projects in Czechoslovakia realized by Yugoslav construction companies from the 1960s to the 1980s, and offers a preliminary insight into their modes of operation. The account is inevitably incomplete, largely due to insufficient archival records, which suffered greatly during the so-called post-socialist transition in both former countries. Despite limited archival sources, however, the coverage of these projects in Czechoslovak professional periodicals allowed me to catalog no less than fifty of them originating mostly in Serbia, as well as a few from other parts of Yugoslavia. Interviews with the surviving protagonists and contemporaries of these collaborations,

3 Tanja Damljanović, *Češko-srpske arhitektonske veze 1918-1941* (Czech-Serbian architectural connections 1918-1941) (Belgrade: Republički zavod za zaštitu spomenika kulture, 2004), 9-11 and 49-73.

4 Kimberly Elman Zarecor, *Manufacturing a Socialist Modernity: Housing in Czechoslovakia, 1945-1960* (Pittsburgh: University of Pittsburgh Press, 2011), 224-295.

5 There are instances of industrial equipment imports from Czechoslovakia, which is often connected with construction of entire industrial facilities, i.e. for glass production or vinegar production, however, no planning or design documentation has been retrieved yet. See Arhiv Jugoslavije [Archive of Yugoslavia, hereafter AJ], Belgrade, Fond KPR: Kabinet predsednika Republike, folder 1-5-b-19.

6 Dubravka Sekulić has written extensively about this phenomenon, following the case of the largest and most prominent Yugoslav construction company, Energoprojekt. Other cases include the story of Hotel Babylon in Baghdad (Vladimir Kulić, "Building the Non-Aligned Babel: Babylon Hotel in Baghdad and Mobile Design in the Global Cold War," *ABE Journal: Architecture beyond Europe* 6, 2014, <http://journals.openedition.org/abe/924>) and the experimental housing in Angola (Jelica Jovanović, "From Yugoslavia to Angola: Housing as a Postcolonial Technical Assistance. City Building Through IMS Žeželj Housing Technology," *Arhitektura & Urbanizmus* 53, no. 3-4 (2019): 170-181).

7 I thank my colleague Martin Zaiček for these insights.

including the leading Slovak architects Ilja Skoček, Bohuslav Pernecký and Anna Pernecká, further allowed me to flesh out some of the details, pointing to a peculiar transnational division of labor, in which local architects were typically responsible for the overall design, and Yugoslav companies provided the design development, technological know-how, construction services, and materials. In comparison to the export of design services to non-aligned countries, those to the socialist world were much more limited, which contributed to their lower visibility in professional circles.⁸ Nevertheless, they were significant enough to contribute to a growing body of knowledge about the exports of architecture from Eastern Europe during the Cold War. The recent groundbreaking scholarship has uncovered the wide extent of such exports to Africa, the Middle East, and South Asia.⁹ In contrast, this paper points to other routes based on the cooperation within the socialist world, but nevertheless across a geopolitical division, the one that separated the non-aligned Yugoslavia and the Warsaw Pact-member Czechoslovakia.

The internationalization of architecture and urbanism in socialist countries was intricately connected with the infrastructural development of the post-colonial and post-imperial South and East - a geography in which Yugoslavia was deeply involved. However, if the exports, for example, to Angola should be considered post-colonial development, the question is how to characterize the exports to Czechoslovakia. Having in mind the building types constructed there, such as industrial and healthcare facilities, this particular exchange can be understood as a contribution to continued industrial and infrastructural development. In addition, it served as the settlement of Yugoslav debts incurred in the interwar and early postwar periods, due in part to the nationalization of Czechoslovak companies in Yugoslavia and the loans for industrialization taken by the new socialist government. The internationalization of Yugoslav architecture was always conditioned by the specific bilateral relations with the country in question, which often significantly inflected the more general Cold War bloc relations. It went in many directions, but it was always deeply intertwined with the country's foreign policy as well as internal affairs. The resulting exchanges often complicate the common assumptions about the center and periphery, as well as the canon of architectural and technological history monopolized by the West, from which the proverbial underdogs such as Yugoslavia are usually excluded. The development of the Yugoslav construction sector and the dissemination of its products challenge many ideas entrenched in architectural history, which teaches of great technological leaps as the only historically relevant

⁸ Architectural design provided the smallest share in construction exports abroad. Of the companies that engaged in design services Energoprojekt held a 90% share of total exports, most of it to NAM countries (Nigeria, Peru, Zambia, Uganda, Gabon, Iraq, Morocco, Algeria, Burma, Guinea, Cyprus. Tucakov. Cfr. Miloš Jarić, *40 godina građevinarstva Socijalističke republike Srbije* (Forty years of construction industry of the Socialist Republic of Serbia) (Belgrade: Izgradnja, 1987), 250-251.

⁹ Most notably, Łukasz Stanek's groundbreaking book traces the exports from socialist Eastern Europe to the recently decolonized world; see: Łukasz Stanek, *Architecture in Global Socialism: Eastern Europe, West Africa, and the Middle East in the Cold War* (Princeton and Oxford: Princeton University Press, 2020). Other notable case-studies include Christina Schwenkel's work about the architectural exports from East Germany to Vietnam. See her forthcoming book *Building Socialism: The Afterlife of East German Architecture in Vietnam* (Durham, NC: Duke University Press, 2020).

ZÁVOD NA VÝROBU UŽITKOVÉHO SKLA V NOVÉM BORU

Generální projektant: Skloprojekt Praha

Dne 28. října 1967 byl slavnostně zahájen provoz v novém závodě na výrobu užitého skla v Novém Boru.

Toto místo v severních Čechách má ve výrobě skla dlouhou tradici. Vždy první významný a sklářské se datují z roku 1654. Triumf novoborského skla potvrzují ceny EXPO 58 Brusel, Trienské, Milán a EXPO 67 Montreal.

Rostoucí poptávky na zvyšování produkce vyvolaly nutnost výstavby nového závodu. Generálním projektantem celé akce byl určen Skloprojekt Praha.

Po zpracování investičního úkolu a několika variant studií byl vypracován Skloprojektem zadávací projekt. Generálním dodavatelem stavební části byl určen Průmysl Pardubice, později Konstruktiva Praha. Ale počátkem roku 1965 začalo jednání mezi ČS. Polytechnou a jugoslávským Union Enginering, který nabídl vybudovat nový závod v termínu o jeden rok zkráceně.

A tak, zatím co byl položen v srpnu 1965 základní kámen závodu, spolupracovali již pracovníci Skloprojektu s jugoslávskou projektovou kanceláří Trudbenik Beograd a Montex Zagreb na přípravě pro provádění projekt.

Zastavovací plán závodu se v podstatě nemění. Centrem zůstává výrobní monoblok, který zahrnuje provozní soubory hlavní výroby, tj. soubor tavení skla a soubor rafinačních provozů. Okolo tohoto objektu jsou situovány ostatní objekty stavby, i když znanou generálním projektanta bylo dodržet základní pásma závodu v linii, odpovídající výrobnímu, případně účelovému charakteru jednotlivých částí objektů, nebylo možné tento požadavek vždy dodržet. Bylo třeba brát v úvahu nejvhodnější napojení na veřejné zdroje, situování energetické objekty co nejblíže centru spotřeby energií a tím vytvořit podmínky k minimálním investičním nákladům vynaloženým na intenzivně sled a k maximálnímu provozním úsporám ve vlastních rozvodech. Samostatnou část tvoří vstupní areál závodu, který je umístěn severovýchodně od výrobního monobloku a vnitrozvodní komunikací navržené na státní sílnici Nový Bor – Kamenný Šenov. Jeho hlavním objektem je administrativní budova. Druhou samostatnou část tvoří dvě budovy svobodně s tělocvičinou a sportovní hřiště na jihovýchodní straně pozemku.

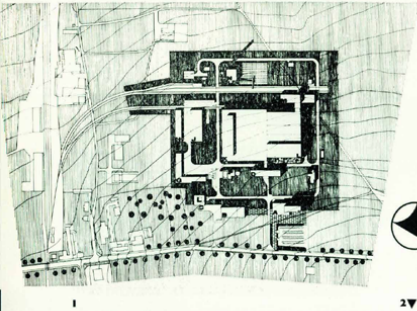
Původní zadávací projekt technologického zařízení obsahoval vybavení závodu moderním a vysoce produktivním zařízením. Před zahájením výstavby byl však rozhodnuto o změně v otopení tavných agregátů a původně navrženého odtahového systému se u vanažních agregátů změnil v celoelektrické sítě. Tato změna měla vliv na navazující technologické provozy i na energetickou část v náročných na nové elektrické příslušenství a s tím související změny v projektu měření, regulace a stavby. Všem těmto změnám bylo třeba přizpůsobit původní zadávací projekt.

Jak již bylo uvedeno, původní zadávací projekt byl řešen s ohledem na generálního dodavatele stavby. Při zpracování prováděcích projektů jugoslávské organizaci dochází ovšem ke konstrukčním úpravám, které odpovídají možnostem a zvyklostem jugoslávského dodavatele, avšak nejsou takového rozsahu, aby narušily navrženou technologii.

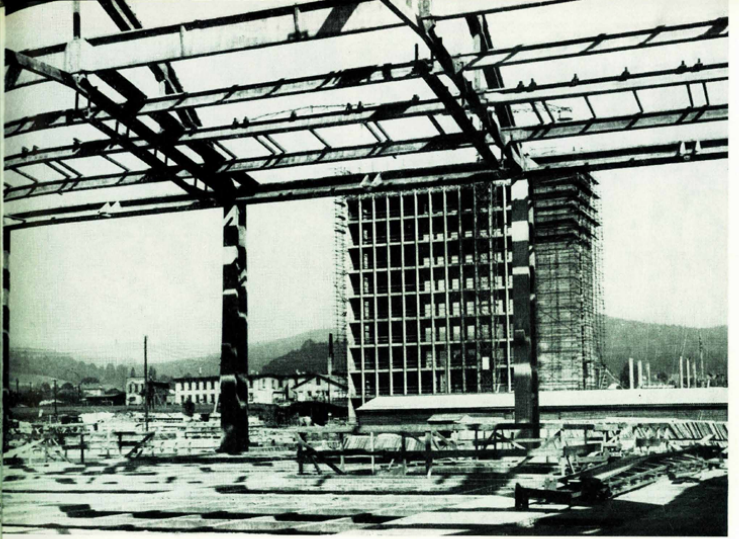
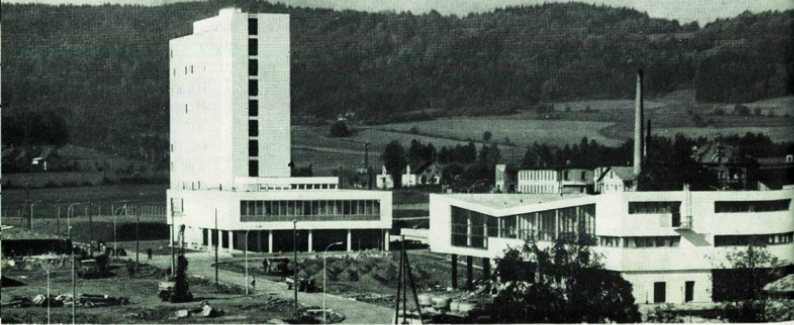
Pro příklad uvedu konstrukční změny, k nimž došlo u hlavního výrobního monobloku, který je největším objektem výstavby. Je to soustava dvoupodlažních hal o celkové výměře cca 175,00 x 109,00 m. V zadávacím projektu byla navržena svíslá nosná železobetonová konstrukce. U hal o rozponu 30 m to byly sloupy V-čarosti a vloženým stropem ze železobetonových panelů 600/120 cm. U hal o rozponu 12 m bylo první podlaží vytvořeno ze spánkových „H rámců“ stejného stropních panelů 600/120 cm. Tato konstrukce byla „typem“ dodavatelé organizace (projektováno v roce 1962–63). Druhé podlaží tvořily ocelové haly s lehkými vaznicemi.

Jugoslávský dodavatel v provádění projektu provedl změnu v tom, že střešní konstrukci tvoří železobetonové prefabrikáty. U hal o rozponu 30m jsou nosníky předpjatého betonu vně objektu a střešní pláště je na nich zavěšen. Haly menších rozponů jsou zastřešeny rovněž předpjatými žebry. Příhradovými vaznicemi. Zajišťuje vyřešen strop nad prvním podlažím celého monobloku: na železobetonových sloupcích (modul 6x6 byl zachován) je položen železobetonový rámový kazetový strop s pěti políci v obou směrech. Jednotlivé otvory jsou řešeny křížem štramberovými deskami cca 120/120 cm, uloženými do cementového lože. Tento systém má v průmyslu velkou výhodu vzhledem k požadavkům technologických průmyslů, nebo například volně pole zakrýt. Podstatné změny proti původnímu návrhu zadávacího projektu jsou u objektů vstupního areálu. Zde jugoslávští projektanti plně využili širokého sortimentu dodavatele. Jako příklad uvádím dva objekty: administrativní budovu a závodní dílnu. V zadávacím projektu musel projektant použít systém spánkových „H rámců“ o modulu 6,00+3,00+6,00 m v příčném a 6,00 m v podélném měřítku. Obvodové zdi tvořily panely 17 cm silné s bitulítoovou omítkou. Um. že jugoslávský dodavatel použil při zpracování monolitu, upřesnil si „způsob podle účelu a potřeb (hloubka traktu 6 m pro administrativní budovu a „způsob velkou. Vyrovnal tak tříleté jednání podlaží budovu na dvoupodlažní „základně“.

Ročník použitém různých materiálů – hliníková okna, dveře a stěny s velkou plochou skla se subtilními rámy, mramorové dlažby apod. – docílil lepšího modernějšího vzhledu.



1 Zastavovací plán závodu. Legendy: A-administrativní budova, B-závodní kámen, C-travní plocha, D-cvraty, E-terapeutická, F-terapeutická, G-garáže a parkovací stání, H-komunikace, I-komunikace, J-komunikace, K-komunikace, L-komunikace, M-komunikace a sklady surovin, N-kešola, O-pohled na vstupní areál závodu, P-foto K. Tuma



Projekční organizaci dochází ovšem ke konstrukčním úpravám, které odpovídají možnostem a zvyklostem jugoslávského dodavatele, avšak nejsou takového rozsahu, aby narušily navrženou technologii.

Pro příklad uvedu konstrukční změny, k nimž došlo u hlavního výrobního monobloku, který je největším objektem výstavby. Je to soustava dvoupodlažních hal o celkové výměře cca 175,00 x 109,00 m. V zadávacím projektu byla navržena svíslá nosná železobetonová konstrukce. U hal o rozponu 30 m to byly sloupy V-čarosti a vloženým stropem ze železobetonových panelů 600/120 cm. U hal o rozponu 12 m bylo první podlaží vytvořeno ze spánkových „H rámců“ stejného stropních panelů 600/120 cm. Tato konstrukce byla „typem“ dodavatelé organizace (projektováno v roce 1962–63). Druhé podlaží tvořily ocelové haly s lehkými vaznicemi.

Jugoslávský dodavatel v provádění projektu provedl změnu v tom, že střešní konstrukci tvoří železobetonové prefabrikáty. U hal o rozponu 30m jsou nosníky předpjatého betonu vně objektu a střešní pláště je na nich zavěšen. Haly menších rozponů jsou zastřešeny rovněž předpjatými žebry. Příhradovými vaznicemi. Zajišťuje vyřešen strop nad prvním podlažím celého monobloku: na železobetonových sloupcích (modul 6x6 byl zachován) je položen železobetonový rámový kazetový strop s pěti políci v obou směrech. Jednotlivé otvory jsou řešeny křížem štramberovými deskami cca 120/120 cm, uloženými do cementového lože. Tento systém má v průmyslu velkou výhodu vzhledem k požadavkům technologických průmyslů, nebo například volně pole zakrýt.

Podstatné změny proti původnímu návrhu zadávacího projektu jsou u objektů vstupního areálu. Zde jugoslávští projektanti plně využili širokého sortimentu dodavatele. Jako příklad uvádím dva objekty: administrativní budovu a závodní dílnu. V zadávacím projektu musel projektant použít systém spánkových „H rámců“ o modulu 6,00+3,00+6,00 m v příčném a 6,00 m v podélném měřítku. Obvodové zdi tvořily panely 17 cm silné s bitulítoovou omítkou. Um. že jugoslávský dodavatel použil při zpracování monolitu, upřesnil si „způsob podle účelu a potřeb (hloubka traktu 6 m pro administrativní budovu a „způsob velkou. Vyrovnal tak tříleté jednání podlaží budovu na dvoupodlažní „základně“.

Ročník použitém různých materiálů – hliníková okna, dveře a stěny s velkou plochou skla se subtilními rámy, mramorové dlažby apod. – docílil lepšího modernějšího vzhledu.

U závodní dílny pro 1000 strávníků, kterou navrhla firma Trudbenik Beograd podle dispozičního řešení Skloprojektu, použili projektanti monolitu a kombinaci materiálu na průčelí docílili lehkosti a vzdušnosti. Na venkovní omítku bylo použito pravděpodobně poprvé z ČSSR „teraplastu“, který byl testován dodavatelem i na 30ti stupňový mraz a který barevnými tóny plně uspokojil projektanty Skloprojektu, kteří barevně řešení celého závodu zpracovávali.

Spolupráce projektanta Skloprojektu a jugoslávských firem byla velmi dobrá. Pro nás bude jistě přínosem, že jsme se mohli seznámit s formami práce i organizace jugoslávských stavebníků a převzít od nich to, co mají lepší. Je však třeba podotknout, že zahraničních zkušeností není možno využít v plné míře vzhledem k odlišným podmínkám, ve kterých pracují naši dodavatelé i projektanti. Příkladem by mohl být prováděcí projekt, který by svým rozsahem určité naše stavební organizace neuspokojil. Naproti tomu jugoslávský dodavatel nenechal si narušovat harmonogram výstavby nepřetváření v projektech už z toho důvodu, že dokončení objektu bylo určeno pevně stanovenými termíny, jejichž nesplnění by bylo penalizováno.

A tak po více než dvouleté spolupráci mohli být 28. října 1967 otevřeny v Novém Boru „Závod československo-jugoslávského přátelství“.

Josef Růt

K REALIZACI ZÁVODU V NOVÉM BORU

V romantické krajinné siluete podhorského městečka slavně sklářské tradice vrostl nový prvek, velký moderní sklářský závod. Po 2 letech souseděného úsilí jugoslávských stavebních organizací – realizován v mimořádných dodávacích podmínkách, které dovozovaly do značné míry vyloučit nepřizpůsobení vlivu, a nás během výstavby obvykle platné – se stává pochopitelně předmětem profese pozornosti. Svým způsobem experiment byl nepochybně přínosným k dosažení neběžné úrovně a opravuje tedy i k nasazení příslušných měřítek hodnocení.

Závod aší novosti – a přece nelze výsledek považovat bez výhrad. Jeho koncepte neje nepřijemnou pečť národní doby na začátku druhé cesty mezi původním záměrem, který měl zachytit „bruselskou“ konjunkturu českého skla z konce padesátých let, a mezi zahájením výstavby v roce 1965.

path of development, in turn assuming that transfers are only possible from the more to the less developed regions. This paper aims to challenge some of those notions and to add another layer to the expanding scholarship of “other” modernisms and modernities and the circulation of architecture, technology, and labor within them. [Fig. 2]

Yugoslavia and Czechoslovakia: a brief history of the relationship

The intense relationship between the regions that would comprise the future states of Yugoslavia and Czechoslovakia dates to the beginning of the 19th century. It was shaped both by the shared imperial framework of the Austro-Hungarian Empire and the emerging Pan-Slavic sentiments. Among the first officially trained architects to arrive in Serbia during its emancipation from the Turkish rule in the mid-19th century was the Czech Jan Nevoľe, who designed one of Belgrade's first historicist buildings and who taught at the Engineering school, influencing generations of architects and irreversibly changing architectural design in Serbia.¹⁰ After Bosnia was occupied by Austria-Hungary in 1878, another Czech, Karel Pařík, arrived in Sarajevo and designed some of the city's most recognizable buildings, including the historicist City Hall.¹¹ After World War I, Czechoslovakia and The Kingdom of Yugoslavia (originally founded as

10 Mirjana Roter Blagojević, “Jan Nevoľe, prvi moderni arhitekta u Beogradu (Jan Nevoľe, the first modern architect in Belgrade),” *Limes Plus* 2 (2013): 129-148.
11 Branka Dimitrijević, “Arhitekt Karlo Paržík” (PhD diss., University of Zagreb, 1989), <http://www.karloparzik.com/Disertacija.html>, accessed 4.6.2020.

Fig. 2 Glass factory, Nový Bor, Czech Republic, n.d. Construction: KMG Trudbenik (Source: *Architektura ČSR*, 1968, 165-166).

the Kingdom of Serbs, Croats, and Slovenes) emerged as new states built on the ashes of old empires, soon joining a political alliance known as the Little Entente to rebuff the restoration of the Habsburg dynasty, as well as Hungarian revanchism. Cultural cooperation was also intense, maintained in part through the Pan-Slavic Sokol movement, which had been founded in Prague in the mid-19th century. Sokol Halls were built throughout interwar Yugoslavia in support of the shared Pan-Slavic sentiments.¹² [Fig. 3]

With Bohemia being the most industrialized region of the Habsburg Empire, the newly founded Czechoslovakia naturally emerged as an important industrial nation. In contrast, some of the Empire's least industrialized areas became parts of Yugoslavia, which also came to encompass the even less developed lands formerly under the Ottoman rule.¹³ While in interwar Czechoslovakia functionalist architecture blossomed and mass production emerged in the Bat'a company towns, Yugoslavia's shift to modernism was slower and uneven, and traditional techniques and crafts continued dominating construction. It was natural that Czechoslovakia would become a significant education center for Yugoslavia's future architects and engineers, including some of the most prominent modernists.¹⁴ Typically, architecture students from Serbia and Bosnia attended the Czech Technical University in Prague (ČVUT), while those from Slovenia and Croatia went to the Academy of Fine Arts.¹⁵ Czech architects, in turn, practiced in Yugoslavia throughout the first half of the 20th century. For example, Vladimir Karfik, born in Idrija (Slovenia), who spent his interwar career as the architect of the Bat'a company, designed buildings not only for the company's headquarters in Zlín, but also in its subsidiary industrial towns, such as Borovo in Croatia. Similarly, Jan Dubový became one of the founding members of GAMP - Group of Architects of the Modern Movement, Belgrade's first group of modernist architects founded in 1928.

The warm relationship continued after World War II. On May 21st, 1946, soon after the prime minister Josip Broz Tito's first official visit to Czechoslovakia

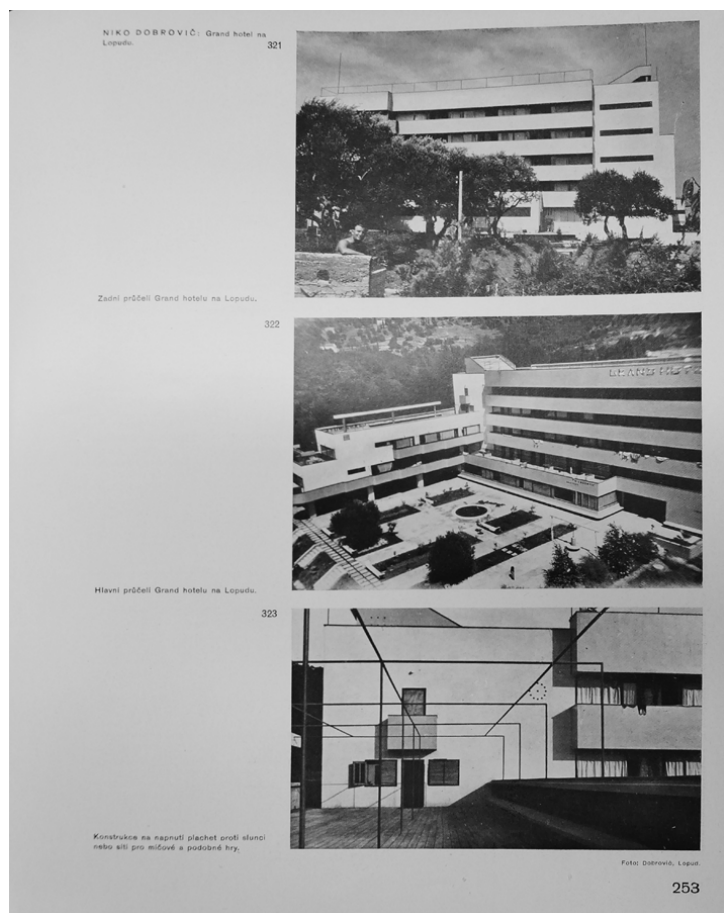


Fig. 3
Architect Nikola Dobrović, Grand Hotel, Lopud, Dubrovnik, Croatia, 1934-1936. (Source: *Arhitektura - spojené časopisy Stavba, Stavitel, Styl*, 1939, 253).

12 Vladana Putnik, *Arhitektura Sokolskih domova u Kraljevini SHS i Kraljevini Jugoslaviji* (The architecture of Sokol houses in the Kingdom of Serbs, Croats, and Slovenians and the Kingdom of Yugoslavia) (Beograd: Filozofski fakultet Univerziteta u Beogradu, 2015), 22-49.

13 Alfons Von Halkowich, *Die Eisenwerke Osterreich-Ungarns* (The Ironworks of Austria-Hungary) (Wien: s.e., 1911).

14 These included Nikola Dobrović, Jan Dubovy, Momir Korunović, and the brothers Muhamed and Reuf Kadić.

15 Damijanović, *Češko-srpske arhitektonske veze 1918-1941*, 73.

(one of his first official trips abroad), the newly established Federative People's Republic of Yugoslavia and the Republic of Czechoslovakia signed *the Agreement on Friendship, Mutual Aid and Peaceful Cooperation*.¹⁶ Economic relations continued the established pattern. Czechoslovak industry, still in private hands at the time, viewed Yugoslavia as a source of cheap ore and a place to absorb the depreciated industrial equipment.¹⁷ In turn, a substantial part of the Yugoslav Five Year Plan was based on the assumption that Czechoslovakia will provide the industrial equipment and training, a part of which was intended for the construction sector. Several special agreements were signed in this respect, directly tying the fulfillment of Yugoslav Five Years Plan to the imports from Czechoslovakia.¹⁸ Architectural connections continued as well: a team of Czech architects designed the new Railway Station in Sarajevo, whereas Prague-educated Luděk Kubeš arrived in Skopje in 1947 to design the city's first postwar master plan and a number of modernist buildings.¹⁹

However, by mid-1948 everything suddenly changed, and the two countries began moving in opposite directions. In February, the communist coup placed Czechoslovakia into a firm alliance with the Soviet Union, whereas in June, Yugoslavia—previously the most reliable Soviet ally—was expelled from the socialist orbit and forced on its own independent path. In the ensuing crisis, the Czechoslovak and Polish communist leaderships served as especially ardent proxies for the Soviets, launching repeated attacks against the Yugoslav leadership for their alleged betrayal of communism. Diplomatic relations were frozen, not to be reestablished until after the death of Stalin and the Czechoslovak communist leader Klement Gottwald, both of which occurred in March 1953. It took until September 1954 for the Czechoslovak ambassador to return to Belgrade, and another six months for the Yugoslav envoy to arrive in Prague. Nevertheless, it would take almost two more years for Yugoslavia to restore its diplomatic relations with the USSR, and the comparably fast rapprochement with Czechoslovakia should likely be understood as testament to past friendship.

By 1955, Yugoslavia's negotiating position was different. The leadership was eager to set aside the dispute with Czechoslovakia, especially since the much-needed resources for development were cheaper and easier to obtain in the Warsaw Pact countries. However, Eastern Europe was no longer seen as the main partner as in the meantime, Yugoslavia established friendly relations with the West, in turn receiving substantial amounts of military and technical aid. Concurrently, it also established strong diplomatic connections with the Middle East and Northern Africa. Owing to the postwar reconstruction and ambitiously

16 *Ugovor o prijateljstvu, uzajamnoj pomoći i saradnji u miru između FNRJ i Čehoslovačke Republike* (Agreement on friendship, mutual assistance and cooperation in peace between the FPRY and the Czechoslovak Republic), AJ, Fond Prezidijum Narodne skupštine FNRJ 1943-1957, folder 15-15-264.

17 Slobodan Selinić, *Jugoslovensko – čehoslovački odnosi 1945-1955* (Yugoslav-Czechoslovak relations 1945-1955) (Beograd: Institut za noviju istoriju Srbije, 2010), 98-147.

18 Selinić, *Jugoslovensko – čehoslovački odnosi*, 135-143.

19 Sofija Stojanovska, "Arhitekt Ludek Kubeš (1913 – 1996)," *Makedonska Arhitektura*, <https://marh.mk/architekt-ludjek-kubesh-1913-1996/> accessed June 4, 2020.



planned development, Yugoslavia's construction sector grew in size and scale and modernized extensively. The future Non-Aligned Movement was already on the rise, expanding the networks of cooperation even further South and East. Tito's journey to India in late 1954 attracted the attention of the leadership in Prague in the context of the post-Stalinist thaw and the opening towards the emerging postcolonial world.²⁰ By that time, Yugoslav construction companies had already established their presence abroad. Their first major foreign construction site opened in the Latakia Port in Syria in October 1952 by Pomorsko građevinsko preduzeće from Split, later joined by Trudbenik from Belgrade. Other sites in Syria, as well as in Turkey, Greece, Egypt, India, Lebanon, Pakistan, and Paraguay followed by 1954.²¹ Tito, the greatest advocate of the Yugoslav economy, began his "journeys of peace" in 1953.²² The managers of large enterprises often joined him on these visits to directly negotiate trade deals. By 1969, Yugoslav construction companies had sites in forty countries across the world, of which 45,8% were in Europe (28,1% Western and 17,7% Eastern), 16% in Asia, and 38,2% in Africa.²³ [Fig. 4]

20 Selinić, *Jugoslovensko – čehoslovački odnosi*, 644.

21 At first, the *Federal Administration for Investment Construction* oversaw these 'investments abroad', which was later transferred to other bodies with the reforming of the administration. See *Inventar (Inventory)*, AJ, Fond 187: *Savezna uprava za investicionu izgradnju*, folders: 10 and 11.

22 Most were to Africa, Asia and South America, totaling 169 visits to 92 countries between 1944 and 1980. Radina Vučetić and Pol Bets, eds., *Tito u Africi. Slike solidarnosti* (Tito in Africa. Images of solidarity) (Belgrade: Muzej Jugoslavije, 2017), 19.

23 Mara Adžić, ed., *25 godina građevinarstva socijalističke Jugoslavije* (Twenty years of the construction industry of socialist Yugoslavia) (Belgrade: Tehnika, 1970), 215

Fig. 4
Factory construction site in Mladá Boleslav, Czech Republic, n.d. (Source: Museum of Science and Technology, Belgrade).

This kind of international engagement was beneficial for several reasons. First, it helped resolve the problem of continuous employment in the construction industry, which had built its capacities during the postwar reconstruction, but could not rely on the steady flow of large-scale investments inside the country. Second, it provided access to hard currency, which became especially necessary after the 1948 severing of Yugoslavia's ties with the socialist world and its system of economic coordination and solidarity, later formalized through the founding of the Comecon. Third, work in the less competitive markets in the developing world allowed Yugoslav companies and state institutions to build expertise they lacked, such as bidding in the international arena, securing bank guarantees, and administration. This, in turn, allowed them to build competitiveness for expansion into other markets, necessary to balance payments in foreign trade and service foreign debts. In that sense, entering the Czechoslovak market was especially beneficial because Yugoslavia's debt to it was still high.²⁴

Reversing the roles: Yugoslav architecture in Czechoslovakia

Leafing through the post-war issues of the Prague-based journal *Architektura ČSR*, as well as other professional periodicals published in Czechoslovakia, an unusual phenomenon becomes apparent in the mid-1960s: Yugoslav architecture suddenly reappears in them after the hiatus of two decades. Even before the 1948 break, the coverage of Yugoslav architecture in Czechoslovakia was sporadic. Belgrade's *Grupa arhitekata modernog pravca* (Group of Architects of the Modern Direction) exhibited its work in Prague in 1929, but it received scant attention from the much more radical and prolific functionalists in Prague, Brno, and Bratislava.²⁵ In the late 1930s, villas and hotels in the city of Dubrovnik designed by the former Czech Technical University student Nikola Dobrović received some attention, as did Jože Plečnik's oeuvre.²⁶ After the war, *Architektura ČSR* published an article on "Tito's Yugoslavia," which included designs for a housing neighborhood in Jesenice, a typified school designed by the Planning Institute of Ljubljana, and a report on the Pioneers' City in Zagreb. After the 1948 break even such sporadic coverage vanished; an exception that only reinforced the enmity was an article about a housing block in Skopje designed by the Czech architect Luděk Kubeš, which avoided even mentioning the word "Yugoslavia," instead locating the project in "Macedonia."²⁷ In the following years, Yugoslav architecture was completely banished from the pages of Czechoslovak journals, while Polish and Czechoslovak representatives, serving as Soviet

24 Selinić, *Jugoslovensko – čehoslovački odnosi*, 644-645; Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 214-224.

25 Damljanović, *Češko-srpske arhitektonske veze*, 72. Around the same time, the journal *Stavba* published a series of articles about Belgrade architecture, all written by architects from Belgrade. See *Stavba* (Prague) VII (1929): 177-182.

26 Oldřich Starý, "Domy pro chudé," *Architektura - spojené časopisy Stavba, Stavitel, Styl*, (1939): 253; Anon., "Josef Plečnik, učitel a mistr. K jeho 70. narozeninám," *Architektura - spojené časopisy Stavba, Stavitel, Styl*, no. 4 (1942), 57-66.

27 Luděk Kubeš, "Obytné domy ve Skoplji v Makedonii," *Architektura ČSR*, no. 8 (1949): 238.

ARCHITEKTURA V JUGOSLÁVIÍ
MARIE BENEŠOVÁ

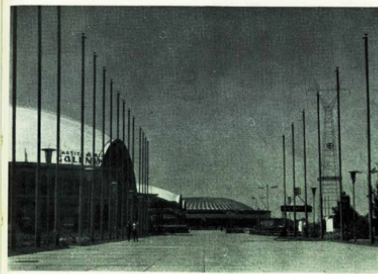
Je tomu již rok, co jsme navštívili Jugoslávii, abychom si prohlédli architekturu současnou i historickou. Naše cesta vedla přes Bělehrad, Sarajevo, Dubrovnik, Šibenik, Rijeku do Záhřebu, kde za pomoci kolegů ze zářebské fakulty architektury jsme se mohli seznámit jak s prostředím, tak tvůrčími architektonickými problémy nejlépe a vzhledem v úrovni celého zájezdu nejzajímavěji.

Jugoslávské prostředí, tak jak jsme se s ním bezprostředně shledali, je příjemné. Spolupůsobí tu stále přízně počasí a milí lidé, obzvláště k nám, posuzováno s ohledem na národnost. Vlastnosti prostředí, formovaného přírodou a lidmi, jsou přiznávány i pro architekturu jak historickou, tak současnou.

Architektura však prozrazuje ještě více, co ani tak krátký styk s lidmi neprozradí. Je to jakási uvolněnost, neokázalost a neformálnost, které jsou zároveň vlastní i lidem, kteří s námi jednali. Obecným znakem tamnější soudobé tvorby je tvůrčí individualita, i když ani tam nejde vyložit sledování módních vzorů a představ. Je však zajímavé, že mnoho z takových konceptů je jakoby přizpůsobeno době do domácní pudy.

Mluvíme-li často o syntetizujících procesech tvorby, které se projevují v péči o krásné, pevné a naplněné estetické dořešení a vyznění všech složek vztahů v architektuře, pak lze říci, že zřídka se s takovými projevy setkáváme u nás, avšak často jsme je našli i v Jugoslávii. Vytvářet je převažujícím znakem a domníváme se, že by tu architektura dosahla ještě vyšších kvalit, kdyby našli typologické bylo ve stejné úrovni se schopností dát dispozici výborný výraz. A ještě jedinečnost a chuť k novotvarům jsou vlastnosti, s nimiž se setkáváme téměř na každém kroku.

Všechny tyto znaky, ústící v poměrně vysoké vytvářené hodnoty, jsou pochopitelné, když uvážíme, že mnoho ze zhlédnutých staveb bylo vytvořeno s velkou zkušeností v mnohaletém ovládnutí vytvářetného působení železobetonových a ocelových konstrukčních systémů, i když nových nebo odrazných rozpůl.



654 655 656 657
658 659 660
661 662 663 664 665



654 Studentský domov národní školy v Dubrovniku 655 Arch. Panovčić, Havela Štara v Bělehradu 656, 657 Velež v Bělehradu 658 Lepi, prof. arch. Panovčić 659 Dům národního syndikátu v Bělehradu 660 Nový Bělehrad obytelný dům ve starobě 661 Popelník Jilina Dalmácie, starobě katedrály v Šibeniku 662 Bodoval obytelný dům sídliště ve Rijeci 663 Hoteli Marjan ve Špilju 664 Neodstavení Nové filozofické fakulty v Sarajevu 665 Velež dům ve náměstí Praskihy v Záhřebu



332



333

proxies, actively opposed the Yugoslav professional associations' ascension to the international bodies such as the International Union of Architects.²⁸ [Fig. 5]

Although the political relations thawed in the mid-1950s, it took another decade for the reestablishment of more intense architectural connections. The turning point was a seven-page long, lavishly illustrated article "Architecture in Yugoslavia" by the architect Marie Benešová, written after a study trip for her column "Architecture abroad" in *Architektura ČSR*.²⁹ It covered a series of recent projects in Belgrade, Rijeka, Zagreb, Ljubljana, and Sarajevo. From thereon, Yugoslav developments were featured often, most notably the development of the Adriatic coast and the restoration of historical cities,³⁰ the post-earthquake reconstruction of Skopje,³¹ and the new developments in Belgrade,³² including the international competition for the new Opera house.³³ The interest in Yugoslav architecture was genuine: in the 1960s Yugoslavia emerged as a hotspot of modern architecture and it became known for experimentation with various architectural and urban typologies on a large scale. Around the same time and with increasing frequency, construction companies from Yugoslavia

28 Tamara Bjažić Klarin and Marcela Hanáčková, "Networking into the International Union of Architects (UIA) – Poland vs. Yugoslavia," in *Transnational Networking Practices of Central and Southeast European Avant-garde*, ed. Ljiljana Kolečnik (Zagreb: Institut za povijest umjetnosti i Filozofski fakultet Sveučilišta u Zagrebu, 2014), 26-28.

29 Marie Benešová, "Architektura v zahraničí: Architektura v Jugoslavii (Architecture abroad: architecture in Yugoslavia)," *Architektura ČSR*, no. 5 (1964): 332-338.

30 Budimir Pervan, "Urbanistický ústav Dalmácie," *Architektura ČSR*, no. 2 (1969): 113-119.

31 Saša Sedlar, "Skopje urbanistické problémy rekonstrukce," *Architektura ČSR*, no. 6 (1967): 365-369.

32 K. Pašek, "Bělehrad," *Architektura ČSR*, no. 10 (1972): 503-504.

33 Anon., "Výsledky soutěže na budovu Bělehradské opery," *Architektura ČSR*, no. 4 (1971): 156.

Fig. 5

Marie Benešová, "Architektura v zahraničí: Architektura v Jugoslavii (Architecture abroad: architecture in Yugoslavia)," *Architektura ČSR*, no. 5 (1964): 332.



were increasingly credited for various buildings all over Czechoslovakia, either as developers or collaborators in the design process, especially on the interior design. [Fig. 6]

The appearance of these companies was conditioned by several factors: the loans the Czechoslovak government took from international creditors, the agreements it had with the government in Belgrade, and the capacities these companies had at their disposal at the time. The architectural typologies they covered ranged from industrial and healthcare facilities to tourist infrastructure—mostly balneal, but also urban hotels. Additional typologies, such as administration, education, and residential buildings, were usually subsidiary to those mentioned above. Few of the companies advertised these developments in their catalogs, which ensured that they stayed under the radar of the professional scene in Yugoslavia. One reason was the relatively utilitarian nature of many of the projects, which were often stripped of unnecessary details, modular and prefabricated to ensure easy construction. This likely led to their perception as unremarkable, generic architecture that could not compete with the high-profile achievements back home. Moreover, many of these projects were usually designed by the specialized Czechoslovak offices such as Zdravoprojekt or Štátny projektový a typizačný ústav, and then only developed

Fig. 6
Architect Ľudovít Jendreják,
Administration building of
the Transportation Company
(also known as the Chemapol),
Ružinov, Bratislava, 1972-1973.
Construction: Komgrap, chief
architect Milanka Lukič (Photo:
Jelica Jovanović, 2015).

for the construction by Yugoslav companies and their architectural offices. Even the interior designs, which were often authored entirely by Yugoslav architects, received little attention back home, whereas in Czechoslovakia they were highly valued, due to access to better materials and furniture that Yugoslav companies had to offer.³⁴ If the thriving modernist scene in Czechoslovakia easily ignored its inferior peers in Yugoslavia between the wars, by the late 1960s the tables appeared to have turned and the asymmetry of interest was largely reversed.

Yugoslav companies and their construction sites in Czechoslovakia: new experience for hardened veterans

As of 1965, Yugoslav companies began appearing in Czechoslovakia under the common banner of the Unioninženjering business association, initially established by the Yugoslav People's Army to facilitate work abroad.³⁵ The timing was crucial for this arrival. Czechoslovakia's gradual liberalization in the 1960s caused difficulties as local companies struggled to keep up with the demands of the ever-expanding industrial economy. As a result, many construction sites would remain unattended for a long time: construction would begin, but the lack of funding would bring it to a temporary halt before the completion.³⁶ Eventually, Czechoslovakia's political leadership decided that important projects, especially those in the lucrative branches of economy, had to be finished as soon as possible, even if it meant that construction companies had to be brought from abroad. The Yugoslav companies were among the first to arrive because these efforts coincided with Yugoslavia's own reform of 1963-65 and the resulting shift to market economy. Italian and Austrian companies were also engaged in various projects, either in the construction or the supply of the materials, thus further intensifying the international collaboration. Besides favorable prices, Yugoslav companies had the advantage of their government vouching for them through bank guarantees, bilateral agreements with Czechoslovakia, trade deals, and favorable loans negotiated as part of cooperation agreements. Furthermore, because of the country's peculiar political position within the Cold War geographies, Yugoslav companies had easy access to materials and equipment from both sides of the Iron Curtain, which became a challenge for Czechoslovak companies, especially after the Soviet invasion of 1968. In the 1960s labor circulation in Europe was regulated by bilateral agreements, which removed

34 Il'ja Skoček, interview with the author, Bratislava, June 1, 2015.

35 Unioninženjering was also known as Union Engineering in documentation. Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 165. Business associations in the field of construction started appearing to represent a variety of companies: architectural (or any other) design, construction, production of materials. The associations operated with two goals: representing companies of a certain region or republic, or a sector, often aimed at better market presence either in the country or abroad. Officially, they were regulated by the *Law on Association and Business Cooperation*, promulgated by the decree of the President of the Republic on 2nd of June 1960 and published in *Službeni list FNRJ* (Official Gazette of the FPRY) (Belgrade: s.l., 1960), 3. The law regulated various forms of associations for the purpose of business and technical cooperation, the formation of chambers for individual areas of the economy, as well as cooperatives, unions and cooperation. These associations were the next step towards formalization of the enlargement and consolidation of the pauperized sector of construction, which took place during 1950s. Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 158-167.

36 Bohuslav Pernecký and Anna Pernecká, interview with the author, Piešťany, June 20, 2015; Aco Arizanović, interview with the author, Trenčianske Teplice, April 7, 2017.

the obstacles for work within Europe for Yugoslav construction companies. Although rarely designing for the markets of Eastern Europe, architects in Yugoslav construction companies did contribute to the design culture of Czechoslovakia. By the mid-sixties they were already very confident about the application of the prestressing technology and prefabrication and they used this knowledge in the development of their designs. Besides the materials and components with visible stamps of origin, the architectural features of some of these buildings are often the only way of identifying them as the products of Yugoslav teams. Unusually thin slabs and columns, protruding brise-soleils, contemporary structural facades, and a variety of cladding are some of the subtle details characteristic of this import architecture, which was neither fully local, although designed locally, nor fully foreign, although developed through importing foreign expertise and technology. These details were just enough for these collaborations to stand out from the rest of the built environment.

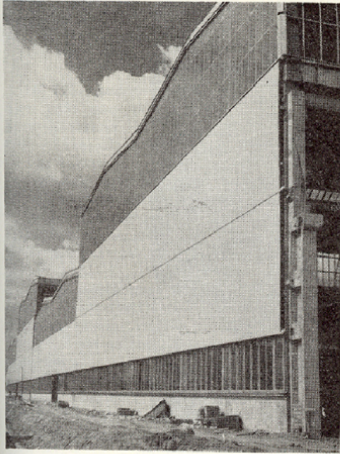
Among the Yugoslav construction companies, those based in Serbia held the largest share of the Czechoslovak market. In general, Serbian companies produced on average around 40% of work abroad, followed by those from Croatia with 25-30%.³⁷ The most visible enterprises and associations were KMG Trudbenik, GK Komgrap, GP Neimar, GP Rad, and Unioniženjering. The data about the activities of other companies are often scarce, sometimes amounting to nothing more than small side notes in paid journal advertisements such as *Izgradnja* or *Arhitektura urbanizam*. However, for the oldest and largest construction companies it is relatively easy to trace their projects abroad even if their archives no longer exist, because they consistently invested in the promotion, either through paid advertisements, or through articles in important annual reviews and thematic journal issues. These companies were originally established by the state to address the particular issues of post-war reconstruction and development: the construction of roads, electrical power plants, the reconstruction of cities, city reconstruction, etc. From the start, many of them developed their own proprietary technologies, which afforded a degree of technological independence, in turn increasing competitiveness on the international market. They prospered especially after the Federal Assembly passed the *Resolution on the Prospective Development of the Building Sector* in 1957, which encouraged investments in scientific research. A building boom across Yugoslavia around the same time gave further boost to research and technological development, especially in the field of mass housing and urban development. In the case of non-aligned countries, this kind of technological emancipation was used to pursue the policy of non-alignment and to further disseminate technologies and knowledge in many acts of post-colonial solidarity. In other markets, including Eastern Europe, it provided a competitive advantage, enabling better offers and more affordable prices to the benefit of both parties.

37 Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 215

The Construction company Napred (Građevinsko preduzeće Napred) was founded in 1948 as the construction company of the Yugoslav People's Army, with the predominant goal of dealing with the Army's housing construction. It championed the cutting edge IMS Žeželj pre-stressed prefabricated technology, even outsourcing its high capacity production line of prefabricated elements to other companies. It was also known for employing the movable formwork technology when it became available at the beginning of 1960s, and for the construction of large-span industrial halls. At its peak, the company had around 3,600 employees. It became active in Czechoslovakia in 1968 through either the Unioninženjering or Montinvest associations. The Construction Combine Komgrap (Građevinski Kombinat Komgrap), the oldest construction company in Yugoslavia, was founded in September 1945 and tasked with the reconstruction of the country. For many years it worked on rebuilding and redeveloping housing and public spaces in downtown Belgrade. Later on, the company specialized in the construction of industrial, tourist, and civic infrastructure. By the end of the 1980s it had 11,000 employees in 9 organizational units, six factories, and cybernetic and design centers. Montinvest was founded in 1961 as a business association of companies working in the field of construction, finishing, and installation works. During the 1970s the associations' business abroad flourished. In Czechoslovakia, its most important clients were Technoexport and Strojexport.³⁸

Of all the Yugoslav construction companies, the most active in Czechoslovakia was the Combine of prefabricated construction Trudbenik (Kombinat montažne gradnje Trudbenik), established in 1947. It started exporting as early as 1952, in part to keep up with the payroll, as the company grew fast from 429 employees in 1947 to 6,500 in 1987. It constantly invested in new equipment, expertise, and development of products and technologies. Its chief building method was prefabrication, specializing in the construction of industrial plants and silos, as well as mass housing. In the field of housing the company developed and applied its own eponymous prestressed panel system, Trudbenik, including a closed-circuit production line with the capacity of 1,200 housing units per year. Over time, as the company acquired better equipment and its production capacities grew larger and more versatile, it began specializing in volumetric and large-span construction, particularly through the technology of prestressing. The company was able to produce and transport several types of girders with the maximum span of 40m, and it owned the equipment to manipulate construction elements weighing up to 90t. Owing to the modernization of technology and equipment, by the 1960s KMG Trudbenik developed several typified designs for industrial plants, which might have been the selling point for Czechoslovak investors and the reason behind such strong presence of KMG Trudbenik in the development of their industrial capacities. **[Fig. 7]** Due to the extent of work, in 1973 KMG Trudbenik signed a self-management agreement with another Yugoslav company, GP Rad, to build together several

38 "History," Montinvest, http://www.montinvest.co.rs/about_us/history.103.html, accessed June 7, 2020.



Fasada hale V-17
od staklenih i me-
talnih površina

Mlada Boleslava
— dom — inter-
nat učenika u pri-
vredi



Mlada Boleslava
— stambeni ob-
jekti

IZGRADNJA 8/73.

123

71

factories in Czechoslovakia, including an artisan glassworks plant in Nový Bor, a plate glass production plant in Teplice, and an extension of the Škoda car factory in Mladá Boleslav. This was a common occurrence, even for the projects in Yugoslavia: if there were not enough workers, if the deadlines could not be met, or if additional equipment was needed, construction companies often joined forces, which was enabled by the aforementioned *Law on Associations*.³⁹ From magazine articles we can surmise that a third company was involved in these developments, Monter from Zagreb. All three were working under the auspices of Unioninženjering. However, so far no contract has been found in the documentation, so the details of this three-way collaboration remain unknown due to the differences of the legal practice of self-managed contracting in different Yugoslav republics.⁴⁰

39 The contract of these two companies was printed en masse and deposited at the National Library of Serbia in Belgrade and Matica Srpska in Novi Sad, offering rare insight into the process. See *Samoupravni sporazum o međusobnim odnosima u udruženom radu radnika osnovnih organizacija udruženog rada "KMG Trudbenik" – Beograd i "GP Rad" – Beograd u organizacionim jedinicama u Čehoslovačkoj*. Beograd: "KMG Trudbenik", "GP Rad", 1974.

40 Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 205.

Fig. 7

Buildings in Mladá Boleslav, Czech Republic: Hall V-17 of the Škoda factory, Boarding School and mass housing. Featured in the journal *Izgradnja*, no. 8 (1973), special issue celebrating the 25th anniversary of KMG Trudbenik.

Although generally positively predisposed, Yugoslav policy makers were often slow to follow up on the needs of these companies and the dynamics of international market. Despite the fact that such companies would bring 100% of the net profit back to the country, Yugoslav commercial banks were still reluctant to support them, asking for deposits of up to 80% of the value of the given bank guarantees. The Federal Chamber of Commerce was established in support of the businesses, opening many foreign branches (in Czechoslovakia active until as late as 1992), but they were slow to respond and meet their needs.⁴¹ Eventually, due to the scope of endeavors, separate agreements were signed for companies working in Libya, Czechoslovakia and FR Germany, and a specialized department within the Chamber was established. There was a lack of legal support, prompting the Chamber to address that as well and to start translating documents, advising, data collecting and counselling to avoid bad contracts. On the other hand, from the onset, the official bodies of the Federal Administration for Investment Construction and Federal Chamber of Commerce worked to prevent and sanction bad practices and disloyal competition.⁴² Nevertheless, the state stayed aside also because self-management was in full swing: the companies could directly bargain, bid, and actively search for jobs on international market, so the state was often unwanted in these processes, which were considered a business secret and a problem for self-managers to resolve on their own. [Fig. 8]

The official attitude towards work abroad was that the Yugoslav legislation applied at the foreign construction sites. Even abroad, full time employees were also supposed to be proud participants in the self-managing process, rather than mere wage earners.⁴³ At least on paper, the construction sites of the Yugoslav companies in Czechoslovakia promulgated self-management and inscribed it in the contracts and agreements. The bulletins of the GP Hidrogradnja, as well as the documentation of the GP Rad, KMG Trudbenik and GK Komgrap all state that the workers' councils existed, met, and practiced self-management within their units abroad. This practice stood in sharp contrast with the case of Energoprojekt, the most famous case of a Yugoslav construction company active abroad, which has received the lion's share of historiographic attention. According to Dubravka Sekulić's research, Energoprojekt generally suspended the self-managing process abroad under the pretense of improving efficiency and competitiveness.⁴⁴ In contrast, the workers of Yugoslav companies in Czechoslovakia continued to participate in self-management in their units at home, because only full-time employees with a minimum of six months of employment could be sent abroad. Working conditions were also highly regulated: depending on the season, working time varied between seven and nine

41 Arhiv Srbije (Archive of Serbia, hereafter AS), Fond Privredne komore Jugoslavije (Commercial Chamber of Yugoslavia), folders 1232 and 1325.

42 Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 214-222.

43 Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 192-213.

44 Dubravka Sekulić, Katarina Krstić, Andrej Dolinka, *Three points of Support: Zoran Bojović* (Belgrade: Museum of Contemporary Art, 2013), 184.

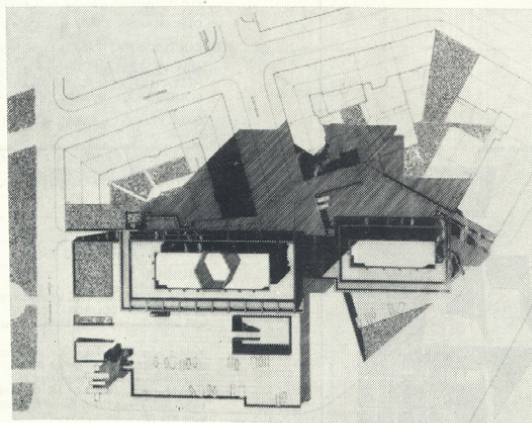


CENTROTEX

PZO a Výzkumný ústav plánování a řízení národního hospodářství

Investor: FMZO, Centrotex
 Generální projektant: KPÚ Praha
 Autoři projektu: Václav Hlilský, Otakar Jurenka
 Generální dodavatel: INGRA, Jugoslávie
 Celkový obestavěný prostor: 138 000 m³
 Projekt: 1972
 Realizace: 1978

Soubor budov je situován na západní straně náměstí Hrdinů v Praze na Pankráči proti budově Nejvyššího soudu, kde prostor náměstí dominujícím způsobem ukončuje. Staveniště bylo velmi omezené. Na západní straně je stará zástavba a na východní straně stanice metra. Hlavní objekt Centrotexu o 18 podlažích je umístěn na jediném volném místě mezi nimi. Vedle hlavního objektu je situována budova Výzkumného ústavu plánování a řízení národního hospodářství o sedmi



Celkový pohled
na budovu
Centrotexu
a Výzkumného
ústavu

Situace

250

8 |

hours per day, workers knew in advance the exact date of their arrival and departure, and the transportation, accommodation, and food were organized by the company, usually in prefabricated barracks moved from site to site. In case the housing had to be rented, a fixed price would be deducted from the monthly salary, or some other arrangements would be agreed on in contract. In general, the employees were very interested to go abroad, since the salaries were much higher, up to three times in the case of Czechoslovakia in comparison to the salaries at home.⁴⁵

There were typically seven models of legal entities in this process: a detached (stand-alone) section/construction site of the company, a joint section/site shared with another commercial company, a stand-alone foreign company owned by a Yugoslav one, a foreign company established in partnership with another Yugoslav construction company, a mixed type of company abroad, a foreign franchise, and operation via business associations.⁴⁶ The modalities

45 Aco Arizanović, interview with the author, Trenčianske Teplice, April 7, 2017.

46 Radovan Perović, ed., *Pravilnik o organizaciji i načinu poslovanja GK Komgrap u inostranstvu* (Handbook on the organization and business of GK Komgrap abroad) (Belgrade: Biro za informacije u propagandu GK Komgrap, 1975), 25-27

Fig. 8

Architects Václav Hlilský and Otakar Jurenka, Centrotex Building, Prague, 1972-1978 Investor: FMZO, Centrotex. Construction: Ingra Association, Zagreb. (Source: *Architektura ČSR* no. 6 (1979): 250).



8 |

of work abroad were flexible and scalable. Undertaking complete jobs was the most common and most usual in the developing countries. Undertaking parts of developments on international biddings, direct negotiations and contracting with investors, and the design and construction supervision were the practices most common in the Second World. In Western Europe, the most common modality was to take charge of only certain phases in project development, either in collaboration with or through subcontracting to local companies, or even through leasing entire sections (carpenters, rebar workers, brick layers). The reason was that many West European countries stipulated local partnerships and banned foreign companies from competing individually; this, in turn, is why much of the work done by Yugoslav companies in Western countries remains unknown, with the exception of West Germany.⁴⁷ Many contemporaries claimed - without explaining the specifics - that the directors of construction companies preferred the latter forms of cooperation, since allegedly it was easier for them to manipulate the accounting and hide the profits.⁴⁸ Such corrosive practice in the West apparently started relatively early on, and it was concealed in the details of the self-management process, foreign affairs, and formal and informal relations.⁴⁹ [Fig. 9]

Conclusion

The economic crisis in Yugoslavia in the 1980s eventually led to the dismembering of the country in the following decade, which in turn enabled the radical transformation of ownership through wholesale privatization of the economy. As a result, most of the construction companies covered in this text no longer exist, casualties of a mass destruction of communal wealth under predatory

47 Adžić, *25 godina građevinarstva socijalističke Jugoslavije*, 217-220

48 Bogdan Budimirov, interview with the author, Zagreb, February 13, 2015; Archer, 41-45.

49 Rory Archer, "It was better when it was worse: blue-collar narratives of the recent past in Belgrade," *Journal Social History* 43, no. 1 (2018): 41-45.

Fig. 9

Architect: Milan Šavlík, Krym Hotel (after restoration), Trenčianske Teplice, Slovakia, 1974-1976. Construction: Neimar, Belgrade (Photo: Jelica Jovanović, 2017).



| 10

capitalism.⁵⁰ However, the material remnants of their work are still present, scattered not only throughout the former Yugoslavia, but also in many other parts of the world. In today's Slovakia and Czech Republic—themselves heirs to a partitioned former socialist state—material traces of the architectural exchanges with Yugoslavia can still be recognized in specific façade treatments, interior design, or built-in components and materials, such as Sigurnost glass plates and Končar escalators. In some cases, the original dedication plaques identifying the designers and builders are all that remains recognizable of the buildings' original shapes after the extensive renovations carried out by new owners.

50 Historian Marija Obradović describes these processes to an extensive detail in her book suggestively titled *The Chronicle of a Transitional Cemetery*. See Marija Obradović, *Hronika tranzicionog groblja. Privatizacija društvenog kapitala u Srbiji 1989-2012. Ekonomsko-istorijska analiza* (A chronicle of transitional graveyard. Privatization of social capital in Serbia 1989-2012. Economic-historical analysis) (Belgrade: Nova srpska politička misao i Institut za noviju istoriju Srbije, 2017).

Fig. 10

A detail of the interior of the Krym hotel: the original glass door made by Sigurnost, Pančevo, Serbia, kept after restoration (Photo: Jelica Jovanović, 2017).

And yet, these seemingly ephemeral traces testify to a much larger story on a scale that forces us to reconsider the recent architectural history of Europe. From the perspective of the architectural exchanges between Yugoslavia and Czechoslovakia, not only the presumed hierarchies of the Cold War world, but of modernity in general, have to be dissolved, pointing to the many “lateral” exchanges and peculiar micro-histories with large local effects. At the same time, the story also eludes the usual Cold War geographies, owing as much to the geopolitics of the period as to the prior and subsequent territorializations between historical empires, ‘Central Europe’, ‘Mittel-Europa’, South, East, and South-East Europe, and so on. Furthermore, the petrified narratives of the ‘developed’ and ‘un(der)developed’ are also reshuffled, as demonstrated by the constantly shifting positions of the two countries in their architectural exchanges, in which they alternated in their roles between ‘exporters’ and “importers”. This paper offers only the first attempt at mapping such shifts, inviting additional research and deeper interpretations as a way of further dissolving the apparent monolith of modern architecture. [Figs. 10-11]

| 11



Fig. 11

Architects Ferdinand Konček, Ľubomír Titi, and Il'ja Skoček, Building of the Foreign Trade Enterprise (Petrimex), Ružinov, Bratislava. Construction: GK Komgrap, Milan Korolija, chief architect, Milanka Lukič. Interior design (Source: *Architektura ČSR*, no. 6 (1973): 277-279).

Appendix: Construction sites of companies most frequently featured in the architectural press in Czechoslovakia⁵¹

	building/site	place	architect	year	investor
GK Ko mgr ap	Foreign trade enterprise	Bratislava	Project organization for social buildings - Ferdinand Konček, Ľubomír Titl, Ilja Skoček; Milan Korolija, chief architect, Milanka Lukić, interior design	1973	Foreign trade enterprise
	Administrative building of Foreign trade ministry	Ružinov, Bratislava	Ľudovít Jendreják, Milanka Lukić	1972/ 1973	Foreign trade ministry
	Orthopedic clinic of the Bulovka Hospital	Prague	Zdravoprojekt Praha: Vladimír Černický	1975/ 1978	VHMP - VUS
	Traumatology hospital	Prague	-	-	-
	Hotel Koruna	Prague	-	~1989	<i>Interhotely Praha</i>

Table 1: Construction Sites of the GK Komgrap Construction Company

	building/site	place	architect	year	investor
GP Nap red	engines factory	Jablonec	-	-	-
	steel tempering hall	Strakonice	-	-	-
	petrochemistry	Záluží in Most	-	-	-
	Jawa motorcycle factory	Záluží in Most	-	-	-
	housing	Nitra	-	-	-
	housing	Karlovy Vary	-	-	<i>Československé štátne kúpele</i>
	Balneotherapy center	Piešťany	Zdravoprojekt Bratislava: Viktor Uhliarik, Jozef Schuster; interior design: Ch. Tursunov	1969- 1974	Československé štátne kúpele
	house of culture	Piešťany	<i>Zdravoprojekt Bratislava: V. Uhliarik, J. Schuster; interior design: Ch. Tursunov</i>	<i>1969-74</i>	<i>Československé štátne kúpele</i>
	cellulose factory	Ružomberok	-	-	-
	hotel Papiernik	Ružomberok	-	-	-
	Hotel Forum	Bratislava	Julian Hauskrecht	1989	Čedok Praha, Interhotely Bratislava via Strojexport
Motol university hospital	Prague	-	-	-	

51 Architektura ČSR (Praha: Klub architektů, 1939-1990); Architektura urbanizmus (Bratislava: Ústav stavebnictva a architektúry SAV, 1960-2015); Projekt: Revue slovenskej architektúry (Bratislava: Spolok architektov Slovenska 1955-1990).

Table 2: Construction Sites of the GP Napred Construction Company

	building/site	place	architect	year	investor
KMG Trudbenik and GP Rad ¹⁾	factories of artisan glassworks	Nový Bor	Skloprojekt	1965-1968	
	flat glass production	Teplice	Skloprojekt**		
	Škoda car factory extension	Mladá Boleslav			<i>Automobilové závody národní podnik, AZNP</i>

Table 3: Construction Sites of the KMG Trudbenik and GP Rad Consortium

	building/site	place	architect	year	investor
KMG Trudbenik	extension of the Tatra truck company	Kopřivnice			
	<i>car parts factory</i>	<i>Trmnica*</i>			
	Karosa factory of car bodies	Vysoké Myto			
	Avia factory for airplane parts production	Prague			
	steelworks	Kladno			
	color TV screens' factory	Valašské Meziříčí			
	PET packaging plant	<i>Mosna²⁾</i>			
	Dimitrovka chemical industry	Bratislava			
	Motol university hospital	Prague			
	Tešnov hotel	Prague			
	workers' hostel	Prague			
	municipal center	Kopřivnice			
	hotel	Kopřivnice			
	Tatra educational facility	Kopřivnice			
	Škoda hotel	Mladá Boleslav			<i>Automobilové závody národní podnik, AZNP</i>
	workers' hostel	Mladá Boleslav			<i>Automobilové závody národní podnik, AZNP</i>
	170000m ² of housing	Mladá Boleslav			<i>Automobilové závody národní podnik, AZNP</i>

1) Monter, Zagreb, was a likely subcontractor.

2) Name cited from the source.⁵² The actual toponym is unclear.

52 Trudbenik: preduzeće za projektovanje i izvođenje montažnih i opštegrađevinskih radova: 1947-1977 (Trudbenik: company for the design and prefabricated and general construction: 1947-1977) (Belgrade: KMG Trudbenik, 1977), n.p.

Table 4: Construction Sites of the KMG Trudbenik Construction Company

	building/site	place	architect	year	investor
Montinvest	chemical plant	Litvínov	-		Technoexport
	Hotel Forum	Bratislava	Julian Hauskrecht	1989	Čedok Praha, Interhotely Bratislava via Strojexport
	hospital	Kadaň	<i>Zdravoprojekt Praha</i>		
	electric furnace in Poldi steelworks	Kladno			<i>Foreign trade enterprise</i>
	section of the chemical complex	Neratovice			Technoexport
	ethylene production plant	Most			<i>Technoexport</i>
	city hospital	Most			
	chemical plant	Záluží			<i>Technoexport</i>
	car factory Avia	Prague			
	Bulovka Health Centre	Prague	<i>Zdravoprojekt Praha</i>		
	glass works	Jablonec	<i>Skloprojekt</i>		
	glass works	Nový Bor	<i>Skloprojekt</i>		
	Hotel Sanssouci	Karlovy Vary	Zdravoprojekt Praha: Jiří Martínek		<i>Československé státní koupele</i>

Table 5: Construction Sites of the Montinvest Business Association

**Data by analogy, further confirmation needed*

Archives

AJ: Arhiv Jugoslavije, Beograd (Archive of Yugoslavia, Belgrade)

AS: Arhiv Srbije, Beograd (Archive of Serbia, Belgrade)

MNT: Muzej nauke i tehnike u Beogradu (Museum of Science and Technology in Belgrade)

Bibliography

Adžić, Mara, ed. *25 godina građevinarstva socijalističke Jugoslavije* (Twenty years of the construction industry of socialist Yugoslavia). Belgrade: Tehnika, 1970.

Anon. "Josef Plečnik, učitelj a mistr. K jeho 70. narozeninám." *Architektura - spojené časopisy Stavba, Stavitel, Styl*, no. 4 (1942), 57-66.

Anon. "Výsledky soutěže na budovu Bělehradské opery." *Architektura ČSR*, no. 4 (1971): 156.

Archer, Rory. "It was better when it was worse': blue-collar narratives of the recent past in Belgrade." *Journal Social History* 43, no. 1 (2018): 30-55.

Bjažić Klarin, Tamara, and Marcela Hanáčková. "Networking into the International Union of Architects (UIA) – Poland vs. Yugoslavia." In *Transnational Networking Practices of Central and Southeast European Avant-garde*, edited by Ljiljana Kolečnik, 26-28. Zagreb: Institut za povijest umjetnosti i Filozofski fakultet Sveučilišta u Zagrebu, 2014).

Damljanović, Tanja. *Češko-srpske arhitektonske veze 1918-1941* (Czech-Serbian architectural connections 1918-1941). Beograd: Republički zavod za zaštitu spomenika kulture, 2004.

Jarić, Miloš. *40 godina građevinarstva Socijalističke republike Srbije* (Forty years of construction industry of the Socialist Republic of Serbia). Beograd: Izgradnja, 1987.

Dimitrijević, Branka. "Arhitekt Karlo Paržik." PhD diss., University of Zagreb, 1989, <http://www.karloparzik.com/Disertacija.html>.

Jovanović, Jelica. "From Yugoslavia to Angola: Housing as a Postcolonial Technical Assistance. City Building Through IMS Žeželj Housing Technology." *Architektura & Urbanizmus* 53, no. 3-4 (2019): 170-181.

Kubeš, Luděk. "Obytné domy ve Skoplji v Makedonii." *Architektura ČSR*, no. 8 (1949): 238.

Kulić, Vladimir. "Building the Non-Aligned Babel: Babylon Hotel in Baghdad and Mobile Design in the Global Cold War." *ABE Journal: Architecture beyond Europe* 6, 2014, <http://journals.openedition.org/abe/924>

Menzelová, Kateřina. "Drákulov Zmênil Majitele." *euro*, November 6, 2002. <https://www.euro.cz/archiv/drakulov-zmenil-majitele-808066>

Montinvest. "History." Accessed June 7, 2020. http://www.montinvest.co.rs/about_us/history.103.html.

- Obradović, Marija. *Hronika tranzicionog groblja. Privatizacija društvenog kapitala u Srbiji 1989-2012. Ekonomsko-istorijska analiza* (A chronicle of transitional graveyard. Privatization of social capital in Serbia 1989-2012. Economic-historical analysis). Belgrade: Nova srpska politička misao i Institut za noviju istoriju Srbije, 2017.
- Pašek, K. "Bělehrad." *Architektura ČSR*, no. 10 (1972): 503-504.
- Perović, Radovan, ed. *Pravilnik o organizaciji i načinu poslovanja GK Komgrap u inostranstvu* (Handbook on the organization and business of GK Komgrap abroad). Belgrade: Biro za informacije u propagandu GK Komgrap, 1975.
- Pervan, Budimir. "Urbanistički ústav Dalmácie." *Architektura ČSR*, no. 2 (1969): 113-119.
- Putnik, Vladana. *Arhitektura Sokolskih domova u Kraljevini SHS i Kraljevini Jugoslaviji* (The architecture of Sokol houses in the Kingdom of Serbs, Croats, and Slovenians and the Kingdom of Yugoslavia). Beograd: Filozofski fakultet Univerziteta u Beogradu, 2015.
- Roter Blagojević, Mirjana. "Jan Nevole, prvi moderni arhitekta u Beogradu (Jan Nevbole, the first modern architect in Belgrade)." *Limes Plus* 2 (2013): 129-148.
- Schwenkel, Christina. *Building Socialism: The Afterlife of East German Architecture in Vietnam*. Durham, NC: Duke University Press, 2020.
- Sedlar, Saša. "Skopje urbanističke problémy rekonstrukce." *Architektura ČSR*, no. 6 (1967): 365-369.
- Sekulić, Dubravka, Katarina Krstić, and Andrej Dolinka. *Three points of Support: Zoran Bojović*. Belgrade: Museum of Contemporary Art, 2013.
- Selinić, Slobodan. *Jugoslovensko – čehoslovački odnosi 1945-1955* (Yugoslav-Czechoslovak Relations 1945-1955). Beograd: Institut za noviju istoriju Srbije, 2010.
- Starý, Oldřich. "Domy pro chudé." *Architektura - spojené časopisy Stavba, Stavitel, Styl*, (1939): 253
- Stanek, Łukasz. *Architecture in Global Socialism: Eastern Europe, West Africa, and the Middle East in the Cold War*. Princeton and Oxford: Princeton University Press, 2020.
- Stojanovska, Sofija. "Arhitekt Ludek Kubeš (1913 – 1996)." *Makedonska Arhitektura*, <https://marh.mk/архитект-лудјек-кубеш-1913-1996/> accessed June 4, 2020.
- Trudbenik: preduzeće za projektovanje i izvođenje montažnih i opštegrađevinskih radova: 1947-1977* (Trudbenik: company for the design and prefabricated and general construction: 1947-1977). Beograd: KMG Trudbenik, 1977.
- Von Halkowich, Alfons. *Die Eisenwerke Osterreich-Ungarns* (The Ironworks of Austria-Hungary). Wien: s.e., 1911.
- Vučetić, Radina and Pol Bets, eds. *Tito u Africi. Slike Solidarnosti* (Tito in Africa. Images of solidarity). Belgrade: Muzej Jugoslavije, 2017.
- Zarecor, Kimberly Elman. *Manufacturing a Socialist Modernity: Housing in Czechoslovakia, 1945-1960*. Pittsburgh: University of Pittsburgh Press, 2011

Interviews:

Aco Arizanović, retired employee of Neimar construction company, Trenčianske Teplice, April 07, 2017.

Bogdan Budimirov, architect, Zagreb, February 13, 2015.

Bohuslav Pernecký and Anna Pernecká, architects, Piešťany, June 20, 2015.

Il'ja Skoček, architect, Bratislava, June 1, 2015.