

博士論文（要約）

**Soviet Contribution to the Global Built Environment  
of the Cold War Era, 1946-1991**

(冷戦期(1946-1991)におけるソ連のグローバルな建造環境に対する貢献)

クズネツォフ ドミトリー

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## **On abbreviations**

The keys to all abbreviations in the text are provided throughout. However, some, such as the archival titles, are often used to identify the sources. Therefore they can be consulted below:

RGANTD — the Russian State Archives of Scientific and Technical Documents

RGALI — the Russian State Archives of Literature and Arts

RGAFKD — the Russian State Documentary Film and Photo Archive at Krasnogorsk

RGAE — the Russian State Archives of Economics

CGANTD — the Central State Archives of Scientific and Technical Documents in St. Petersburg

RGANTD in Samara — the Russian State Archives of Scientific and Technical Documentation in Samara

GARF — the State Archives of the Russian Federation

MTsA — the Central Archives of Moscow

## **On transliteration**

The footnotes and the bibliography section uses the Chicago style and, therefore, the transliteration applied to the References uses the American Library Association (ALA) and the Library of Congress (LC) system. However, as the majority of the proper and geographical names in the professional literature comply with the United States Board on Geographic Names (BGN), and the British Permanent Committee on Geographical Names (PCGN), the BGN/BGCN system of the Cyrillic alphabet romanization is implemented throughout the text of the dissertation.

It is essential to notice that much data was acquired through the Russian language sources, and certain proper names' origin could not be verified. Therefore, their English versions might differ from the original ones.



## Foreword

In his preface to the June 2014 publication of the *Architecture Beyond Europe Journal*, Lucas Stanek, one of the most prominent researchers in the Socialist Bloc technology transfer, talks about a small but growing body of researchers who dedicate themselves to revealing the complex palimpsest of socialist architecture and urban heritage born from the Cold War period. This dissertation deliberately calls on understanding of the complexity of realms that were defining the production of the aforementioned architectural, urban and even regional space where the common formal analysis has been insufficient. Architecture, as a philosophical matter, deals with and shapes several discourses — social, economic, political, natural and ethical: the first four are in perpetual interaction with the built environment, and change over time as an integrated whole; the last serves to evaluate that whole. The scattered pieces of information, politicized discourses of architects, and public opinion at the beginning of this research might have suggested that the influences of the Soviet Union on the global built environment was so dominant that, to an extent, it could homogenize such environments. However, a growing research corpus has shown that such a representation would be mere artifice. In fact, the data suggests that the contribution of the Soviet Union to the global built environment took place through a process of international cooperation, and therefore depended on domestic and foreign policy, economic and social settings, sometimes even on natural factors; these demanded the most detailed analysis. The study of data left by diverse actors of the international cooperation process such as policies, historic records, intergovernmental agreements and records, showed this very process had been taking place around the globe occasionally before the Second World War and became a hub of activity as a comprehensive international process later on.

## Introduction

### 1.1. Problem statement

(a) At the moment there is no comprehensive study that assesses the patterns representing an integrated Soviet approach to constructing abroad globally during the Cold War; this dissertation aims to add to this gap in literature. The Soviet Union was a major power that shaped multiple facets of twentieth-century culture. When it collapsed on December 29, 1991, not only did this mark a turning point in global history, but it also became a milestone in the history of the global built environment. Fast forward to 2019, and we witness a transition into the current world order, with physical evidence shaped by unique urban policies, architectural principles and concepts, and infrastructural achievements that transformed landscapes and reinvigorated economies. Trainees and university alumni became professionals and practitioners in many regions of the globe, and a powerful and competitive system of institutions and industries articulated these complex relations and processes. These elements born from the Cold War, long missing from the global architectural discourse both in Russia and internationally, have only recently attracted interest.

(b) Contrasting evaluations of Russia in the global media and poor international climate has been feeding both negativity and curiosity regarding USSR foreign policy. Luckily, no actual political discourse could bypass the physical evidence of the regime that had been entwining through years into the built environment of Europe, Asia, Africa, and the Caribbean. The global media's pressure on the one hand and the swift economic development of the ex-protégés of the Soviet Union on the other, endanger and distort the remaining traces of the Soviet Union's impact. By now, many countries

related to the research topic have experienced wars, revolutions, as well as economic and political crises (Yemen, Nicaragua, Syria, Iraq to name a few); almost all witnesses and participants of the construction process such as architects and engineers have passed away. Even the organizations in charge of these projects — construction bureaus and export companies — have disappeared, having been liquidated or gone bankrupt. Political and social changes have already led to certain projects being alienated in the eyes of the public: for instance, in Poland, Ukraine and in the Baltic states. This research is, therefore, attempts to serve an urgent need to grasp the swiftly disappearing traces of the Soviet Union's impact on the global built environment.

(c) Among the factors that have been a long-term drag on earlier progress in the topic are: (i) the closed nature of the country (ii) language barriers (iii) existing “government policy unfavorable to archival data acquisition (raising charges for copying, cumbersome bureaucracy, general copyright issues) and/or the access difficulties not only at the administrative level but also at the level of geography, as some places are remote.

## 1.2. Previous research background

Despite the rising interest towards Soviet architecture today, the discourse can be divided in limited groups:

- 1) accounts of the Soviet urban planning in the post-Soviet space given by Shaw (1982), Hudson (1994), DeHaan (2013); Meuser & Zadorin (2015), Andersen (2015), Revzin (2015), Mercer (2016), Konyshcheva (2017) which, although lacking information about the process of project implementation abroad, still help us understand the typologies and discourse on urbanism in the international cooperation programs of the USSR;
- 2) post-war reconstruction analyses, which are limited to the ex-republics and have limited research as of late (Kosenkova, 2009);
- 3) research on the transfer of technologies, the most significant insight of which being on China by Zhang (2010), which includes descriptions of the background, the process, and an exhaustive inventory of projects, but still lacks architectural analysis;
- 4) Photo albums (Murray, 2019), Russian State Film and Photo Archive;
- 5) Research on cultural diplomacy or the economic processes of the time, which, however, lacks discussion on the built environment (Nagornaya, 2018; Vdovin, 2018);
- 6) Research on Soviet foreign policy. This is much more advanced and comprehensive: it includes work by Petrescu (Petrescu, 2014) on the final period of socialist states in Eastern Europe, Mastny on Warsaw Pact and the legacies of the Cold War (Mastny, 1996; Mastny & Zhu, 2005, Mastny, 2014), and Westad (Westad, 2010, 2017).

However, the literature above has not yet been connected entirely to the built environment development processes on a global scale. The overall lack of interdisciplinary understanding on the topic and discussions thereof in the global context, and limited original data analysis may be named among the current research gaps in the field.

### 1.3. Research Purpose

The research purpose is to assess the trends and patterns of the Soviet Union's contribution to the global built environment by:

- (a) providing historical background and information about the specialists, the process of project implementation and the articulating institutions related to these activities;
- (b) revealing the change in the Soviet Union's approach to built environment development as a form of international cooperation; and
- (c) showing influences of the Soviet approach to the built environment development in various regions and at different scales.

### 1.4. Hypothesis

- (1) The attitude towards the international cooperation changes from domination to liberal participation (Caldwell, Lauren & Deibold, 1981). If this can be stated in political science, this can be stated in the built environment history.
- (2) The purpose of contribution was merely to export the ideology to strengthen the socialist block.
- (3) The foreign and domestic policy defined the approach to the built environment contributions.

### 1.5. Scientific and social value

#### Broader knowledge

The contemporary built environment originated from the end of World War II and matured during the Cold War period. It is therefore interesting to look at this issue today when we are facing a new wave of global crises and geopolitical confrontations. Another aspect is that the global cooperation in construction as a matter of political dialogue or global economy is only broadening and many of its current institutions (the World Bank, the OECD, the UNESCO, the UIA to name a few) originated or took the present shape during the same period. As such, in this research I will reveal the network of institutions created by the Soviet Union and which existed broadly between 1946 and 1991.

#### Unique data

The biggest part of this research is based on over two hundreds original archival materials from eight archives:

- the Russian State Archives of Scientific and Technical Documents (RGANTD),
- the Russian State Archives of Literature and Arts (RGALI),
- the Russian State Documentary Film and Photo Archive at Krasnogorsk (RGAFKD),
- the Russian State Archives of Economics (RGAE),
- the Central State Archives of Scientific and Technical Documents in St. Petersburg (CGANTD),
- the Russian State Archives of Scientific and Technical Documentation in Samara (RGANTD Samara),
- the State Archives of the Russian Federation (GARF),
- the Central Archives of Moscow (MTsA).

The results include access and reproduction of technical documentation related to projects, governmental resolutions, and commercial contracts, statistics, correspondence, reports, photographs from construction sites and meetings. I have also analyzed a large scope of dissertations by Russian and foreign scholars written in Russian, English and French languages, consulted books in Russian, Chinese and Korean from the funds of the State Library of Russian Federation.

## Higher value to heritage and a better understanding

Understanding the built environment evolution through the systems it interacts with, including the forms societies and ideologies give it, is a new approach in architectural history because classic research in the field would usually be restrained to styles and forms analyses. It, therefore, broadens horizons to the architectural history field by connecting it to the sociology, geo-politics, and economics, thus bringing a more interdisciplinary understanding, more value to heritage and the built environment as part of global development. Focusing on the built environment from such a perspective may bring this research into the sphere of urban programming and may also serve as a support for new global cooperation projects.

## 2.The framework of the dissertation

### 2.1. Definitions

**Built environment.** Roof and Oleru describe the built environment as the “human-made space in which people live, work and recreate on a day-to-day basis.”<sup>1</sup> The American Center for Disease Control and Prevention characterizes it as including “all the physical parts of where we live and work (e.g., homes, buildings, streets, open spaces, and infrastructure).”<sup>2</sup> It can also refer to “human-made (versus natural) resources and infrastructure designed to support human activity, such as buildings,

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<sup>1</sup> K. Roof & N. Oleru "Public Health: Seattle and King County's Push for the Built Environment". J Environ Health. 75 (2008), 24–27.

<sup>2</sup> Impact of the Built Environment on Health, brochure, CDC <https://www.cdc.gov/nceh/publications/factsheets/impactofthebuiltenvironmentonhealth.pdf> (accessed December 20, 2019)

roads, parks, and other amenities.”<sup>3</sup> The built environment is connected to humans and exists in opposition to and is dependent on nature. For this research in architectural history, the term built environment will be used simply in opposition to the natural environment, surrounding architecture, city, and infrastructure.

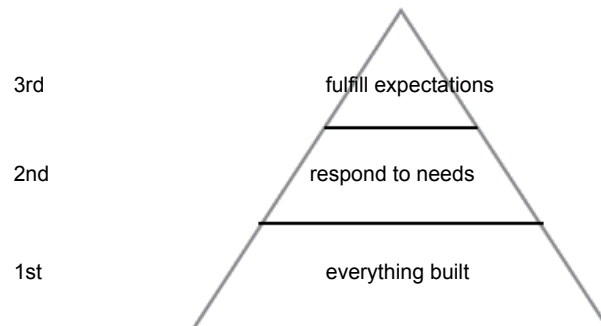


Fig. 0-1. Three possible levels of contribution to the built environment levels

**Contribution.** We can summarize a general definition of the act of contributing based on the Merriam-Webster Dictionary’s definition as “supplying” or “playing a significant part in bringing about an end or result.”<sup>4</sup> Collins Dictionary defines it as doing “something to help make [something] successful or to produce it.”<sup>5</sup> Therefore, in this research, the contribution to the built environment shall imply significant participation in bringing about the result or the product that was announced as a goal. The production itself is a sufficient condition, and success is nontrivial.

The contribution to the global built environment shall be seen not as a globally practical or applicable contribution, but as a significant supply of the new (as a literally new or non-existent before), the modern (as in a trend) or the ideological right to plural and various built environments as being a part of the global one.

I attempt to reveal the built environment change which occurred due to the Soviet Union’s international cooperation; however, as this research is in architectural history, I avoid the assessment models commonly used in urban sustainability theories, because I did not have access to data that would allow me to analyze the commonly used built environment attributes such as Density, Diversity, and Design<sup>6</sup>. This has not been my research purpose. In different theories of impact assessment, I combine such effects on the environment as a city “goodness” (in my case — the built environment “goodness”) as, for instance, discussed by K. Lynch containing the aspects of good city form, visuality, sense, access, control and contribution as impact leading to progress (when progress

<sup>3</sup> Amoruso, Giuseppe. "The Image of Historic Urban Landscapes: Representation Codes." In *Handbook of Research on Emerging Digital Tools for Architectural Surveying, Modeling, and Representation*, ed. Stefano Brusaporci, 2015, 550-578, (accessed December 20, 2019).

<sup>4</sup> Contribution, Merriam-Webster Dictionary, <https://www.merriam-webster.com/dictionary/contributing> (accessed December 20, 2019)

<sup>5</sup> Contribution, Collins, <https://www.collinsdictionary.com/dictionary/english/contribution> (accessed December 20, 2019)

<sup>6</sup> R.Cervero, K.Kockelman, Travel Demand and the 3Ds: Density, Diversity and Design. *Transport. Res. D-Tr. E.* 1997, 2, 199-2019

seen as evolution) as in Wright's *Short History of Progress*.<sup>7</sup> The problem of evaluation of impact or progress necessary to assess the results of international cooperation has been long researched and can be traced to the Enlightenment and even to Aristotle who stated that "human excellence [is] only possible within a city-state with a good constitution" and this constitution has to improve to support human excellence.<sup>8</sup> However the "goodness" itself is allusive; therefore I will use such vocabulary as "better" in a sense "new (as a literally new or non-existent before), modern (as in a trend), right (the ideological right)" but by the Soviet standards that will be gradually explained in the following chapters. If all built things can be literally considered as a contribution of the basic first level, then what I hold to observe in this thesis can be called "contribution of the second level" when it is a response to the needs of local people or the government. Last, an analysis of the contribution qualities from the point of view of local people and governments, if it fulfilled their expectations, we can consider at the third level, which I leave for future studies.

**Cold War** is a period of indirect confrontation between the Soviet Union and the United States and their allies between 1946 and 1991 or more precisely between W.Churchill's speech on March 5, 1946, at Westminster College, Fulton, Missouri and the dissolution of the Soviet Union on December 26, 1991.<sup>9</sup>

**Developed socialism** — the new fundamental concept of the political current that replaced the concept of "catch up and overtake" the advanced capitalist countries. The building of the developed socialist society was announced in the article of F.M. Burlatsky of December 21, 1966, in *Pravda*.<sup>10</sup> The next year, at the celebration of 50 years of the October Revolution, Leonid Brezhnev announced that this society had been already built and his conclusion was officially consolidated at the twenty-fourth meeting of the Party in April-March 1971. The concept was proclaiming a course towards augmenting the efficiency of production and combining the scientific and technical achievements with the socialist economy; flourishing and rapprochement of socialist nations; achieving a stronger social homogeneity.<sup>11</sup>

**VOKS** — the Soviet international organization in charge of familiarization of the Soviet citizens with the cultural life of foreign countries and presentation of the Soviet achievements abroad.

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<sup>7</sup> Kevin Lynch, *The Image of the City*, Nachdr., Publication of the Joint Center for Urban Studies, 2005 and Ronald Wright, *A Short History of Progress*, 2004

<sup>8</sup> Progress, Stanford Encyclopedia of Philosophy online, 2019. <https://plato.stanford.edu/entries/progress/> (accessed June 3, 2019) originally from Aristotle, *Politics* 1269a12–14

<sup>9</sup> D.Asanov Д. Асанов, *BSE Большая советская энциклопедия, БСЭ Bol'shaya sovetskaya entsiklopediya* [the Great Soviet Encyclopedia], "Holodnaya voina" Холодная война [Cold War], ed. Egorova, 2007 - 132.

<sup>10</sup> A.I. Vdovin Вдовин А.И., *СССР. История великой державы. 1922 – 1991 SSSR, Istoriya velikoi derzhavy, 1922-1991* [USSR, a History of a Great Country, 1922-1991] (Moscow: Prospekt), 768.

<sup>11</sup> *ibid.*

## 2.1. Research method

Table 0.1. Research purpose, goals and method	
Research purpose and goals	Method
(a) <u>to provide</u> the historical background and information about the specialists, the process of project implementation and the articulating institutions related to these activities;	<ul style="list-style-type: none"> <li>- Secondary sources analysis: Russian and foreign books, theme magazines from 1945;</li> <li>- Original documentation research in the archives of related organizations or governmental sources: (1) Russian State Archives of Scientific and Technical Documentation (RGANTD), (2) Russian State Archives of Literature and Arts (RGALI), (3) Russian State Documentary Film and Photo Archives in Krasnogorsk (RGAFKD), (4) Russian State Archives of Economics (RGAE), (5) Central State Archives of Scientific and Technical Documentation in Saint-Petersburg (CGANTD), (6) Russian State Archives of Scientific and Technical Documentation in Samara (RGANTD), (7) State Library of Russian Federation</li> </ul>
(b) <u>to reveal the change</u> in the Soviet Union approach to built environment development as a form of international cooperation.	<ul style="list-style-type: none"> <li>- by analyzing various publications of the time, reports, and monographs;</li> <li>- by analyzing individual contracts by each of the research institutes in charge;</li> <li>- by using graphs, organized the projects in time and according to their nature.</li> </ul>
(c) <u>to show the influences</u> of the Soviet approach on the built environment development in various regions and at different scales.	<ul style="list-style-type: none"> <li>- by using the developed concept of contribution, attribute a value to each type of impact;</li> <li>- by briefly analyzing the international experience, make clear the specificity</li> </ul>
The purpose is <u>to assess</u> the Soviet Union's contribution to the global built environment.	By a, b, and c, to show the trend of the Soviet Union's approach to international cooperation regarding the built environment, its process, and background, using patterns.

Trends and patterns assessment in this thesis will be represented as in figure 0.2. Thus **patterns** will show the relationship between the human and the built and changing over time, and the change of patterns will represent the **trend**.

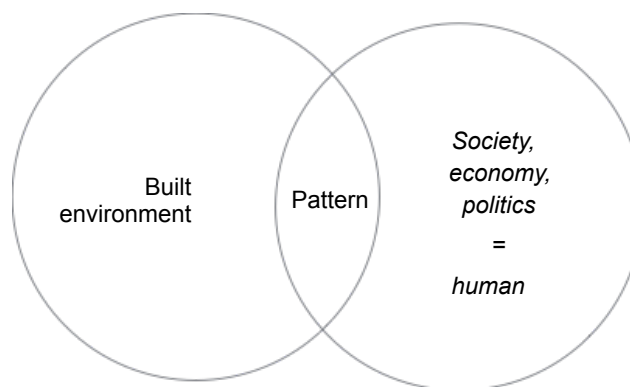


Fig. 0-2. Pattern representation

## 2.3. Framework

In order to respond to the research purpose, for each period the background, process details, actors and a brief inventory will be provided. The evaluation will be made in comparison to some other countries. Chapter 1 will explain major tendencies in architecture, urban planning and infrastructural development in the Soviet Union. Chapters 2 through 5 will be organized around a distinguishable tendency of the period such as (1) postwar reconstruction and modernization, (2) growth of international cooperations, (3) post-earthquake reconstruction resilience, (4) liberalization of cooperation.

More precisely, these tendencies can be seen when analyzing the countries with which the Soviet Union cooperated in 1946-1991. The data on economic and technical cooperation of the Soviet Union in 1945-1987 (table 0.2) and the information acquired from the State Archives of Economics (table 0.3) shows that the total number of such countries equals 49 and the number of projects to 4859. The map (fig. 0.4) shows the geography of international cooperation. The data accessibility limited the choice, and thus, the four aforementioned tendencies could be illustrated by instances of eleven countries in total (fig. 0.5). In the first period (1946-1955), I will observe the policies, the process and the approach to cooperation in both zones representing the proxy-conflicts at the beginning of the Cold War — Korea, China and Mongolia in East Asia and Poland in Eastern Europe with the most remarkable scope of reconstruction. In the second period (1956-1966), the countries targeted by the new Soviet foreign policy in Southeast Asia and according to the types of projects and not by countries individually. In the third period (the 1960s), I will analyze the instance of Tashkent reconstruction with the new urban development paradigm. For the fourth period (the late 1960s-80s), where the international cooperation of the Soviet Union became widespread and more liberal, I chose two countries where both camps took part in the development of the built environment — Afghanistan and Vietnam.

**Table 0.2. Economic and technical cooperation of the Soviet Union. 1945 -1987. The total number of enterprises and other construction objects built/ being built in 1987 under Soviet economic cooperation abroad, by country:**

	Total enterprises		Industrial enterprises within	
	Contracted	Exploiting	Contracted	Exploiting
<b>Total</b>	5050	3342	2590	1879
<b>Socialist countries</b>	<b>3550</b>	<b>2460</b>	<b>2590</b>	<b>1879</b>
<b>COMECON Countries</b>	<b>3043</b>	<b>3023</b>	<b>1577</b>	<b>1136</b>
including:				
Albania	45	45	42	42
Bulgaria	370	249	299	207
Hungary	130	111	94	82
Vietnam	330	228	202	130
East Germany	77	53	49	32
Cuba	649	360	278	197
Mongolia	1022	650	290	199
Poland	205	151	157	116
Romania	160	135	130	106
Czechoslovakia	55	41	36	25
<b>Other socialist countries:</b>	<b>507</b>	<b>437</b>	<b>425</b>	<b>376</b>
including:				
China	265	256	251	243
North Korea	80	66	48	38
Laos	38	21	8	6
Yugoslavia	124	94	118	89
Developing countries	1480	866	577	359



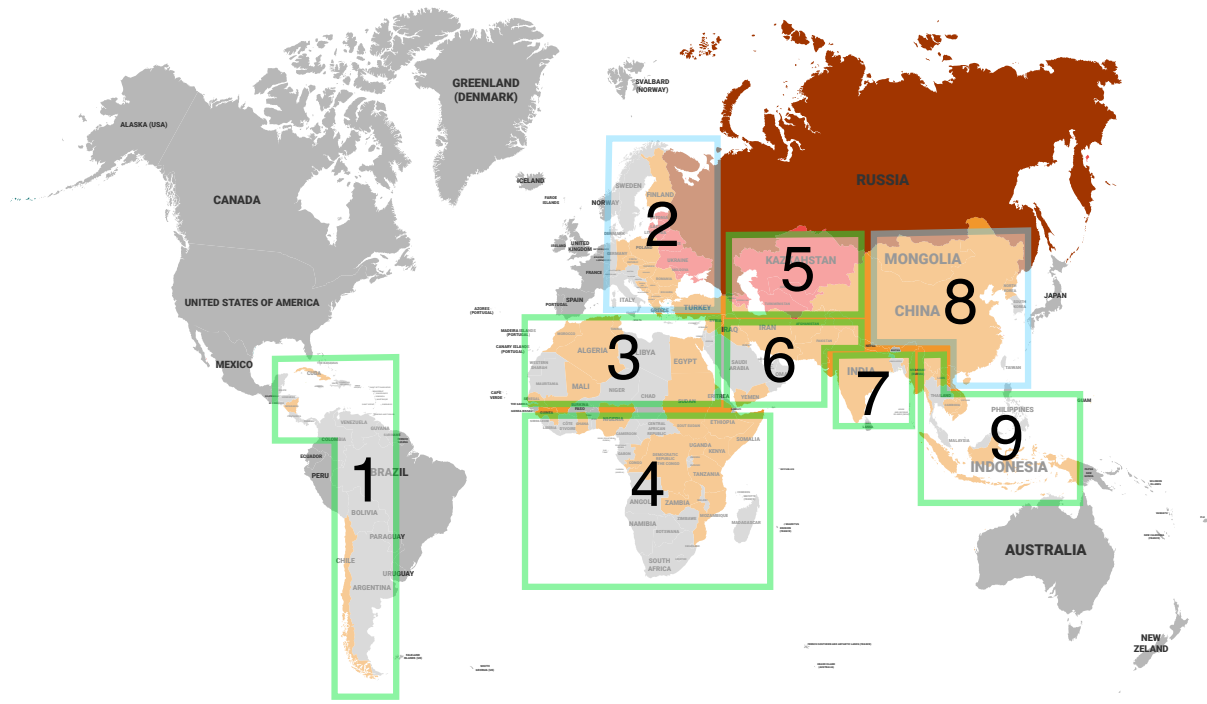


Fig. 0-3. Global image of Soviet international cooperation, 1946—1991. Nine zones of interest.

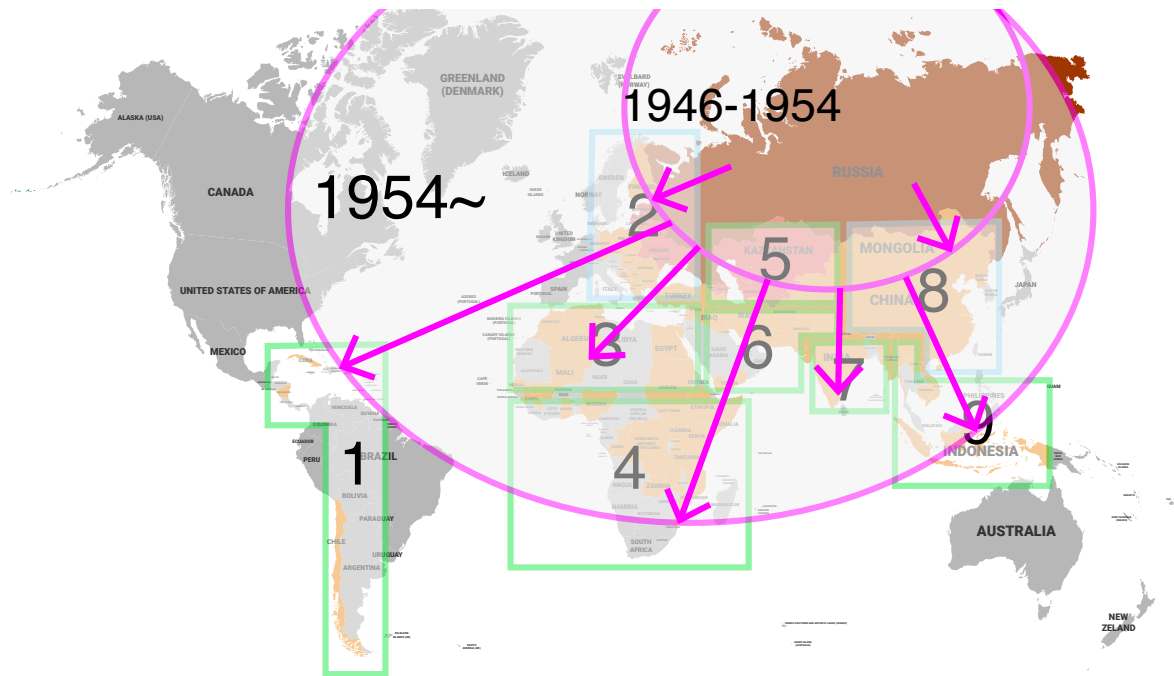


Fig. 0-4. Global image of Soviet international cooperation, 1946—1991. A change from the continental to the freewheeling policy.

### 3. Thesis structure

Major events reflecting the domestic and foreign policy of the Soviet Union and consecutively the approach to the process of international cooperation shall define the structure of the dissertation.

The introduction part will discuss the background and the bibliographic study on which I build the research question, define the aims and purposes of the research, identify the timeframe and touch upon the method for the study.

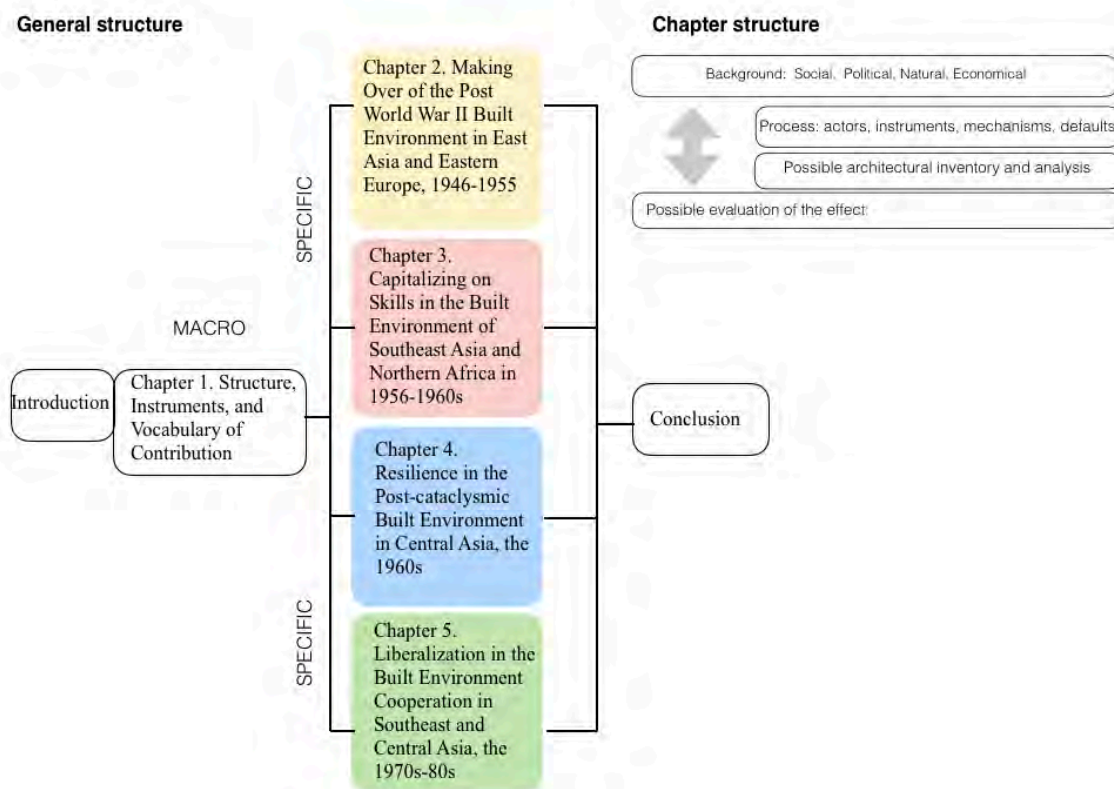


Figure 0-6. Thesis structure

**Chapter 1** will explain what structure the Soviet Union had and how it was changing to enable its international cooperation.

**Chapter 2** will discuss a period when the Soviet Union takes part in the world's division in the aftermath of the Second World War and targets liberated or underdeveloped countries to promote its vision through the built environment of power and monument and invest its architectural knowledge at the scale of the street and major networks. The instances of Poland, China, North Korea, and Mongolia will illustrate this approach.

**Chapter 3** will focus on changes in domestic and foreign policy when alongside the fight against excessiveness in architecture, the Soviet Union seeks to participate competitively in the global market of international construction and develops its system of international cooperation choosing the countries liberated from the colonial rule as its recipients. The way of "peaceful architecture" will be chosen to demonstrate the new face of Socialism. Case-study will include Indonesia, Myanmar, Cambodia, and Egypt.

**Chapter 4** will be dedicated to a period following the 1960s when in the turmoil of international cooperation growth, the case study of Tashkent becomes a stepping stone for urban planning and architecture of the last two decades of the Soviet Union. Remaining in the stylistic of projects launched in the late 1950s, the Soviets face massive destruction in one of its regional capitals, the reconstruction of which will become prototypical.

**Chapter 5** will talk about a period when Soviet Union is recovering from a significant focus on post-earthquake reconstruction when geopolitically it enters the last loop of confrontation with the US in Vietnam and Afghanistan, yet needs of cooperation with an unprecedented level of mutual acclaim and thus the cooperation flourishes in a more open and international way.

# Chapter 1. Structure, Instruments, and Vocabulary of Contribution

## 1.0. Introduction: Setting of the socialist aspect to the built environment, the 1920s-1930s

The international cooperation of the Soviet Union was set as a process more or less clearly by 1956. The preceding period of the 1920-1930s settled the artistic concept that would explain the visible results in architecture and urbanism of that cooperation. The aesthetics and urban approach of 1946-1956, from the end of the Second World War until the 20th Congress of the Communist Party of the Soviet Union, was dictated by the vision fully developed in the 1930s as the etalon image of the socialist city under Stalin regime. Everything after 1956 will represent a retrospective of the 1920s Russian and international concepts enhanced by technological progress. For that reason, at some point, the post-1956 approach to architecture and urban planning is called by some as *Soviet Modernism* and the period of the 1980s as 'Soviet Postmodernism' by analogy with Vladimir Kulić, 's term to represent the architectural space typically created under the socialist political regime.<sup>1</sup>

Central and East European Avant-garde strongly nourished the pre-war artistic model of the Soviet Artists. When in 1921, L'Esprit Nouveau of Le Corbusier arrived in Czech translation to Prague, the new center connecting Parisian trends with Brno, Vienna and the Netherlands, the young Soviet artistic and architectural elites such as architects Vesnin brothers, Moisei Ginzburg, poet Vladimir Mayakovsky were already there to exchange ideas. Whereas their Western colleagues were being commissioned with hundreds of individual projects, the Soviet counterparts work mostly on communal housing, as dictated by the demand. While the aristocrats, elites, and the intelligentsia ordered villas and houses in Prague, Berlin, and Vienna, in Russia, the focus was on public building typology — factory-kitchens, workers' clubs, etc. German Bauhaus architects were widely welcomed to work on projects of different scales, from housing to industrial buildings and city.<sup>2</sup>

In the 1920s, the geography of Russian architectural and urban practice was represented on both sides from the border: there were many cultural contacts with the new Soviet State, even before VOKS foundation in 1924, Russian-British society in London, Swedish-Russian society in Stockholm the same year; 1927 - American-Russian Institute, 1928 - Novaya Rossiya in Paris 1925 - Prague, etc. and at the same time work of professional immigration through unions and individuals practitioners who left Russian Empire after or during the revolution the Civil War: 345 individuals practiced abroad.<sup>3</sup> This generation of dreamers muted under the Stalin regime. The Decision of the Politburo of April 23, 1932, named "On the reorganization of literary and artistic organizations" liquidated all existing architectural and other artistic free unions to be replaced by government-controlled unions, of writers, architects, etc. This reform meant the official interdiction of individual artistic views. Moreover, only

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<sup>1</sup> Vladimir Kulić, *Second World Postmodernisms: Architecture and Society under Late Socialism*, 2019, 2–3.

<sup>2</sup> Richard Anderson, *Russia*, 2015, 356.

<sup>3</sup> Svetlana Levoshko, Левашко Светлана, *Russkiy zodchiy za rubezhom: Organ svyazi russkikh arkhitektorov za granitsey. Praga, 1938 - 1942 "Русский зодчий за рубежом: Орган связи русских архитекторов за границей: профессиональное издание. Прага, 1938–1942"* [Russian architects abroad: the liaison body of Russian architects abroad. Prague, 1938-1942].

“common” views were allowed. This set censorship upon the architectural thought that has been practiced by the Soviet government until 1991.<sup>4</sup>

The publication of Nikolay Milyutin’s *Sotsgorod* that criticized the European approach to designing and urbanism of the West was followed by critical articles in *Arckhitektura SSSR*, the major Soviet architectural professional magazine, became a part of a complex process under the Stalin regime aiming to put the profession under censorship and control. Once the free-thinking and modern architecture were abolished, Stalin inaugurated *Socialist Realism* as the only acceptable architectural and urban planning style. Under the motto “socialist in contents, national in form,” the fourth Moscow reconstruction plan was launched. Further, the destructions of the Second World War made this “official” style to be integrated into rare reconstruction projects abroad either in the Soviet vicinity such as Warsaw or Kyiv and within the first center of proxy-conflict between the USA and USSR in East Asia via technological exports to China, North Korea, and Mongolia.

Following the death of Stalin and the new anti-policy by Khrushchev, the government passed December 28, 1958, “On strengthening ties between school and life and on further developing the system of education in the USSR” parted with Stalin Empire style and was to link “the school training with labor, industrial practice of school pupils, domination of polytechnic content in the curriculum, and active participation of the school in social life technical education to the front.”

## 1.1. Tools of international cooperation

We can represent the tools of international cooperation through various transfers of soft power, people, technology, and money flows.

### Soft power

At the end of the Second World War, the USSR did not join such Western intuitions in charge of the postwar reconstruction as the World Bank and the World Trade Organization. Still, it needed to be investing in the countries where communism was or could be rising. The initial years were marked by a soft approach. The National Institute of Cinematography, created in 1956 under the Ministry of Culture, started to make propaganda movies. The films were to show the views of the Soviet cities that survived after the Great Patriotic War and the wealthy life of Soviet citizens. The publication of the TASS Information Agency was likewise oriented and reporting from Beijing, Tokyo, Bangkok, Jakarta, Canberra, Yangon, Phnom Penh, and Hanoi.<sup>5</sup> The major cities of decolonized countries were looking for support from a different regime and the local communist parties’ influence was growing, thus enabling them to receive low-interest loans and sign more beneficial contracts.

The next step was to reconsider the construction and renovation of the railroads between the USSR, North Korea, India, and Burma (Myanmar) as reported to P.N. Kropotkin in 1956. Again and with similar logic as in the case of the Red Cross, the first contracts dating of 1952 solely consider the connections through Mongolia to China.

As the professional architectural sphere was undergoing transformation within the Soviet Union, in 1936, at the first All-union Assembly of Architects, to which international students delegations were

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<sup>4</sup> Dmitry Khmel'nitskiy, Хмельницкий Дмитрий, "Что такое "sotsialisticheskiy realizm" Что такое "социалистический реализм" [What is "Socialist Realism"]].

<sup>5</sup> GARF 922 8 75

invited, took place in Moscow, which was one of the first steps towards more showcasing the country's vision internationally. In 1948, Joseph Stalin, via the Council of Ministers, authorized the first participation fee. From this period, the communication between the Unions of Architects in the USSR and Poland, China, North Korea, International Union of Architects was supported by the Soviet government and significant work was being done to maintain a friendly relationship with professional unions of constructors in China, Korea, Mongolia, and Vietnam.<sup>6</sup> However, not all countries remained loyal to the Soviet government, and when four years after the relationship with Communist China degraded (1961 is the Sino-Soviet split), a new plan on cultural cooperation was set in 1965 by the Union of Soviet Architects. It aimed to demonstrate further progress in opening towards a bigger international cooperation scale by (1) informing each other about the conferences, meetings, competitions, (2) exchanging books and magazines between cultural, scientific, and other institutions, (3) supporting individual trips of artists, etc. This relationship was maintained until the dissolution of the USSR in 1991.<sup>7</sup>

### People and technology

The architects and engineers in the Soviet Union could participate in the transfer of technologies through the national research institutes system. Although in the USSR, there was no private entrepreneurship, some renowned architects could still work in ateliers. Zholtovsky, Alabyan, Pashkov, and other chevaliers of Stalin's Prize retained offices until the 1950s. The resolution of the Council of Ministers of April 6, 1951, liquidated small architectural firms. Architects after graduation had to work in big research institutions, and often, their names were unknown for all the fame is to be attributed to the leaders or the country.

Some of the research institutes appear already in the first decades following the October Revolution. Following the resolution of the Council of Ministers of April 23, 1932, all hitherto existing organizations of artistic nature were to be abolished and reformed to prevent slowing the socialist movement. Thus the profile of Scientific Research Institutes diversified in the same years. In the mid-1950s, more than 30 Research Institutes were developing new ideas for all sorts of projects. From at earliest 1940, a number of construction institutions were created or reorganized. Some of the research institutes are shown in table 1.1.

**Table 1.1. Some construction-related research institutes**

Research institute name	Creation	Country/ project example
Research and Design Institute for Higher Education Facilities 'Giptovuz'	Founded Feb. 14, 1947	Burmese Technological Institute, Ethiopian Pedagogical Institute, Vietnamese Polytechnic Institute, Administration School in Bamako (Mali) and a stadium, a technical school in Afghanistan, Technological Institute in Indonesia (Bandung), Mongolian Agricultural Institute, Gas and Oil Institute in Algeria, School of Forests in Cameroon, Tunisian National Technical Institute.
Soyuzmetalstroy (The Research Institute of Metallic Structures)	Founded 1919	Technical documentation for machinery, metallurgic factory, and others for India, Romania, Turkey, Indonesia, Bulgaria, Poland, and China.

<sup>6</sup> GARF P5475 33 2054, 2202

<sup>7</sup> RGALI 674-4 766

Santekhproect (The Research and Design Institute of Sewage and Water Supply)	1957	Heavy industry factory in China.
Central Research and Design Institute for Type and Experimental Design of Sanatoriums and Resorts	From 1945	Housing and embassies in Egypt and Yugoslavia
The All-Union Research Institute for Sports Facilities	From 1953	The Palace of Culture and Science in Warsaw, a hotel and stadiums in Yangon, Myanmar
Leningrad Research Institute of City Planning	1929	Hanoi master plan (1973-1980).
Source: <a href="http://guides.eastview.com/browse/guidebook.html?bid=143&amp;sid=28626">http://guides.eastview.com/browse/guidebook.html?bid=143&amp;sid=28626</a>		

The research profiles were separated, and each was in charge of developing the ideas of socialist city planning, housing, educational facilities, roads, bridges, and others. These institutions were in charge of delivering projects during foreign cooperation fully from 1956. Soyuzmetalstroï (Metallic Contractions Company and Research Institute (1919~) delivered project documentation for big sale machinery, metallurgic plants and other facilities of a kind for India, Romania, Turkey, Indonesia, Bulgaria, Poland, and China; National project institute Santeckhproekt (1957~) developed the construction documentation for heavy industry factories in China; Central Institute of City Planning in 1953 delivered Changchun city development plan and others.

Although many of these institutes existed from the pre-war times, some were even established right after the revolution, yet only under Khrushchev, their capacities were to be used as much.

The early 1950s was the period when many research institutions were modified or created anew. They were in charge of projects of a specific profile. Thus, existing from 1951 State Research Institute (State All-Union Institute back in the Soviet era) of the Ministry of Communication of the USSR was in charge of constructing radio-houses and communication centers in many cities such as Ulaanbaatar, Baghdad, Pyongyang, Cuatro Campanias (Cuba), Rawalpindi (Pakistan) and Dhaka (Bangladesh).<sup>8</sup> Giprovuz creates 49 objects during the Cold War period.<sup>9</sup>

Transfer of technologies was often taking place as organized visits to the Soviet enterprises and significant construction sites, exhibitions organized by the Soviet Union as fairs dedicated to the achievements of Soviet engineering, architecture, machinery, or agriculture. For instance, the model of the Moscow University building was exhibited in Beijing around 1954, or an exhibition of cranes for Korean workers was held at the Industrial and Agricultural Exhibition in Pyongyang in 1959. Local workers, architects, engineers, and politicians could thus learn about innovations in the related fields. Another way used to transfer the technologies was the nurturing of local specialists and educators. The report of the Moscow Institute of Technology delegation about the educational program at Hanoi Technical University in 1959 is an example of such cooperation. In more detail, the contribution of Soviet educators will be discussed in Chapter 3.

## Money flow

What best illustrates the setting of the architectural design execution in the USSR can be well seen if analyzing the building of Comecon (The Council for Mutual Economic Assistance) as the ultimate

<sup>8</sup> RGANTD 73/R - 501, 263.

<sup>9</sup> RGANTD Fond P-621 data

managing structure. Comecon or CMEA was created in 1949 and, with years, developed a standardization system that provided homogeneity of technical documentation, material production, and supply between different actors within the Soviet zone of influence. Meetings were held every five years to provide adjustment of norms and standards to the latest updates. Although there is a tendency in the West to see Comecon as mirroring the OECD, OEEC, the European Community, and others, it had intrinsic qualities that affected not only the inner functioning but also the relationship with the world. Comecon provided the Soviet Union with a dominating position regarding smaller countries, yet it (1) secured access to the inner market of the Union and its cooperation target markets; (2) stable supply of relatively cheap raw material and energy; (3) preferably free transfer of technology, combined research, and the like.

On March 5, 1946, when Winston Churchill claimed the iron curtain to have descended across the continent [Eurasia] and in 1947, the first countries of future Eastern block refused the “glove” or the Marshall Plan. The Soviet Union, as a country capable of restraining the appetites of the United States and launching one of the first proxy-wars in Korea, its GDP in the 1950s is at its highest for the period when statistical data exists, 1885-1900 (table 1.3).

**Table 1.2. Imperial Russia, USSR, and Post-Soviet Russia: Growth Rates of GDP**

Country	Period	GDP
Old Russia	1885-1900	3,5
	1900-1913	3,2
USSR	1928-1940	4,6
	1950s	7,3
	1960s	4,6
	1971-1975	3,5
	1976-1980	1,2
	1981-1985	1,5
	1986-1990	0,1
Post-Soviet Russia	1990-1998	-6,7
	1999-2000	5.8

Source: Vitali A. Meliantsev, "Russia's Comparative Economic Development in the Long Run" Social Evolution & History, vol. 3, no. 1, (Moscow, 2004), 106-136. <https://cyberleninka.ru/article/n/russias-comparative-economic-development-in-the-long-run> (accessed December 16, 2018).

When Khrushchev took office in 1954, he decides to go on a tour, first meeting with Eisenhower in 1953 in the US, then to Southeast Asia. He initiated several ‘gift’ construction in the visited countries. The range of such donations stops around the 1960s and marks the shift from political influence instruments to market relations. In order to support this process, in opposition to Marshall Plan and its institutions such as World Bank and OECD later, Comecon or CMEA (the Council for Mutual Economic Assistance) was created in 1947 along with the International Bank of Economic Cooperation (1963). Countries joined CMEA in the order shown in table 1.4.

**Table 1.3. Full members of CMEA and the year of integration**

Bulgaria	1949	Mongolia	1962
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Cuba	1972	Poland	1949
Czechoslovakia	1949	Romania	1949
East Germany	1950	Vietnam	1978
Hungary	1949		
Source: "Germany (East)", Library of Congress Country Study, Appendix B: The Council for Mutual Economic Assistance Archived 2009-05-01 at the Wayback Machine			

The EU, in leverage to these measures through the Treaty of Rome, created in 1957 a European economic association known as the European Economic Community ( the European Community from 1993). Both economic spheres were created to weaken tensions in the aftermath of the Second World War, setting common customs with differing from the other world tariffs and free exchange within the community, with later on shared policies on the environment, research and technology, health, education, and other areas.<sup>10</sup>

Through these institutions, the standardization of the whole process of construction was to be reorganized<sup>11</sup> to facilitate the construction works, and the councils are being held consequently in every country-participant. A unified system of norms and regulations called SNIP was created along, that among others, included technical drawings vocabulary partially originated from Bauhaus Neufert's book. The norms were discussed and corrected at every session and protocol. The last norms were to be followed until 2000 (de facto ended 1985). The examples of international SNIP can be seen in Figure 1 (Standard CMEA 1001-78), a part dedicated to the module system use and its unification for architectural drawings. According to the document, it has been prepared by the Soviet delegation and discussed at the 47th session of CMEA; it should be applied accordingly by June 1980 in Vietnam, July 1980 in East Germany, 1980 in Poland, etc. It is supposed to be verified in 1985 in five years.

In 1983, more than 600 bilateral agreements became the result of this process. The number of construction was continually growing as well as geography expanding. Table 2 demonstrates the most popular fields of investment which were education at the first place, suggesting that the USSR was considering the construction of educational facilities itself to symbolize the enlightening power of socialism altogether with the necessity to introduce Russian language education, Soviet technical and architectural education sources (which is the case in Phnom Penh, Bamako or Hanoi) and with accent to developing socialist countries initially lacking education and not having any previous experience of 'western' education. The electric power industry has remained even today one of the most prominent trading marks of the USSR and Russia with a remarkable number of hydroelectric, nuclear, coal, and thermoelectric plants all other the globe. Transport and communication systems would be placed number 3 with almost 6000 km of railroads and 2220 km of highways and autoroutes. Under Khrushchev, only in Vietnam, 300 km of roads were covered with asphalt as, again, a gift. Until 1987 almost 3500 enterprises were planned, and more than 3000 built, with twice as many within the CMEA countries. This cooperation continued until the collapse of the Eastern bloc.

<sup>10</sup> "European Community" Def. <https://britannica.com>

<sup>11</sup> B.I Gorchyakov and Yu.M. Bazhenov Горчаков Г.И., Баженов Ю.М. "Stroitelnye materialy" Строительные материалы [Construction materials], 1986, 688.

**Table 1.4. Economic and technical cooperation of the Soviet Union. 1945 -1987. The total number of enterprises and other construction objects built/ being built in 1987 under Soviet economic cooperation abroad, by country:**

	Total enterprises		Industrial enterprises within	
	Contracted	Exploiting	Contracted	Exploiting
Total	5050	3342	2590	1879
<b>Socialist countries</b>	<b>3550</b>	<b>2460</b>	<b>2590</b>	<b>1879</b>
<b>COMECON Countries</b>	<b>3043</b>	<b>3023</b>	<b>1577</b>	<b>1136</b>
including:				
Albania	45	45	42	42
Bulgaria	370	249	299	207
Hungary	130	111	94	82
Vietnam	330	228	202	130
East Germany	77	53	49	32
Cuba	649	360	278	197
Mongolia	1022	650	290	199
Poland	205	151	157	116
Romania	160	135	130	106
Czechoslovakia	55	41	36	25
<b>Other socialist countries:</b>	<b>507</b>	<b>437</b>	<b>425</b>	<b>376</b>
including:				
China	265	256	251	243
North Korea	80	66	48	38
Laos	38	21	8	6
Yugoslavia	124	94	118	89
Developing countries	1480	866	577	359
including:				
Algeria	124	69	34	25
Angola	51	13	5	-
Afghanistan	223	118	52	26
Guinea	43	29	14	11
Egypt	106	97	46	38
Zambia	12	10	10	10
India	101	62	78	44
Iraq	98	79	52	41
Iran	123	91	89	68
Cambodia (Kampuchea)	42	23	13	6
Congo	22	12	5	2
Mali	17	13	3	1
Mozambique	43	8	13	1
Nigeria	11	2	2	-
Nepal	8	7	6	5
Pakistan	14	10	5	4
Syria	80	45	29	20
Somalia	36	16	12	5
Turkey	16	11	14	9
Ethiopia	56	18	24	6

\* Source: Based on data published in USSR Facts & Figures Annual, V.8, Academic International Press, 1984, 251.

**Table 1.6. Economic and technical cooperation of the Soviet Union. 1945 -1987. Total number of enterprises and other construction objects built/ being built by 1987 under Soviet economic cooperation abroad, by industry:**

	Total		including			
	Contracted	Exploiting	Socialist Countries of Europe		Developing Socialist Countries*	
			Contracted	Exploiting	Contracted	Exploiting
Total enterprises	5050	3342	1166	879	3599	2191
by type:						
Industries:	2590	1879	925	699	1403	929
Electric power industry	470	337	132	104	269	172

Oil refining Industry	77	55	48	40	25	11
Coal industry	132	78	44	29	65	28
Ferrous metallurgy	113	83	63	44	38	28
Non-ferrous metallurgy	156	111	92	75	49	21
Chemical industry	202	127	148	93	43	22
Machinery and metal processing	338	270	103	82	205	158
Construction materials industry	243	158	129	99	111	56
Light manufacturing	83	55	21	21	61	33
Food industry	343	273	39	34	301	236
Flour-cereal industry	139	118	41	34	98	84
Agriculture	705	394	28	17	675	375
Transport and communication	567	390	135	102	416	273
Housing and public utility	144	86	20	17	123	68
Education, culture, healthcare, sport facilities	735	423	11	10	722	411

Source: Based on data published in USSR Facts & Figures Annual, V.8, Academic International Press, 1984, 251.

## 1.2. Vocabulary of cooperation

### Urbanism of 1935-1953

As previously stated, the idea of a city existed in two major states: one - the postwar concept based on the 1930s tendencies of neoclassicism; two - the post-Stalin more international concept that followed the 20th Congress of the Communist Party of the Soviet Union decisions and aimed to more openness, functionality and more significant numbers.

The 1935-1953 paradigm was, first of all, forcibly implemented due to the gradual loss of artistic freedom among architects and urbanists. As Dmitry Khmel'nitsky puts it, Western architects were people of a free profession, whereas their counterparts in Russia had no right for free opinion and discussion.<sup>12</sup> Their work was subordinated to the ministerial bosses. Within such a freedom in the West, the governmental structures would be charged with detailed master plans, but architects would proceed according to their own ideas and would not be limited by anything besides the more or less soft (depending on the urbanist practice in each country) lines of the general plan. Their Soviet counterpart, voluntarily or out of opportunism, invested themselves in holistic city reconstruction projects.

The etalon of the 1935-1953 city became the Moscow reconstruction plan. Moscow served as a dramatic stage of power with its city plan of 1935 that tore open the cityscape, exposing it to wide-angled light, openness, and space for monumental design.<sup>13</sup> It was to demonstrate the vision of the Soviet capital that was set by Stalin after a long period of international cooperation ceased. The project of major Moscow reconstruction was launched by the Council of People's Commissars and

<sup>12</sup> Khmel'nitsky, *ibid.*

<sup>13</sup> Heather D. Dehaan, *Stalinist City Planning: Professionals, Performance, and Power*, 2013, 272.

the Central Committee of the Communist Party on July 10, 1935.<sup>14</sup> It was the major project that defined the development of Soviet urbanism with 2264 square meters of housing built in Moscow and about 800 sq.m. in Leningrad (Saint-Petersburg).<sup>15</sup> The reconstruction first planned in 1931 and took place against an economic crisis in the Western countries (1929-1933) with Moscow city doubling its previous size and reaching 60 hectares with a population of 2 million. The red lines of the project included urban remaking of the city into the capital with the Palace of the Soviets in the center (Le Corbusier also participates in the competition), housing developed along the riversides, green belts, sport facilities, central and ward parks development, a canal connecting Moscow river to Volga and the construction of the subway (40 km finished before the war) as large scale infrastructure projects.<sup>16</sup>

In 1925 Le Corbusier in *Urbanism* points out that the architecture of straight lines and angles is not only functional but also beautiful by its clarity and appropriate for any political regime for apolitical. Many utopian attempts of the 1920s-30s were pushing forward the ideas of Le Corbusier, *Géographie volontaire* — symbolic of the powerful centralized states. Additionally, it was a response to the decay of the rural lifestyle against the Great Depression in the US 1929 and the growth of the fascist movement and the fast and uncontrollable urbanization — new plan for London 1944.<sup>17</sup> However, in the USSR at the beginning of the Cold War, the original idea of Marxism as a science to face utopia and the USSR itself as the biggest social utopian experiment on Earth was already in decay, giving pace to contentless and very visual Stalinist City.

Michel Foucault gave a systematized image to the architectural and urban devices that urban actors and designers use to create cityscapes known under enclave, armature, and heterotopias in his 1960 work.<sup>18</sup> As David Grahame Shane in his book *Urban Design since 1945* explains “in 1945 Soviet urban designers and many of their Beaux-Art colleagues were deeply committed to the leaner design of the armature as the basic structuring device of the city [for] squares, enclaves, streets and armatures have served urban designers for centuries.”<sup>19</sup> The renowned Russian and Soviet architect, Alexey Shchusev in *Arkhitekturnaya Gazeta* in 1935 explains:

*“Social reconstruction of our cities demanded from our planners a deeper understanding of city planning theory. Simply seeking hygiene, bright living spaces and other building necessities are no longer enough for the Soviet realia, which demands that cities alongside hygienic conditions fulfilled the conditions of comfort and beauty reflecting the work going on in our era. Our society needs squares to gather, hold demonstrations, where through righteous flows of wide streets would masses move.”<sup>20</sup>*

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<sup>14</sup> Nataliya Bronivitskya Наталья Брoновицкая, “Pamyatniki arkhitektury moskvy. Akhiyektura Moskvу 1932-1941” Памятники архитектуры Москвы. Архитектура Москвы 1933-1941 [Moscow Architectural monuments], 2015, 46-48.

<sup>15</sup> Михаил Посохин Mikhail Posokhin, *Sovetskaya arkhitektura za 50 let* Советская архитектура за 50 лет [Soviet Architecture for the past 50 years], 1968, 4-8.

<sup>16</sup> Bronovitskya, *Pamyatniki*, 13-15.

<sup>17</sup> *ibid.* 40.

<sup>18</sup> Michel Foucault, “Des Espaces Autres” [Other spaces] in *Architecture/Mouvement/Continuité*, March 1967: <http://web.mit.edu/allanmc/www/foucault1.pdf> (accessed November 2, 2019)

<sup>19</sup> Grahame David Shane, *Urban Design Since 1945: A Global Perspective*, 2011, 52-53.

<sup>20</sup> Alexei Shusev, Алексей Щусев “Gorodskie ploshadi” Городские площади [City squares] in *Arkhitekturnaya gazeta* Архитектурная газета, April 18, 1935, [http://alyoshin.ru/Files/publika/mastera\\_sov\\_arch/mastera\\_sov\\_arch\\_1\\_013.html#-39](http://alyoshin.ru/Files/publika/mastera_sov_arch/mastera_sov_arch_1_013.html#-39) (accessed May 12, 2019)

There is a dissolution of “I” in a faceless “US” — bright examples are the projects for the Palace of the Soviets 1920-30s. As opposed to individual-oriented buildings of the past, the new society was to bring happiness through architectural spaces of worker’s clubs, Palaces and Houses of Culture - they were to become the “second home for each.”<sup>21</sup>

The Soviet government decided to showcase the new ideology in more cities via reconstruction of Stalingrad, Minsk, Kharkiv, and Kyiv. In his speech delivered at the All-Russian meeting of chief architects in Rostov, Arkady Mordvinov set the following rules to which the new city was to respond and what it needed to represent after the reconstruction:

1. The connection between the city and the environment and unveiling its beauty;
2. Presence of a clearly designed center, main street, railway station square;
3. The concentration of big scale, high rise administrative buildings on the major urban nodes;
4. The building of residential streets and quarters by complexes and ensembles;
5. Painting of buildings in fair colors;
6. Rational design and complex implementation of the engineering networks;
7. Ceaseless fight for the high quality of construction works.<sup>22</sup>

These principles led to the creation of holistic ensembles, and overpopulated centralizes in many cities of the early 1950s. Many war-torn cities were rebuilt according to these principles, many of which were developed by the Ministry of Economic Development *Gosplan*.<sup>23</sup> At the same time, the shortage of housing remained significant. Thus such ideologically driven urban scape entered in confrontation with “the spirit of the time.”

### Nikita Khrushchev’s switch

Radical changes initiated by Nikita Khrushchev’s decree of November 4, 1955, on Elimination of Excessiveness in design and construction” lead to the extreme growth of urbanization by 96% within thirty years and thus the epoch of mass housing. The preparation to this in future global revolution and dramatic, irreversible change in the built environment of many areas around the globe began eight years before the Khrushchev’s decree, Mikhail Posokhin, who later was made by Khrushchev the chief architect of Moscow, in 1947-1948 on the 5th street of the Sokolinaya Gora erected the first prefabricated apartment block with a steel structure followed by 17 similar buildings along the Khoroshevskoye highway between 1949-1952. In 1953 they built five of the same type of buildings but already ten-stories. In 1980 the same Mikhail Posokhin publish a united guide-book for mass industrial housing details for the complex contraction of Moscow. At this time 95% of all buildings were mass-produced.<sup>24</sup>

By 1959, 43% of the Soviet population lived in cities, which along with the policy of 1959-1965 on a broader focus on housing, led to the elaboration of principles to regulate the Soviet urban planning of the post-Stalin period. Those principles are:

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<sup>21</sup> *ibid.* 41

<sup>22</sup> *Materiyaly Vserossiyskogo soveshchaniya glavnykh arkhitektorov gorodov* Материалы Всероссийского совещания главных архитекторов городов [Record from the All-Russian meeting of chief architects], 1946, 6-7.

<sup>23</sup> *Projects of reconstructions by A.V. Vlasov, G.P.Golts. L.V. Guru from the 1944-1945 - Volgograd by Karo Alabyan, V. Simbirtsev, N.H.Polyakov, RGALI R-850, 8-4, files 43-51.*

<sup>24</sup> Владимир Ревзин, Vladimir Rezvin, *Moskva i ee glavnie arhitektory: ot Fiorovanti do Posokhina* Москва и ее главные архитекторы. От Фиораванти до Посохин [Moscow and its main architects: From Fiorovanti to Posokhin], 2015, 205-207.

- Absence of class inequality;
- Absence of opposition between the center and the periphery;
- Absence of private ownership.<sup>25</sup>

According to Kolli here, a well-designed city enhances its citizens' life and supports creative work. Kolli and his team developed a bunch of new ideas and redlines for city planning. This new system supposed: a division of the city in quarters by 30-50 thousand people and micro quarters or micro-district of 6-12 thousand, followed by a primary group of blockhouses to be inhabited by 1,5 - 2 thousand people; these housing blocks need to include primary services. The gradual switch towards typization of architecture, mostly in housing, was gradually taking place under the Stalin regime. However, Khrushchev's new policy turned the industry into a major production. Following the principles above, the government reserved the role to regulate urban planning and the building shape. Therefore, the "production" of type-housing was a State-level task. In 1956 Khrushchev government launched a series of all-union competitions on small type apartment buildings and wide-panned housing projects in 1958.<sup>26</sup> Finally, the most significant changes that influenced urban development of the new cities both in the USSR and abroad were the creation of a new approach to urban planning and the hegemony the prefabricated housing based on long-term prognosis all other the Socialist world. This was decided on the official meeting of the All-Union Council of City Planning in 1960.

### Brezhnev's "zastoi"

The Brezhnev's times commonly called "stagnation" (zastoi) in the Soviet Union overlap with 'normalized-era' in Czechoslovakia, post-Mao China, post-Tito Yugoslavia one may observe a certain struggle against the modernist austerity and one observe a return of formal complexity, ornament, and color in architecture.<sup>27</sup> The Tashkent earthquake of April 26, 1966, was perhaps the only architectural shock of Brezhnev's government. By the early 1980s when the government moves towards Perestroika, more open markets, and cooperation, the system settled is based on a theory, that embraced the development of the town planning, housing, and construction under conditions of social and technological progress.<sup>28</sup>

### Architectures and tyrannies

A Russian architectural historian, A.V.Ikonnikov in his work *Architecture of 20th Century: Utopias and Reality* describes the second wave of neoclassical architecture in Russia (the first takes place along with historicism in Europe in the 19th century) as architecture "at service of government" alongside other such architectures serving the Third Reich, Italian neoclassicism and rationalism, Spanish architecture of Franco and that of the United States in 1930. All these authoritarian architectures were involved as decoration, material manifestation or evidence of mythologies

<sup>25</sup> Kolli, Lecture, RGALI 674 4 File 612, 50-34.

<sup>26</sup> Philipp Meuser & Dmitry Zadorin, Филипп Мойзер & Дмитрий Задорин, *К типологии советского типового домостроения: Индустриальное жилищное строительство в СССР, 1955–1991* [Towards a typology type housing: Industrial approach to housing in the USSR], 2018, 14-15.

<sup>27</sup> Culic, *Second World Postmodernisms*, 2.

<sup>28</sup> "Foreword" to the USSR National Report on Planning New towns in *Planning new towns: national reports of the U.S. and the U.S.S.R.: a joint report of the U.S./U.S.S.R. New Towns Working Group under the "Agreement on Cooperation in the Field of Housing and Other Construction"*, 1981, 92.

adorning the governmental ideology. The whole system is only and solely possible under a totalitarian government against which the ideologies of the others have no chance to withstand.<sup>29</sup> The political discourse itself being essentially rhetorical form of discourse for it is a discourse aiming to persuasion and originating from the conflicting question what government form is best or whether there should be one at all, what should be laws and should there be such at all, reminds us of the dialectic between ideology and utopia in Paul Ricoeur.<sup>30</sup> The conflict demonstrated by Ricoeur through his allusion to the original Marxist philosophy consisted in Marxist tendency to promote the elimination of ideologies and return to the real-life vision while the government operation Marxism, such as Stalin, opt for one, and sometimes the only one socialist utopias on Earth falls into falsity by denying the “real utopia” beyond and without ideology.<sup>31</sup> Therefore, the whole process of reinforcing the Marxist-Leninist ideology within the Stalin regime utopias was merely leading to the real utopia, but to a simulacrum of utopia blurred and distorted by ideology. As Ricoeur puts in one of his work *Violence and Language* (1974), a tyranny is never a “mute exercise of force... it makes its way by seduction, persuasion, and flattery.”<sup>32</sup>

Going back here to Ikonnikov’s analysis where he places together the architectures of tyrannies of Franco, Hitler, Mussolini, and Stalin, yet a closer look at the architecture of these regimes reveals an artificiality of Ikonnikov’s position. Pedro Muguruza Otaño (1893-1952) from Madrid school and his Palacio de la Prensa, finished in 1928 or Palacio de la Música (1929) represent the “renewed classicism”<sup>33</sup> with some classical vocabulary, but distorting already proportions, giving his building a very modernist flavor through a tall monumental window with thick brick-filled blind and massive sides, top dynamic corniche floors, giving the whole building a flavor of New-York Art déco. The architecture of the 1940s when Franco sought to distance himself from gradually failing Nazis included a broader visionary of historicism to include the Italian Renaissance. The building of Zaragoza municipality (A. Acha, R. Magdalena, and M. Nasarre, 1941) although reminiscent of Florence palazzos, yet with certain proportion sending us to Weiner Modernism of Secession with scattered masses of geometric rays of metallic balcony, a row of tiny square windows, the alcove, a row of ground-floor arches and geometric horizontal rick keys of upper-level windows appeasing the monumentality.

The Reich architectural language was largely influenced the post-Olympic discourse of Albert Speer (1906-1981) dedicated to Berlin reconstruction plan of 1936-1943, in which he imagined Berlin is the new center of Europe and the World, “comparable only to Babylon or Rome” to where everyone would come for a once-in-a-lifetime pilgrimage “like a Muslim to Mecca.”<sup>34</sup> As Hitler was aware of the plan of Stalin for the Palace of the Soviets, Speer attempted to create an alternative to the biggest skyscraper in the World by achieving a uniqueness with his Dome building project (1937) after the original sketch by Adolf Hitler. The close presence of a Biedermeier style of German Green Revival in housing and suggestively the German archeological missions to Baghdad were in the background

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<sup>29</sup> A.V.Ikonnikov, A. B. Иконников. *Arkhitektura XX vek. Utopii i real'nost'* Архитектура XX века. Утопии и реальность [Architecture of the 21st century. Utopias and reality], 2001-2002, 402.

<sup>30</sup> David Pellauer & Bernard Dauenhauer, "Paul Ricoeur", The Stanford Encyclopedia of Philosophy (Winter 2016 Edition), Edward N. Zalta (ed.), <https://plato.stanford.edu/archives/win2016/entries/ricoeur/> (accessed October 28, 2019)

<sup>31</sup> James B. Steeves, “Utopia and Text: Ricoeur’s Critique of Ideology” in *Symposium*, IV, 2 (2000) 222.

<sup>32</sup> Ricoeur, Paul, “Violence and Language” in *Political and Social Essays*, ed. David Stewart and Joseph Bien, Athens, (Ohio University Press, 1974), 80.

<sup>33</sup> “Pedro Muguruza Otaño” in <https://thebiography.us/en/muguruza-otanno-pedro> (accessed October 14, 2019) and Alonso Pereira, José Ramón, *Cutting to metropolis, Madrid, 1898-1931*, 1985, 192.

<sup>34</sup> Ikonnikov, *Arkhitektura XX vek*, 23.

of modern classicism preserving certain significant elements of classic Greco-roman architecture in porticos and domes, yet with much modern puristically adorned orders.

Mussolini's design can be placed among the purist modernism-oriented neoclassical architectures. Augustan inspired apartment buildings in Piazza Augusto Imperatore in Rome (Vittorio Ballio Morpurgo, 1932-1938) with modernist doric order columns and plain facade, the Palace of Civilizations (G. Guerrini Bruno E. La Padula, Mario Romano, 1938-1943) showcased the official style the State known as *littorio* – “classical and monumental yet abstracted and stripped-down, infused with modern and traditional ideas.”<sup>35</sup>

In his reasoning on what he named rooted modernism, Roger Griffin argues that the “permutations of stripped classicism” for the fascists were neither nostalgia for the past nor a reaction against the Adolf Loos's Ornament and Crime (1908), but rather a “longing for a new civilization.”<sup>36</sup> If the attempt to place the Social Realist's utopia within the framework of this architectural utopias of fascism to the American GSA (General Services Administration) that spent \$50 million on construction of the neoclassical triangle in District of Columbia during the Great Depression,<sup>37</sup> we will see that it inscribes well in the utopian mythology-making with only minor divergences. Whether one observes the 1930s Communism and the Reich's Third Way ideology, the State looked back on the triumphant architectural styles of the past as the utopias of the 20th were never as close to becoming a reality as before the Second World War. Ikonnikov says the following about the Social Realist utopia:

*“By resembling a myth addresses a mythological time with its cyclic nature as if arguing: not only has the Golden Age been, it yet will be.”*<sup>38</sup>

He was meaning that the new communist society was seen to be going into eternity and can thus embrace everything the humanity created of the best. Although all the freedom of architectural speech was gone in 1932, it is still difficult to explain why many architects of the time took opportunistic positions. Ivan Nikolaev, for instance, who was a certain time also was the dean of the Architectural Department of Moscow Architectural Institute, who himself was in 1925 student of V. Vesnin and A. Kuznetsov, who was editor of *Sovremennaya architectural* (Contemporary architecture [magazine]) in 1926 and dedicated himself to developing the industrial architecture up to 1937, revealed himself as a fervent classicist and belonging to the rooted modernism. During his work on a fabric factory in Kayseri (Turkey) in the 1930s he, in his writings already mentioned the necessity of the connection between architecture and the “flow of history”, “deep composition reminiscent of the Greco-Roman classical school.”<sup>39</sup>

*“Neoclassicism is the universal language of forms, allowing the application of similar signs in different cultural contexts: same for Nazis, Italian Nazis, and the socialist utopia.”*<sup>40</sup>

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<sup>35</sup> Aristotle Kallis, “Futures Made Present: Architecture, Monument, and the Battle for the ‘Third Way’ in Fascist Italy” in *Fascism* 7 (2018) 49 (from) 45-79 and Harry Francis Mallgrave, *Modern Architectural Theory: A Historical Survey, 1673-1968*, 113.

<sup>36</sup> Roger Griffin, “Building the Visible Immortality of the Nation: The Centrality of ‘Rooted Modernism’ to the Third Reich’s Architectural New Order, in *Fascism* 7 (2018) 9-44 36.

<sup>37</sup> Architecture and Government, US General Services Administration: <https://www.gsa.gov/real-estate/historic-preservation/historic-building-stewardship/architecture-and-government> (accessed October 2, 2019)

<sup>38</sup> Ikonnikov, op.cit. 405

<sup>39</sup> Agranovich, Агранович, *Ivan Nikolaev, 1901-1979: Arkhitekt, Uchenyi, Pedagog*. Иван Николаев, 1901 - 1979: Архитектор. Ученый. Педагог [Ivan Nikolaev, architect, scientist, pedagog], 2002, 14-15.

<sup>40</sup> Ikonnikov, op.cit. 354



It was essential to either rebuild the destroyed the way it was or to built something new yet always creating symbols of peaceful coexistence of the postwar period. The Soviets themselves rebuilt old cities with a focus on their historical dominants: Novgorod (Alexey Shchusev, V. Lavrov), Pskov (N. Baranov). Main streets would often become symbols as Khreshchatyk street (1945-47) by A. Vlasov, A. Dobrovolsky, Lenina in Minsk (M. Parusnikov, M. Osmolsky, V. Korol). In Volgograd with its linear plan with an enfilade of squares leading to the Palace of the Soviets (1944-1947 by Karo Alabyan, B. Simbirtsev, N. Polyakov). Such typical elements as squares of Fallen Fighters, alleys of Heroes, squares for demonstrations created the new city center connected by a green belt to the landscape.<sup>41</sup>

In Eastern Europe, these Soviet projects principals were mirrored in Karl Marx Alley in Berlin (1951-1954 by R. Paulik, H. Hopp); an enfilade of parade squares received Magdeburg (1953), the new town of Eisenhuettenstadt (K. Loiht, started 1952), Sofia city plan by Luben Tonev 1944-1945 and others.

As discussed earlier, in the 1920s-1930s, new myths and ideology of the crowd develop in a tendency of overwhelming orderliness sound to sources of visual expressiveness that needed to be found in the cultural heritage. Hitler, Mussolini, Stalin were obsessed with respective historical styles in each country. Thus among the main principles of totalitarian urbanism was the creation of the ideological architectural center, to which not only the capital urbanism should be oriented but also all the cities and towns of the country: E.g. In Moscow Leningradskaya Hotel and Komsomolskaya ring station create a sort of entrance for the city. Similar projects in Berlin: South Railway station with the enormous square of 1000 by 300 meters, the triumphal arch of 110m, then towards the square of Adolf Hitler, there must have led an alley adorned with administrative buildings and the House of Nations. In Warsaw, the central railway station, the Palace of Culture and Science by Lev Rudnev, the Defilad Square, and streets Marshalovskaya and Marsalovski residential area played this role.

The question of architectural style, therefore, is more of a feature for the Stalin era. The Soviet Modernism that was surviving alongside mass-production of housing left only rare manifestations in forms of most important for each city public or administrative facility, beyond with the architectural thought of those who eventually worked abroad did not go.

### Public facilities as diplomacy for the technocratic Khrushchev's doctrine

As previously mentioned, during the very first stage of the Cold War, Soviet leaders eagerly participate in many international projects, joining and paying fees to international organizations. The shift from political propaganda to project implementation is another remarkable feature of the period. Hospitals, education facilities, and proletarian clubs The first interventions of the late 1940s and 1950s started with the construction of hospitals of the Red Cross, some built anew, some modernized. Of course, these first steps were officially presented as a charity. Thus the new buildings were built in Delhi (1955, given to India in 1956), Hanoi (1957, given to Vietnam in 1958), although in Pyongyang (1949) and Genzan (1950)<sup>42</sup> they were constructed already under Stalin and during the Korean war, that shows how the geographical understanding shifted from literally dependent countries to those that could simply adhere to the new ideology without any guarantee or even be only a trade partner.

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<sup>41</sup> Kosenkova, op.cit. 25.

<sup>42</sup> RGAE 501 9 231

These constructions can also be seen as the first trial to build the logistics for the international construction projects of which the Soviet Union will gradually become a visible part.

## The countryside

Through several questionable political and societal tools, the Comintern government could reach impressive goals of industrialization and militarization of the country with massive infrastructural, among others, project, those included: high dams, tunnels, airports, automobile and railroads, factories, electric and other plants, other structures.

The first big-scale infrastructural projects see the light in 1955 when the automobile road connects Ulaanbaatar to China. Authorized by the Council of Ministers on September 13, 1952, and streamed down to the Zheldorproekt (The Research Institutes for Rail and Automobile Roads) with a budget of five million rubles with a total length of 1200 km (750km in Mongolia and 450 km in China). A substantial research base for projects that were laid out in severe geological conditions supported such works. In this case, the project was in the mountains with a continental climate.

**Table 1.5. List of projects by Hidroproekt Research Institute, 1951-1989**

Project name	Country	Initiated capacity, MW	Year of commissioning of 1st unit
Selita hydropower plant	Albania	5,5	1951
Sup'un hydroelectric development	North Korea	700	1957
Ulsa hydroelectric station	Albania	25,6	1958
Sanmenxia hydroelectric development	China	1200	1961
Puli-Khumri hydroelectric station	Afghanistan	9	1962
Panauti hydroelectric station	Nepal	2,4	1964
Bhakra II (only powerhouse)	India	600	1965
High Aswan Dam	Egypt	2100	1967
Naglu hydroelectric development	Afghanistan	100	1968
Kasseb hydroelectric development	Tunisia	0,66	1968
Aras hydroelectric development and Myl-Mougan dam	Iran	22	1970
Thak-Ba hydroelectric development	Vietnam	120	1971
Mansour Eddahbi hydroelectric complex	Morocco	10	1972
Balimela (only power house)	India	480	1973
Moulay Youssef hydroelectric plant (only powerhouse)	Morocco	34	1974
Euphrates hydroelectric development	Syria	800	1974
Dokan hydroelectric station (only powerhouse)	Iraq	400	1978
Al-Bass hydroelectric development	Syria	81	1987
Chian hydroelectric development	Vietnam	400	1987
Malka Wakana hydroelectric development	Ethiopia	153	1988
Hoa Binh hydroelectric development	Vietnam	1920	1989

Al-Kadissia hydroelectric development	Iraq	660	1989
Kapanada hydroelectric development	Angola	520	under construction
Tehri hydroelectric development (hydroelectric power plant, pump storage plant, reregulating reservoir)	India	1000+1000+400	finished 2008
Tishrin hydroelectric development	Syria	630	at present unknown

Source: Hydroproject Association Abroad online industrial catalog <http://xn--80aajzhcnfck0a.xn--p1ai/PublicDocuments/0502001.pdf> (accessed January 10, 2019) Note: For the present list is published in English, most names were preserved as in the original document besides cases when the more common usage could be verified.

## Summary: towards an institutionalization

In terms of the soft power approach, the 1940s demonstrate a somewhat disorganized and hesitant behavior of the Soviet government that aimed at delivering to the foreign partners, images of the prosperous and successful life in the Soviet Union. Cinema and the News Agency TASS would be used for that purpose. However, from the 1950s the cooperation turns more liberal and to maintain a more significant number of contacts, less propagandistic, activities such as informing each other about the conferences, meetings, and competitions; exchanging books and magazines between cultural, scientific, and other institutions; supporting individual trips of artists will prevail. The gradual suppression of private entrepreneurship in architecture and its absence in terms of engineering led to the broader use of architectural enterprises. The scientific research institutes were from the 1950s to play the role of those enterprises. Starting in 1954, the number of scientists and specialists from different institutes and belonging to different fields of specialization. There was little change in terms of the technology transfer as an exchange of professional literature and exhibitions of the Soviet technological achievements did not substantially change. CMEA and IBEC facilitated the cooperation and made the presence of other partner-countries more critical.

In conclusion, such improvements were a response to the changing global conditions when the Soviet Union needed to create its new image on international platforms. The tool enabling the contribution on a larger scale was institutionalization. Moreover, joining the international organizations related to the global cooperation process was not merely a technical tool but also a means of introducing the Soviet Union as an internationally competitive country with a “normal” image in the global arena.

**Table 1.6. International cooperation tools in the 1940s and 50s**

	1940s	From the 1950s
People	Individuals and research institutes until 1951	Research Institutes
Technology	Visits, exhibitions, nurturing programs, local industry dev.	No change
Money	x	CMEA (1949), IBEC (1963)
Soft	Students delegations, Cinema, TASS	UIA (1948), UNESO (1954), WHO (1955)

# Chapter 2. Making Over of the Post World War II Built Environment in East Asia and Eastern Europe, 1946-1955

## 2.0 Introduction: the new role of the Soviet Union at the end of World War II

Towards the end of World War II, societies nurtured by the industrial revolution and colonialism irrevocably failed. The somewhat internationally undesired but decisive role of the Soviet Union that followed from the nuclear bomb tests and the outcome of the Korean War changed both the global geopolitical balance and social climate resulting in a competition of two parallel systems. This division was set with former British Prime Minister Winston Churchill's speech of March 5, 1946. Ever since the confrontation between the East and the West grows and takes shape in global institutions and international programs by both sides. The Marshall Plan and the Warsaw Pact become the footsteps of the international cooperation road map in Europe during the first post-war decade. And the economic aids to Seoul, Tokyo, and Manila — leverage in opposition to the spread of communism into East Asia.

Additionally, the growing importance of other communist leaders such as Josip Tito and Mao Zedong pushed Stalin to part with the original Lenin's idea and move towards a more authoritarian rule, meaning total submission of countries to Moscow. Stalin's government actively started the global submission of its new satellite-states via the fabrication of juridic cases and the execution of opposing leaders. By the end of 1948, Stalin liquidated the leaders of Poland, Hungary, Bulgaria, and his vision became the lingua franca of the social structure and the built environment for the coming decade. From the standpoint of international politics, Stalin's foreign policy that implied the use of international technical assistance consisted primarily of (1) consolidation of Soviet power in Eastern Europe; (2) establishment of firm ties with Communist China; (3) and development of a nuclear capability. Therefore, although the Korean question was not a part of Stalin's foreign policy, North Korea experienced dramatic influences of the Soviet regime in the 1950s.

## Eastern European and East Asia built environment at the end of the Second World War

The East European countries “liberated” at the end of the war were only theoretically remaining independent. Polish Workers Party, for instance, became a Moscow marionette, adhered to the nationalization of enterprises until 1956, was fighting the church.<sup>1</sup> The economic and physical condition of Asian countries was problematic. North Korea was massively in ruins, China — exhausted by wars and technologically dated, Mongolia — remaining a nomad land with a minor sign of urbanization. That being said, the urban and infrastructural breaches made clear by wars or by a

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<sup>1</sup> Steven Otfinski, *Poland*, 2009, 17.

Cultural means for international cooperation were mainly in the hands of VOKS — the Soviet international organization in charge of familiarization of the Soviet citizens with the cultural life of foreign countries and presentation of the Soviet achievements abroad. The information was purged from one side and selectively propagandist from the other. In 1951 the architectural section of VOKS was headed by the author of the Palace of Culture and Science in Warsaw, Lev Rudnev, among others the main Palladianism representatives of Stalinist Moscow and the author of the Moscow State University building Boris Iofan, the reconstructor of post-war Minsk and Smolensk, author of one of the “seven sisters” the hotel Ukraine — Arkady Mordvinov.<sup>3</sup>

In 1944 the National Committee of Construction under the Council of People’s Commissars launched the projects of reconstruction of the destroyed cities in the Soviet Union. A. Vlasov, G. Goltz, L.V. Rudnev, K. Alabyan, V. Simibirstev, N. Polyakov, were in charge of Volgograd (formerly Stalingrad).<sup>4</sup> Works were starting in Minsk, Rostov, Voronezh, and others. The architectural imagery of the reconstruction projects mainly followed 1935, the stylistic of Socialist Realism alongside the new myth that the USSR not only won the war but that the entire communist future was winning globally and needed to be celebrated. Therefore, the city was to represent social welfare and economic prosperity. It was representing the world as an arena of a heroic fight between the forces of progress and reaction.<sup>5</sup>

## 2.1. China on track of Soviet modernization

China was about to skip the capitalist stage of development to reach the state of the most developed society of communism as fast as possible. On February 14, 1950, Chairman Mao was in Moscow to sign with Josef Stalin the Treaty of Friendship, Alliance, and Mutual Assistance between the Soviet Union and the People's Republic of China and the Convention on the Soviet Union Granting Loan of some 300,000 000 US dollars.<sup>6</sup> Soviet specialists working on "restoring and developing China" initiated about fifty construction projects and later supervised them.<sup>7</sup>

In his letter to the Chairman of the Council of Ministers of the USSR, V.M.Molotov and in a report titled the Economic State of China and the Aims of the Five-year Development, both sent in 1952, the Chinese Foreign Minister, Zhou Enlai asks the Soviet government to consult them on the scale and the realization of the first five-year plan, in order to support which, the data on existing industries and standards of production, type projects of mines, factories, schools, hospitals and other objects, technical regulation of industrial and other enterprises, technical drawings of machines and generators, and so on were asked to be provided. Because of this first stage of cooperation between China and the USSR, only between 1955 and 1953, the construction of 58 factories, 40 coal mines, and 28 electric stations began.<sup>8</sup> The total number of projects set between Molotov and Zhou Enlai was 151, and the recent data revealed by Zhang Baichung round this number to 304, where eventually 149

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<sup>3</sup> RGALI 369 2 426 file 10.

<sup>4</sup> RGANTD Samara R-850, 8-4, files 43-51.

<sup>5</sup> A.V. Golubev, Голубев А.В. Мифологизированное сознание и внешний мир Mifologizirovannoe soznanie i vneshniy mir [Mythologized consciousness and the outer world], 1994, 106-118.

<sup>6</sup> Jung Chang & Jon Halliday, *Mao*, 2016, 386. and Wu K. Aitchen, *China and the Soviet Union*, 1967, 335.

<sup>7</sup> Wu, *ibid.*

<sup>8</sup> RGAE 4371 11 995, 95-139.

were completed, and 66 were ongoing, and one-third fell in the military sector.<sup>9</sup> On February 22, 1956, in Beijing, the Chairman of the Ministry of Construction Bo Yibo announced statements aiming to modernize China within the second five-year plan following the first stage of cooperation with the USSR.<sup>10</sup> Thus when the first stage of cooperation was ending in the late 1950s, in the Statement of the National Committee of the People's Republic, the following was proclaimed:

- To industrialize and fasten the construction through development and implementation of typization;
- To collect and apply the Soviet projects and analyze the 156 of those already built;
- Ministries need to systematize the existing materials quickly by type of constructions and details and delivered to the Ministry of Construction to further distribute the selected matter among the research institutes;
- All Ministries had to create research institutes to develop typical projects and create a global database;
- The closest attention has to be paid to the nurturing of local specialists by learning from the Soviet side on big-scale technical issues, and highly qualified specialists must join the practical study-abroad programs.<sup>11</sup>

In this the “closing” statement, the Chinese government showed themselves as having always considered the Soviet economical and technological aid as a matter of very brief cooperation which they needed to settle their track of the development within the newly emerging geopolitical conditions. As Zhang reasons it, Chinese engineers and constructors came eventually to analyze the Soviet design thought and method to further develop new independent products based on this information. As much as we can see it in Changchun automobile factory #1, the American-inspired Dong Feng Trucks soon replaced the production of the Soviet technology-originated Jie Fang trucks. The housing and urban development, architectural and aesthetic thought only during the first years of

Fig. 2-1. V. Preobrazhensky, Chinese architects delegation. Guests observing the South-West Moscow development plan, 1954 (source: RGALI)

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<sup>9</sup> Peng, M. (Ed.). “Dangdai Zhongguo De Jiben Jianshe” [The capital construction in contemporary China] (Vol. 1). Beijing: China Social Science Press, 1989) and Baichun Zhang, Jiuchun Zhang and Fang Yao, *Technology Transfer from the Soviet Union to the People's Republic of China*

1949–1966, in *Comparative Technology Transfer and Society* 4(2):105-167 (January 2006), 116.

<sup>10</sup> Zhang, *Technology Transfer*, 100.

<sup>11</sup> RGAE 4371 11 995, *ibid.*

cooperation resembled the Soviets for the sake of pure copying. Significant experience of assimilation over time eventually led to creating independent and only suggestively Soviet-resembling entities.<sup>12</sup>

Considering the short time when it was taking place, we may put the instance of international cooperation with China among the biggest, given the scale of industrialization to which the government was and could commit, based on the size and the resource base of China. When speaking of the impact on the Chinese built environment, we should consider it in at least two scales: the first and most commonly noticeable scale of the building and the street; the second — the industrial architecture, urban organization, and infrastructures. Although in most cases the research on Soviet projects would touch upon aesthetics, among the aforementioned one hundred eighty-two urban and construction interventions, there is only a handful of buildings. Therefore, the total impact must not be restricted to architectural pieces but include impacts at different levels of state, regional, industrial, urban and architectural development, where the projects can be seen as more socially and economically tangible projects.

## Sharing experience as the primary action

During the first five-year plan implementation, much effort was put into building the industrial plants and capital construction projects. In that regard, the qualification of Chinese specialists lacked expertise, and approximately 50% of the budget distributed among the ministries was spent on international projects. During the three years of the first five-year plan, 283 projects of high prolificness were finished, and the Soviet specialists supported 156 non-military of those. In terms of education, the set of architectural educational institutions created before 1949 was modified to copy the Soviet one where technical education was separated from the humanitarian, and the latter was largely neglected. During the years of cooperation, over 30,000 Chinese specialists were educated in Soviet Russia.

While many Chinese revolutionists and administration workers were already in Moscow and the Far East to learn about the revolution and cooperate with the Soviet government on that matter in the 1930s, after the People's Republic of China was proclaimed on February 14, 1949, the Soviet-Chinese relationship took more practical aspect of raising China to the most modern level. Chinese establishment committed to learning from the Soviet experience, and in 1953, the Chinese government was already copying the Soviet economic system launching their first five-year plan of economic development. Among its tasks was the development of industries and infrastructures: the industries would bring the fundamental modern goods at the modern scale of production, which the country did not have, such as automobiles or textiles; the infrastructures meant roads and bridges as much as radio and electrification of the country. These elements being indispensable for the economic and social stability after a range of war conflicts that had shattered the Chinese land for two decades.

As the stepping stone of modernization, the Soviet side started the in situ analysis, and several Chinese delegations came to visit Soviet enterprises and cities. On July 18, 1954, a delegation of Chinese architects visited Moscow on their way from Warsaw to Beijing. The Vice-Chairman of the Union of Chinese architects, the General Secretary, the Chief of Beijing Construction Department and others from September 22 through May 5 observed various spots in Moscow such as the permanent

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<sup>12</sup> Zhang, *op.cit.*, 102.

construction exhibition and the subway, the Research Institute of Construction Industry, the construction sites on Peschanaya Street, various construction enterprises, the Exhibition of Achievements of National Economy and others, between October 7 to 9 they visited Leningrad. The interest of the visiting side was not merely in observing the physical results of construction but learning about its process and management. For that reason, they first met with the ministerial representatives to clarify the organizational questions, with research institutes members to learn about innovations or new construction techniques. They visited enterprises producing elements for construction such as the Moscow Concrete Factory, “Nikolsky” Brick Factory, Moscow Platter factory, and a natural stone treatment factory in Vodniki. Only at the end of their visit, the Chinese delegation observed the newly built housing and new urban patterns and obtained the holistic vision of the city. Additionally, in Leningrad they visited both the historic sites and the new quarters such as the Victory Park and the new panel housing areas, some materials such as annual magazines on architecture and a book of A.Ginzburg on industrial production of housing and a guidebook on construction industry products by Leningradproekt research institute were also provided. During their visit to Leningrad, the engineers Lui Yulei and Thi Tangli consistently sought answers to the very fundamental questions such as the production of construction materials and the functioning of research institutes related to this process, research institutes developing construction machinery, reinforced concrete production.

Fig. 2-2. Report of the Soviet specialists sent to China in 1956 (RGALI)

A delegation of the Union of Soviet Architects headed by M.S. Sharonov, S.A. Permsky (the head of the Leningrad committee of construction and city planning), A.D. Motorin (head of Kharkiv Research Institute of Urban Planning), I.N. Rozhkova (the chief architect of Magnitogorsk) the chief architects of Baku and Tbilisi, visited China between August 25 and October 9, 1956. The work started with preliminary research aiming to recount Chinese cities in the aftermath of the civil war and the Japanese occupation. They organized the research topics around general information about the state of



constructions in China and its perspectives. Major problems were housing, public buildings, industry, agriculture, public spaces and vegetation, construction industry and material production, architectural education, and construction management. Considering these issues, the research team carried out recommendations upon the development of urban and rural fabric, architecture, infrastructure, professional education, and management. The Chinese architectural world was missing these elements of the new post-war development paradigm. For instance, in the 1950s, four cities counted two to four million inhabitants (Beijing, Shanghai, Guangzhou, and Hangzhou) with 95% of land constructed, Shanghai had poor greening, Beijing — small yards (sometimes less than 1 sq. m per inhabitant).<sup>13</sup> Such conditions could not match the image of a “modern” city.

At the scale of the country, by the 1950s the coastal Eastern part was on the developed side, trading through the rivers and sea, yet it is in the West where the resources needed for industrial development were and those areas were in lack of urban and infrastructural development. According to the first five-years development plan a network of industrial cities based on existing schemes needed to be strung on the “cooperative industrial systems”<sup>14</sup> with a population ranging from 300 to 500 thousand people. Smaller industrial towns like those built in the 1920s around certain resource bases or enterprises did not match the realities of post-war modernization. Examples of Magnitogorsk, Angarsk, Zaporizhia in the USSR had shown that smaller size towns were a priori meaningless and would grow to a regular big city size. For that reason, the construction and planning of facilities satisfying the bigger city needs were considered for the Chinese development plan and the Chinese Urban Planning Department started to develop such cities as Lanzhou, Baotou, and others.<sup>15</sup>

Overpopulation, extreme density, absence of road network prompt to public transportation, dispersed craftsmen and the necessity to gather them in closer neighborhoods, extensive use of city land mobilized East coast city development. In this regard, the main idea introduced by Soviet specialists was the concept of city-industry. Already in the 1930s Soviet Union, there was a lot of enthusiasm about the development of socialist cities around industrial facilities. Similarly, in China, the Soviet specialists were against craftsmanship and were promoting industrial production. Such economic activity would at least demand land and a new transportation network.

The enthusiasm of the Chinese government regarding industrialization was understandable yet somewhat disorganized. In many cities where the industrial zones were already well developed such as Shanghai or Wuhan, more additional land was gradually being consumed, electric plants would be built in the centers of residential areas (in Nanjing for instance), the growth was unleashed and the elements of life comfort such as greening and landscaping neglected. This alerting for the Western-based understanding situation was pointed out by Soviet specialists Mukhin and Kravchuk, who among others, consulted the development of Shenyang, where they suggested laying out five new parks along the river and 6 million new trees to support the air quality in accordance with the number of inhabitants.

The Changchun automobile factory N1 and the First Automobile Works enterprise along with other factories’ projects were realized in Anshan, Wuhan, and other places. However, the housing area of

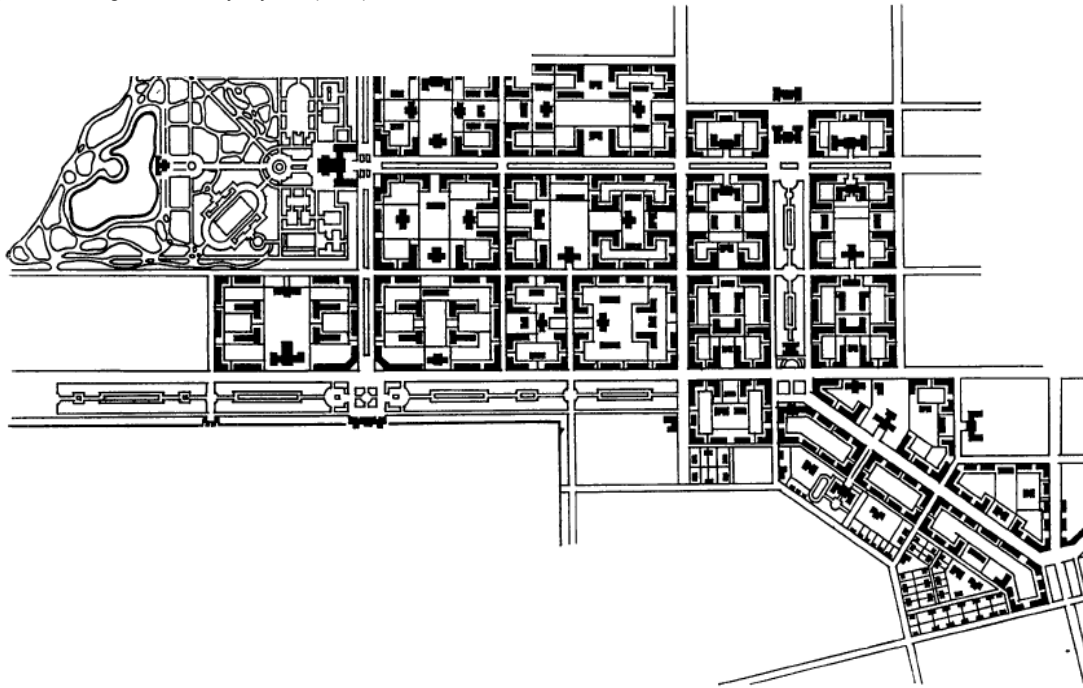
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<sup>13</sup> RGALI 674 3 1346

<sup>14</sup> *ibid.*

<sup>15</sup> These cities received impulse for development basing on different industries China was considering crucial. Baotou became the center of tank assembling industry and later many others, Harbin, Chengdu, Xian, Shenyang become centers of aviation industry.

Fig. 2-3. Changchun factory layout (BSE)



320 square meters in Changchun at least tripled that of Anshan and doubled that of Wuhan. Its layout was finalized in Moscow in 1953 by its author architect Yuri Sokolov and engineer P. Dubrovsky working at the National Research Institute of Urban Development Gorskroiproekt in Moscow.<sup>16</sup> The most notable project of a kind in the USSR was the Gorky automobile factory at Nizhny Novgorod (1931) and built by Kahn atelier reminds us of the 1920s foreign influence. The sober facade of the main gate was not the case for the architecture in China since the turning point of Socialist Realist architecture had not yet passed. Sokolov's project included classical symmetrical layout, the antique gates with doric order popular for the common architecture of entrances for parks and factories in Russia, a cultural center, a cinema, and a stadium were to respond to the needs of the worker as the privileged class. The ideologically superficial visual aspect of the factory put aside, it introduced a new function to the industrial architectural space. Stalinist architecture paradigm having deformed the original Fordian and constructivist approach to industrial architecture. Besides such new buildings as hospitals, canteens, and bathhouses, the factory was apparently built to be a self-sufficient entity with its own railway station, bakeries, a farmers market, schools, a stadium, a cinema, a hair salon, a kindergarten, a pharmacy, shops, a park and a community center known as the House of Culture, and so on.<sup>17</sup> The situation in Chinese urbanized areas in the first years was alerting. And visibly the number of industries-related projects was prevalent, whereas the architectural and urban interventions often being in focus of general research was only the tip of the iceberg.

<sup>16</sup> RGANTD Samara R-147 6-4 file 410

<sup>17</sup> *ibid.* (from the micro-district plan annotation)

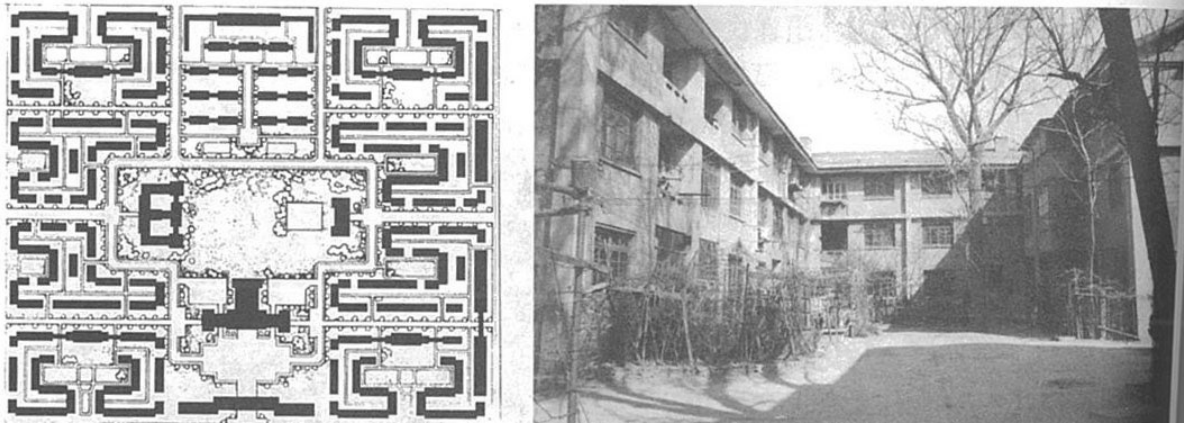


Fig. 2-4. Baiwanshuang residential area in Beijing

## Influences in architecture

The housing construction norms and growing construction efficiency were among the top goals of modernization in China. In 1955 the Chinese National Construction Committee for the first time developed the norms and standards for housing and surrounding facilities. Such norms are known to

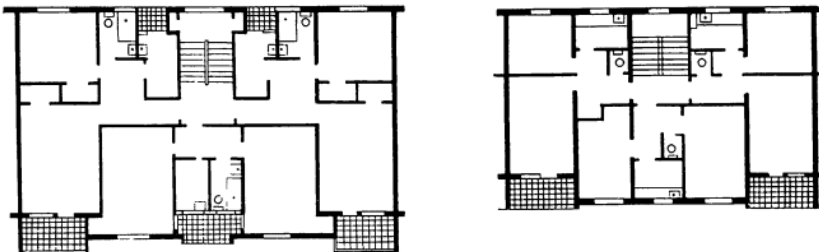


Fig. 2-5. A typical example of apartment plans (BSE)



Fig. 2-6 (Left). An element of the bridge in Wuhan, 1955—57 (Pan,197)

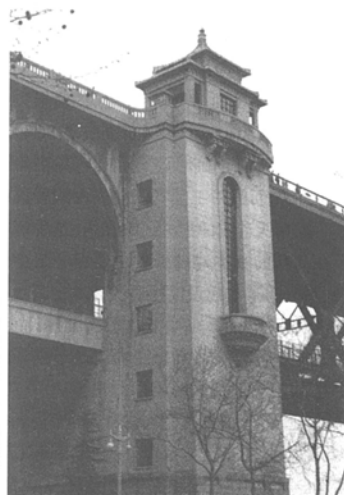


Fig. 2-7 (Right). The Four Ministries building, 1952-1955 (Zhou, 25)



Fig. 2-8. Guangzhou Gymnasium by Lin Keming, 1955—57 (Zhou, 197)



Fig. 2-9. Guangzhou exhibition center, 1959 (Zhou, 58)



Fig. 2-10. Beijing Gymnasium, 1953-55 (Pan, 170)



Fig. 2-11. Chongqing People's Auditorium, 1951-55 (Zou, 457)



Fig. 2-12. Beijing House of Radio  
by D.Chechulin, 1955-57  
(Zhang, 40)

Fig. 2-13, 14. Beijing exhibition  
center, 1954—58 (RGAE)

be largely derived from the Soviet experience. Before 1955, architects and engineers had to refer to various foreign sets of norms. From 1956 the government launched the mass housing construction program and from 1957 implemented mass construction. Before 1955 many type projects created for Moscow were directly copied.<sup>18</sup> The implementation of the USSR experience-based can be seen in the example of Baiwanshuang micro-district in Western Beijing and the new residential areas in Changchun. New houses had better orientation, entrance groups, the territories were functionally divided. However, the enthusiasm of the government also limited the architectural form to the principle known as “efficient, fast and possibly beautiful.” As a result, between 1955 and 1956, 1,905 million square meters were built in Beijing only.

In terms of style, the layout of Changchun FAW factory is noticeably reminiscent of the late 1930s as seen in Moscow Gorky Park for instance, as a part of Stalin Empire Style — a compilation of baroque, neoclassical, and Napoleonic architectures, in the latter years it developed an analogy with the flamboyant Gothic and was characterized by tall architectural forms, pointed and visibly

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<sup>18</sup> RGALI 674 3 1346, 46.

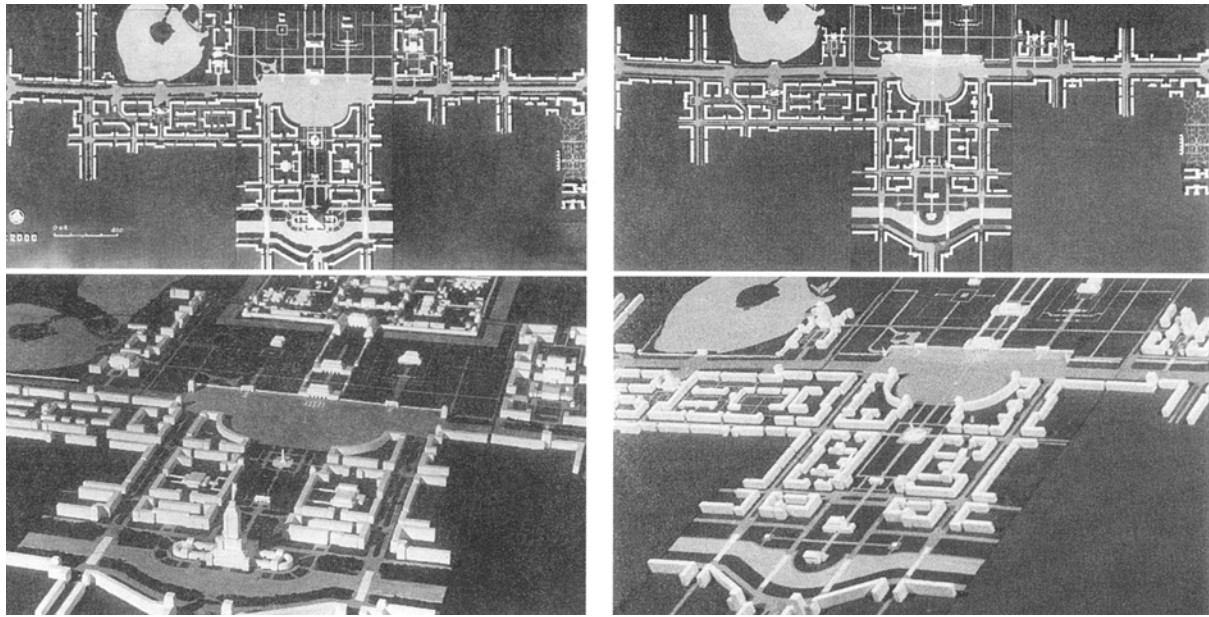


Fig. 2-15. Chang'an boulevard proposals in 1954 (Zheng, 64)

lightweight towards the tip because of excessive details and ornamentation, often completed with statues and spires. Other common examples are the series of the Palaces of Sino-Soviet Friendship. The consequence of this architectural wanderings will be in the quest's decade for stylistic independence, going through the style named Su, and another named the Big Roof. The bridge in Wuhan and the Four Ministries' buildings in Beijing are representative examples of the Big Roof. In contrast, the buildings in Guangzhou by Lin Keming<sup>19</sup> are the heritage of the European school in China with the apparent influence of Tony Garnier in proportion, massive windows, and regular masses of wall design and the portico. At the beginning of the 1950s, the confusion between the image of the new country and the quest for efficiency and the old school was remaining strong. Other examples of public buildings of the time by Chinese architects demonstrate a secure connection to traditional concepts and repetition of space balance between the existing and the new buildings. The Chongqing People's Auditorium and the Palace of Physical Education in Beijing are realized with the use of traditional ornaments and portico. By this time, the works of neoclassical architecture favored by Stalin were already banned, and even the Soviet delegation criticized the works of the earlier five years, including the Radio House by Dmitry Chechulin.

Thus to attain its goals, China started from imitating the Soviets, from the five-year planned economy and the ministerial system to the system of research institutes (309 specialists represented the design research institute in Shanghai, 92 architects were among them). However, after the Chinese delegation visited Moscow in 1954, the concept “fast, cost-effective and possibly beautiful” was replaced by “a lot, fast, well made and cost-effective” and the coming two years, by 1956, the costs decreased by 36%.<sup>20</sup> Therefore, architecture depended on the process of its production, and while China depended on the Soviet process, architecture enviably resembled yet gradual self-appropriation of the process brought confusion and gradual alienation of the original Soviet-originated visual of architecture.

<sup>19</sup> Lin Keming was a graduate of the École des beaux-arts de Lyon and the Institut d'architecture de Lyon, and in before his return to China was in the social circle of Tony Garnier. He has to his credit the authorship of the Palace of the Soviet-Chinese friendship in Guangzhou, however the sculptures that adorn the main entrance, identical to those in Shanghai were made by Lef Kerbel and Lev Muravin.

<sup>20</sup> RGALI 674 3 1346, 60.

## Influences in urbanism

When the Soviet specialists went to China, there was no notion of how much land it would need for a hospital of such quantity of beds or a school of as many classes, or for housing, or each category of factories. Therefore, the local built environment grew from the soviet norms directly. Hoa believes that it was a mistake to follow “the Soviet advice too closely”<sup>21</sup> as much in architecture as in the approach to urban proportions. By that time, the population of China had tripled already that of the Soviet Union’s, and the land distribution was far different. It is well known that already in the 1930s in Europe and the US, cars and public transportation had received a considerable development impulse. In response to that, the Moscow development plan of 1933 was to create a new urban fabric with a multilane road system to meet ‘the city of the future’ image. If Paris and Barcelona were the future cities at the beginning of the twentieth century, in 1930, it was New York and Moscow that had taken the lead. In 1955, however vast were lands occupied by the Chinese cities, the very traditional craftsmanship and lifestyle had given those a different look. Even Beijing and Shanghai were mostly represented by one or two-story buildings. The city road system was not well developed for there was no need for public transportation in general — most people worked near where they lived. Therefore, when in 1950, China stepped on the way of industrialization, the new factories demanded vaster territories, and all the processes of blockchain production and management needed to be geographically denser.

In 1959s China, city quarters in old cities were organized but varied a lot in the number of inhabitants, layout, and sizes. Cities had no concentrated centers. Public spaces were markets and adjacent to temples gates slots. Thus because, Beijing was the capital and a characteristic example of such an urban entity, its reconstruction turned into a project for the entire country. One of the first projects included the subway contracted on October 12, 1956, between the Ministry of Transport Construction and the Import Agency in Beijing.<sup>22</sup>

The Chang’An Avenue and the Tiananmen Square were turned into the skeleton of new Beijing and new Chinese urbanity. As if following Moscow image by Alexey Shchusev, the new square was to fit the “masses.” The standard layout to be seen in Pyongyang and Ulaanbaatar and suggested enclosure by local government buildings and enough space for parading. The Chang’An Avenue pierces the edge of the square adjacent to the Forbidden City to discharge the traffic. Both elements — the square and the vast avenue adorned by buildings serving as theatrical decor. The empty sides of buildings would not correspond to the framing of mass events. What was necessary is the “drop cloth” for “by deforming streets with irregular buildings, one deprives the workers of the possibility to communicate, gather, parade [...] in a socialist city; the street is always an influential factor in creating the city layout.”<sup>23</sup> The Chinese source adds to it a war-oriented usage of the wider roads. Therefore, the Chang’An Avenue width was enlarged to 110m. Similarly, the Tiananmen Square in the article of 1959 by Liang Sicheng, the new Tiananmen Square alongside the dismantlement of the city wall, the Gallery of One Thousand Steps and the Western Gates became enlargement corresponded to a social-architectural pattern change that can be represented as below:

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<sup>21</sup> Hoa, *Reconstruire La Chine*, 16.

<sup>22</sup> RGAE 365 6 1526, 1.

<sup>23</sup> Hmelnitsky, Хмельницкий, *Arkhitektura Stalina. Psihologiya i stil’* Архитектура Сталина. Психология и стиль [Stalin architecture. Phycology and style], 183-184.

human of the new society — political human — collective being proportions;

human of the old society — biological human — physical being proportions.<sup>24</sup>

By the 1950s in the Soviet Union, the regime attained an extreme level of bureaucratization, and it only highlighted the fact that little was left of the 1920s workers' privileged image. Now the new elites inevitably were creating the demand, which took shape in parting with laborer-oriented constructivist residences, clubs, public kitchens, and canteens in favor of monuments to the bureaucracy, the regime, and the elites. In Beijing, the new political regime needed similar to the Soviets typology of bureaucratic buildings to adorn the main boulevard of Mao's government.<sup>25</sup>

Finally, environmental considerations were also culturally different. For instance, in Beijing, there were only 1.4 sq.m of trees per citizen in 1956, and even less in Wuhan — only 0.6, Shanghai — 0.25. Parks used to belong to nobility, temples, or the Emperor and were enclosed by walls, not accessible to ordinary people. However, in these years, the streets were being rebuilt wider, and greening was added. New parks were laid out — the Southern park of Beijing (Paojojeting), the Szechuan Park in the North-West, and Lutang park. In addition to universities that had good greening, the riverfront and sport facilities areas started to change with up to 13 sq.m of accessible area per citizen instead of the original 1,4. Big parks construction began and many other locations, for instance, around the Xian Lake in Nanjing with 240 hectares of land and 350 of water bodies, 340 hectares of West Lake in Hangzhou. The new policy for the roads was improved, changing from 50-80m for the main roads and 25-30 for the secondary.

In the thirteen cities visited by the Soviet specialists, they took part in discussions about each city development plan. Throughout the first five-years plan, apartments, shops, hospitals, kindergartens, schools, and educational facilities, cinemas, sports facilities and workers' clubs of some total 67 million square meters were built. The clubs of workers or palaces of youth were developed to support the social education of youth, the positive spirits of the workers' community by providing them with venues of unsophisticated artistic activities, amateur sport meetings, and celebrations. Youth found a place for extra-curricular activities similarly represented by accessible and simple artistic practices and sports. The factories that originally were more or less neglected from the social life point of view, now had canteens, bathhouses, playgrounds for children thereby de-marginalizing certain classes as urban citizens.

Following the decision to liquidate “excesses in architectural design and construction” of 1955 and the 20th Congress of the Communist Party of the Soviet Union in 1956, not only did the stylistic approach to architecture change but also the necessity of mass and swift housing production was given priority. The former regime approach to housing, although produced pieces of high craftsmanship, could not provide enough square meters under the post-war reconstruction policy and the global urban growth due to a massive rural exodus. Therefore, during the visit of the Soviet specialists to China, the Chinese part made it clear about their concern and special attention was paid to the Soviet practice in the post-war mass housing production and the achievements of planning and edification of new territories on the one hand and the needs of the society were to be addressed by

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<sup>24</sup> Ivanova, Иванова, *Istoriya arkhitektury i gradostroitel'stva Kitaya*, История архитектуры и градостроительства Китая [History of Architecture and Urban Planning of China], 2012, 97.

<sup>25</sup> Anderson, *Russia*, 168.



such facilities as Western-style theaters, stadiums, libraries, shopping centers, parks on the other. Both types of contributions can be noticed in today's China.

## 2.2. North Korean picturesque

At the end of the Korean War, the Soviet Union and China began to support the modernization and reconstruction of industries and cities in North Korea. The situation was such that all industries together represented only one-fourth of the pre-war production with eight to seven industrial enterprises left and 90% of railway stations destroyed, with the total production of industries dropped to 65,8% in 1953 compared to 1949. After the meeting in Moscow between the Soviet government and Kim Il Sung on September 11–19, 1953, the Soviets provided technical cooperation in reconstruction and rehabilitation of the most important industrial facilities including the Supung Dam and a series of industries (iron and steel industry in Jeong Jin and Kim Chek, the cement plant in Synhori, etc.)<sup>26</sup>

The first decade was clearly dominated by Soviet influence. In his letter to the Union of Soviet Architects, Han Su Ho in August 1955, from the North Ham-Chen design bureau wrote:

*In our work, we learn a lot from you, our friends, the architects of Moscow. The books and journals you send us, give us a lot of strength [...] As the development of our economy demands it, a better mastery of architecture, we rely on your guidance and advice.*<sup>27</sup>

If at the end of 1946 there were 500 Japanese technicians working in the northern zone, 10,000 to 20,000 specialists from the USSR fully replaced them including technicians and foremen).<sup>28</sup> As the situation in North Korea was urgent, similarly to China, the political and economic model imitated that of the USSR: the five-years planning system for the national economy development was introduced, and all the construction institutions followed the conventional hierarchy of the Soviet model. The impossibility of infrastructural and urban initiatives defined the look of the country. Urban thought was dominated not only by the presence of the Soviet specialists but also by the fact that the chair of the Architectural Society and the chief architect of Pyongyang Kim Jeong Hi was a graduate of the chair of urban planning of Moscow Architectural Institute and praised Soviet post-war reconstruction projects. He seems to have his thesis supervisor Nikolay Polyakov, who worked on Kharkiv reconstruction and the dean Arkady Mordvinov, the author of many reconstruction projects in the best traditions of Stalinist architecture, influenced him. Building-wise first, the opinion towards mass construction remained negative as it was in the USSR. Nevertheless, with the change of the regime in Moscow, the Korean government realized the shortage of specialists and construction workers capable of dealing with such several local projects and the policy quickly changed to the prefabricated housing leaving the “socialist in substance and national in form” concept to the limited number of public and governmental buildings.

Similarly to China, the cooperation began with technical support, geological expertise of construction sites in 1949, then interrupted, restarted partially in 1952 and wholly by 1954. The first years were

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<sup>26</sup> Koh, “Socialism in One Zone,” 176, 247.

<sup>27</sup> RGALI 674 3 1329

<sup>28</sup> Koh, op.cit., 179.

- *keep the planning rational, providing thus the most suitable living conditions for the citizens, proper articulation of industrial and residential blocks, appropriate communication network, state and social institutions facilities.*
- *add greening and pay special attention to landscape architecture.*
- *full use of old buildings and improve the quality of architecture.*<sup>30</sup>

In meanwhile, the Soviet school in city reconstruction privileged:

- *smart location of the industrial zones, good transport communication between those industrial zones and the residential areas;*
- *green filter belts with 15 sq meters per inhabitant in large towns (only 0,25 in Shanghai in 1954). The belts were to be interconnected in a clear functional system protecting the natural flaws of the flora and fauna.*
- *residential blocks to be built as self-sufficient with healthcare facilities, kindergartens, nurseries, bathhouses, shops, etc.*
- *Master-plan to be based on the regional plan-making allowance for prospective development during the next 20-30 years. Such enormous spans were common for the Soviet projects and naturally failing for the planning either would not be accurate or agile.*<sup>31</sup>
- Under the supervision of Kim Jeong Hi, the eventual city saw itself built on both sides of the Taedong River. Korean architects sought to achieve what they called “the picturesque.” Thus the new center was to be situated on the western bank and pierced by the axis starting from Moranbong park to the Kim Il Sung Square of 3,6 ha girdled with the Government House and other civic buildings. The square was to be connected to the quay by a broad green. The entire city network, while preserving the original street layout, would be laid out as a radial-ring pattern reminiscent of the Moscow reconstruction plan of 1935.



Left to right: Fig. 2-17. Moranbong theater, Fig. 2-18. Stalin Alley, Fig. 2-19. Prefabricated housing construction (Pyongyang architectural guide, Meuser, 2012, 57., RGAKFD)

<sup>30</sup> RGALI 674 3 1528

<sup>31</sup> *ibid.*

The most important radial thoroughfares were to become the People's Army Street between the Railway Station Square and the State Art Theater and the Stalin's Avenue as an Army Street extension towards the Moranbong park. The residential areas along the streets kept a modest height of up to five stories. Other radial streets were Mao Zedong Avenue, Sanvonton Street and Bothonmung Street. Although in 1958 the provisions were made to construct annular streets of 25-30 meters wide connecting West Pyongyang to the Eastern industrial areas, current maps show that this plan was abandoned.

Although starting from the 1960s the Big roof style could be increasingly noticed in Pyongyang, a more independent development of the country and the political stagnation in the Soviet Union itself led to a new balance where more Chinese or East Germany influence started to penetrate the North Korean architectural environment and already by the 1970s the stylistic approach changed from the national form and socialist content to more modern aspects and a unique neoclassical and international style forms. Although the technical cooperation never ceased, we can only speak of the post-war reconstruction period as representative of the Soviet influence and contribution.

### 2.3. Warsaw historicism

The instance of Warsaw represents the Soviet international technology transfer in Eastern Europe due to a unique position of East-European states and the new balance of forces in the region at the end of the Second World War. Already in the prewar period, Russia began to dominate the urban modification processes in the Polish capital. However, in 1926, when Poland had already become independent from Russia, the Cathedral of Alexander Nevsky was demolished, and in 1927, local architects sought to rebuild and rethink the Saxon Square on the Saxon Axis to distance themselves from the former Russian influence. After 1935, the relationship between Poland and the USSR degraded, and the Nazis invaded Poland in 1939.

Under the Reich occupation, all official architectural and planning offices quit their activities and went underground. Many of them started to develop plans for reconstruction. The first such plan was accepted by the Union of the Faculty of Architecture of the Warsaw Polytechnic Institute headed by Lekh Nemoevsky as the head.<sup>32</sup> The charge of design and urban redevelopment was taken by an architectural and urban planning firm (PAU) of Simon and Helena Syrkus and the Bureau of Warsaw Regional Planning (Biuro Planu Regionu Warszawskiego), and in 1944, the Temporary Government decided to create the Department of Reconstruction with Józef Sigalin as its head. However, the first projects were abandoned as following the order of Adolf Hitler most part of the city, and primarily targeted historical monuments were destroyed. When the Red Army entered Warsaw in January 1945, the city laid in ruins, with 85% of buildings destroyed. Under the Soviet zone of influence, Poland lost its political independence. In 1945, the Soviet Commission on Reconstruction headed by Nikita Khrushchev arrived in Warsaw, and in 1946, the first group of Soviet architects visited the city. Then the city was visited by Hans Schmidt from Basel (who worked in USSR in 1931–37) and already took part in the project of urban redevelopment of the city in 1931 and knew its problems well; André Lecart from the French Ministry of Reconstruction and architect Paul Nelson; in January — February 1947, the chief architect of Amsterdam. It shows that the Soviet leaders could not persist in the reconstruction process and only via political tools tried to implement their architectural and urban thinking, which still had to be approved by the local architects.

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<sup>32</sup> Strelbitskya, Стрельбицкая, *Konfliktnye tendentsii v poslevoyennoi urbanistike, Конфликтные тенденции в послевоенной польской урбанистике [Conflicting tendencies in the postwar Polish urbanism]*, 2005.

Eventually, the Polish Workers Party weakness and lack of initiative led to enabling the Soviets to put pressure on the opposition to the Polish Socialist Party, and in 1948, they became the United Workers Party. The Socialist way of life started to be imposed through literature, theaters, cinema, following by an obligation to learn Russian in schools. TASS (Soviet International Information Agency) and the Polish Editorial Agency signed the propaganda-oriented contract in 1945, and finally, in March 1947, the Agreement on Technical and Scientific Cooperation was signed, enabling the reconstruction process to begin from 1949.

The system of institutions that needed to be set to back the reconstruction process was not entirely copied from the Soviet one for Polish professional elites did not lack proficiency and knowledge to rebuild the city, yet they needed funding, and their political will was not free anymore. This produced a mixed system with both the Soviet and the former Western-style offices. Thus on May 24, 1945, the Ministry of Reconstruction was created alongside its central organs: Main Department of Space planning, Science and Research Institute of Construction, Main Section of Measurements (May 17, 1947), Establishment of Workers Settlements (May 26, 1947).

The process of reconstruction was set up in Warsaw once the political situation stabilized, and the Soviet-selected government was inaugurated. The new president, Boleslaw Bierut, in his speech of July 3, 1949, to Party Congress claimed that “new Warsaw [was] to be the capital of the socialist state, [and they needed to] fight consciously and with deliberate diligence to give the town a [definite] ideological stamp.”<sup>33</sup> The six-years plan of reconstruction obliged to:

- Adhere to the old city plan to take advantage of existing communications;
- Place apartment buildings for workers in and around the city center and not the outskirts;
- Link housing to newly created enterprises (for instance, the light industry in Wola and the car factory in Praga)
- Therefore, integrate the housing in the schemes of architectural and urban layout carried out for the city center.<sup>34</sup>

Although due to the extreme situation in 1949, this plan focused on the functionality of the reconstruction process, the political situation would still force the architects to limit their creativity to a specific framework set by the socialist orientation of the new state. The first Polish six-year plan (1950-1955) provided 723,000 rooms equipped with kitchens.<sup>35</sup>

In 1955 the delegation of Poland with Yezhi Geiptor, the vice-president of the Union of Polish Architects, Lemekh Dombrovsky, professor of Wroslow Polytechnic University and eight other members visited the USSR. It might be essential to notice that the only professor from the Warsaw Polytechnic University worked in the field of agricultural construction. The research interest of the Polish delegation was somewhat similar to that of the Chinese with a focus on city layout and the architectural approach to squares, the large block construction for housing and school at Peschanaya Street, carcass buildings on Khoroshevskoye Street, the Moscow subway. The specific question to Polish specialists focused on the development of the river port adjacent to Moscow Khimki City at the circumference of the Moscow canal. During their visit to Kyiv, they observed the reconstruction of

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<sup>33</sup> J.Goldman, “Warsaw: Reconstruction as Propaganda”, 135-158.

<sup>34</sup> Strelbitskya, op.cit., 7.

<sup>35</sup> Åman, *Architecture and Ideology in Eastern Europe during the Stalin Era*, 82.



Fig. 2-20. Muranów, Karmelicka Street. 1966–1972 ( Uchowicz)



Fig. 2-21. Muranów, Nowolipki Street, the 1960s ( Uchowicz)



Fig. 2-22. Palace of Culture and Science (Aman, 133)

Khreshchatyk Street, the memorials, the governmental headquarters, the projects of the riverbanks and the stadiums of Khrushchev and Dinamo; in Tbilisi — the traditional architecture and Yerevan the governmental square and the monument to Stalin, the Stalin Avenue, Bagramyan, and Abovyan streets; the sanatoriums in Sochi (Ordzhonikidze, the governmental sanatorium of the Ministry of Culture and the sanatorium of the Union of Architects). Although these projects could influence the reconstruction of Warsaw, it was still primarily oriented to the scale given to the city by the Vistula River. Additionally, in terms of urbanism, they sought new ideas in urban growth, civil engineering and communications, urban plans implementation, and advice at the national research institute of urbanism. The main subject of housing was the development of housing types and technical progress, panel constructions, prefabrication, matters of project implementation, cooperation with construction workers, the works of the Mosproekt research institute.<sup>36</sup>

Willingly or not, during their visit to the Soviet rural areas, the Polish delegation paid attention to such problems as rural areas development and educational process in the USSR. It is unclear whether it was because the professional elites in Poland understood the limitations of the new regime upon

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<sup>36</sup> RGALI 674 3 1322

them. In 1949 the meeting of architects took place, and the values of Polish Socialist Realism were proclaimed. Three types of projects can be distinguished in postwar Warsaw.

1) When local architects followed the Socialist Realism ideas. One of the significant examples of Socialist Realism in Warsaw is the reconstruction of Muranów and Koło-Wschód (Koło-WSM) housing estates (fig. 2-20, 2-21).

2) The historical reconstruction and museumification of Stare Miasto (Old Town), the Saxon axis reconstruction as an example that followed the Italian painter Bernardo Bellotto paintings of the eighteenth century.<sup>37</sup>

3) Buildings by Soviet architects that represent overwhelming organizational patterns for the city and in Warsaw, this role was played by the central railway station, the Palace of Culture and Science (L. Rudnev, A. Khriakov, E. Rozhin, A. Velikanov), the Defilad Square and streets Marshalovskaya and Marsalovski residential areas. The ensemble of massive squares adorned with drapes of architecture and significant political building with a steeple (the tallest in town). On the opposite side — the Old tract reconstruction with a controlled sequence of viewpoints.

In terms of urbanism, the choices were limited. Thus a series of plans were developed for Warsaw. The first plan till 1947 (three years), based on the originally Polish school thought, was sharply criticized. The second eighteen-years plan of 1947-65 was similar to Ulaanbaatar. A city of Social Realism in Warsaw was to fulfill such conditions as:

- thinking the whole city as one organism;
- limitation of unbuilt and green lanes;
- absence of zoning (as leading to enclosures). Housing and industrial areas should not be separated in an obvious way. There must be more housing in the center, not the outskirts.
- no false de-urbanization;
- no museumification approach to reconstruction of historic buildings;
- with places for parades and manifestations;
- more monumental treatment of old urban decisions.

However, in 1956, the new master plan for Warsaw replaced the Social Realist one following the Thaw. It allowed local architects to abandon the hardware of Stalinist buildings and urban structures. It is another example showing how the conflict of professional expertise was more noticeable in Poland for the craftsmanship was so high that it did not allow the Soviet specialists to take part in the designing process behind the Palace of Culture. The international recognition was brought to them after the USSR changed the course to peaceful international coexistence. After the de-Stalinization, local architects gained rich experience, and Jan Zachwatowicz, Stanislaw Lorentz, Kazimierz Michałowski, amidst other renewed museologists, archeologists and architects in the 1960s became international experts in the areas of architectural research, documentation, and education.<sup>38</sup>

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<sup>37</sup> "Story of cities #28: how postwar Warsaw was rebuilt using 18th century paintings", The Guardian, <https://www.theguardian.com/cities/2016/apr/22/story-cities-warsaw-rebuilt-18th-century-paintings> (accessed December 25, 2019)

<sup>38</sup> Gzowska, "Exporting Working Patterns."

master plans of 1954, 1965, and 1975, in this dissertation, we limit ourselves to the events of the 1950s as they only represented the time when modernization process was firstly defined and launched.

<b>Table 2.4. First wave of projects by the Soviet Union in Ulaanbaatar</b>	
Project description	Year
Installation of central heating in Ulaanbaatar	
Film studio in Ulaanbaatar	1956
Wood processing factory	1958
Thermoelectric plant repairs	
Agroprocessing plant with machinery	
Water and wood treatment, forest, healthcare specialists workshops	1957-58
Electric plant expansion	1959
Canteens equipment workshop	1958
Toys production training	1958
Communications engineering training	1958
Assistance in the creation of the Ministry of Culture, the Ministry of Education, the Ministry of Justice, and the Ministry of Agriculture	from 1958
Palace of the Youth	1959
Equipment for phone lines installation in Ulaanbaatar	
New systems for sewage and water project	1957
Restaurants and canteens equipping and workshops	1959
Training of Mongolian specialists in the Russian Academy of Sciences	1958
Monuments restoration	1959
Training of specialists in the USSR	-
Soil investigation and treatment workshop	-
Source: RGAE	

The first step was again the refurbishing of old facilities and setting up essential networks. Around 1957 the old thermoelectric plant was renovated, followed by launching the central heating system for Ulaanbaatar, and the new systems of sewage and water supply were planned the same year.

The construction sites needed human resources, and those stated to be trained to work at new wood processing factories, maintain the new urban networks. Many pieces of training take place on a big scale around 1958-1959. The scope is almost exhaustive and covers personnel qualifications from education and training of the commissioner in the organizations of the Ministry of Culture, the Ministry of Education, the Ministry of Justice, the Ministry of Agriculture of USSR; training of Mongolian specialist in the Russian Academy of Sciences, specialists for soils and iced lands investigation and treatment to communication networks engineers training, restaurants, and canteens equipping and organization of the specialists's training such as toy-making training, and others.



Shaping society through the media and culture is the upper level of significant networks in the city. Thus those networks are represented by the first cinema studio to be built in Ulan-Bator in 1956, first phone lines of the city, and the essential places of social interaction such as the Palace of Youth, wide public spaces, workers clubs as characteristic of the socialist architectural spirit. The “Rostroiroyekt” research institute developed some type-projects for factories or seasonal plants.

As in other cases of the period, to enable local artisans to sustainably use the new technologies, a series of training programs and educational programs were launched in situ like trainings of Mongolian specialist in the Russian Academy of Sciences or education and training of the commissioner in the organizations of the Ministry of Culture and the Ministry of Education of the USSR, the Ministry of Justice, the Ministry of Agriculture. In 1958 Mongolian specialists visit Moscow and Leningrad factories.<sup>40</sup>

## 2.5. Summary and discussion: the limits of Soviet modernity

Whereas the earlier discussed vocabulary was largely reproduced in the recipient countries, China remained cautious. The distinct difference of the Soviet urban thinking was the conception of *ville achevée* [the finished city]<sup>41</sup> as opposed to the growth in postwar Europe (notably France) *schéma directeur* [the directing scheme] concept.<sup>42</sup>

International cooperation in the post-war period provided support by Soviet specialists supervision and direct labor force transfers in the foreign countries; first, it allowed the selected foreign delegations to observe infrastructural projects, industrial sites, cities after reconstruction, study several educational programs in Moscow, Kharkiv, and Leningrad and take part in training organized in the Soviet institutions or on industrial sites. With the diversification of foreign policy under Nikita Khrushchev, that training was also held in situ, and more attention was paid to enable the commissioner to sustain the received technologies on their own. As in the 1940-50s, this was not yet considered. The participation in the global international market of construction and technological transfer was not yet seen possible by the Soviet government, nor was a long-term prognosis made.

Therefore, the focus was on reinforcing communism-oriented governments and help them in manipulating the mass consciousness through installing symbols of power in the cities and streets in the traditions of the Antiquity (using similar rhythm, proportion, kinds of Greek forums like squares, mausoleums, people’s palaces). The architectural approach to the city was holistic and was a part of the ensemble architecture, which was merging with the city space and, in the tradition of Palladianism, would include in the holistic vision natural elements such as, primarily, rivers. Besides the socialist aesthetics, levels of modernization of the recipient countries demanded infrastructural improvement and industrial architecture to come first to ensure the sustainability of the foundation for modern economies. Further development of the social sphere, networks of information, and media were set as existential to controlling the masses.

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<sup>40</sup> RGAE A 403 9 1732

<sup>41</sup> Hoa, *op.cit.*, 68.

<sup>42</sup> As Hoa regards the problem from the 1981 perspective, he refers to a typical to French modern urban law notion, which yet was adopted only in 1967 by the law n° 67-1253 called “d’orientation foncière” (LOF)

Not only shows this period the split of political courses between the East and the West, but also the taking shape mutual decoherence of the architectural thought. While in the East, one could observe the strengthening of the “us” concept building around the praise of the public self and rejection of individuality in its center, the West pursued the opposite. Notably, Charles Archer, a staff member of the US National Resources Board, mentioned a “nobler embodiment of the democratic responsibility for the worth of the individual.”<sup>43</sup> Gradually, from 1945 the suburban population of the US grew from 17% in the pre-war period to almost 50% by 1970 and resulted in a complex set of issues related to the post-war migration, racial, and class inequalities. <sup>44</sup> Meanwhile, the sprawl of the suburban area in the socialist architectural discourse stayed banned for another decade.

Generally, the European culture of city planning in the post-war period represented a mixture of diverse domestic or America-tested concepts, most times very similar to the Soviet approach. Among them are parkways — quintessential to the City Beautiful and reused by Abercrombie for his plan of 1944 or yet self-sufficient Neighborhood units first appearing in Clarence Perry (1929) Regional Plan of New York and its environs. Unlike the Soviet pattern, the European plan was freer and marked by weaker regional obligations.

Alongside the architectural form with the visual focusing on the commoner-oriented doctrine of the 1930s and enforced with the victory celebration concept, we can observe the shift from the individual to mass consciousness in city planning and architecture going on beyond the borders of the USSR and in opposition to the Western concepts. We can characterize this phase of early socialist city development in the built environment history by the first transnational spread of the USSR-style nation-state celebration concept taking place in China, North Korea, and Mongolia. The end of the Stalin regime in 1953 marked by such concepts was after 1955 replaced by a Soviet-style modernist architecture partially generated by Khrushchev’s mass-architecture and a persevering anti-Stalin program aiming to fight against excessiveness in architecture.

While in Europe, where many cities were ravaged by war, the destruction was considered as an opportunity for a new breath for urban redevelopment aiming to solve a bunch of gradually assembled urban problems and incoherences via a meticulous action program within a bigger scale plan, in China, North Korea and Mongolia making a dramatic leap from feudalism to modernity, spacious interventions of above all, authoritarian expression ruled the ball. The International Congress of Architects held in Moscow in 1958 although shown how different was the Soviet and its allies approach to city reconstruction, it merited the voice.

In his 1942 new edition to *New Towns after the War* F.J. Osborn synthesized the problem of rebuilding as follows:

*“... we are not any of us satisfied with the old cities that we want to rebuild them just as they were. We have a chance to reply, and to [...] loosen our congestion, to substitute gracious and healthy surroundings for dark, drab, and debating streets, tenements, and slums, to give better working conditions for industry and greater security for agriculture, to think the requirements for our people as individuals, as families, as workers, as citizens, and to shape our cities and protect our countryside in the best interests of all”.*<sup>45</sup>

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<sup>43</sup> Bauman, “Visions of a Post-War City: A Perspective on Urban Planning in Philadelphia and the Nation, 1942-1945.” 1980 Retrieved from <http://www.jstor.org/stable/44403606> and Dehaan, *Stalinist City Planning*, 2013, 272.

<sup>44</sup> Becky & Wiese, “Suburbanization in the United States after 1945.” April 26, 2017. (Date of access 11 Jul. 2019, <<https://oxfordre.com/americanhistorical/view/10.1093/acrefore/9780199329175.001.0001/acrefore-9780199329175-e-64>>

<sup>45</sup> Osborn, *New Towns after the War*, 1943, 13.

Housing was remaining a big problem with 8,000,000 buildings from before 1918, which poor construction in various ways “was destructive for the inhabitant.” Partially because of different social “visions” of war in Europe and America, the destructions and the shortage of housing stock were foremost seen as an opportunity, whereas in Moscow, the most significant accent was put on a celebration of the victory and further marginalizing of the survived population through government-created mythology. The building industry and the building supplies industry needed an extension. The competition for supplies and contracts demanded adjustments. Each country was involved in cooperation with the Soviet Union at different levels of political freedom, professional knowledge in the construction field, and states of economic or technological advancement from mostly nomad Mongolia to highly skilled Poland. Depending on that, the scale of the interventions and will be more limited in countries with a stronger professional background.

From a contemporary perspective, the postwar global built environment changes brought about by the Soviet international cooperation happened at many crucial scales and visibly influenced the recipient countries’ long-term development. Just as many Soviet concepts such as green belts, or self-sufficient housing unit, and others were not different from their Western counterparts, however, due to many complex political and other reasons, their implementation with the ‘Soviet flavor’ was the only way to not only learn about those concepts but also apply them financially and technically. To conclude, this period in the European and East-Asian built environment history can be characterized as a period of nation-state victory celebration or the return of the nation-building that was promoted by Stalin’s regime, unlike the situation in the West, where the situation was more an opportunity to cope with old urban problems.

# Chapter 3. Capitalizing on Skills in the Built Environment of Southeast Asia and Northern Africa in 1956-1960s

## 3.0. Introduction: "Normalizing" the image of the Soviet Union in the global arena

The speech delivered by Amazasp Arutiunian, the Soviet delegate to the Sixteenth Session of the Economic and Social Council (ECOSOC) on July 15, 1953, demonstrated the new political agenda of the Soviet leaders to move away from "Stalin's bipolar conception of world politics [that] circumscribed Moscow's area of maneuver."<sup>1</sup> Additionally, the liberation movement in the colonies created several minor states with anti-imperialist governments taking over. Under such circumstances, the Soviet leaders sought to attain influence "beyond the immediate borders of the Soviet world [into] the "grey" areas between the Soviet and Western spheres of influence... [shifting] from a continental-oriented strategy to a freewheeling global one."<sup>2</sup> The completion of the post-war reconstruction and the end of reconstruction policy and the Soviet educational programs turning into growing numbers of engineers and technicians who could be spared for assignment abroad as part of the plan for major cultural-economic offensive can be named among the factors of the new type of relations between the Soviet Union and the Communist Parties in the "underdeveloped sector."<sup>3</sup>

To put in operation such a new policy, the new Soviet leaders also sought to use international organizations to carry out their new goals. Khrushchev was ambitious and considered himself a new type of leader, not for tyranny but for business. In the 1957 TV show *The Face of Nation*,<sup>4</sup> he called for more contacts and cooperation between the two nations. The primary platform since 1945 had remained the United Nations, after which followed the UNESCO in April 1954; the World Health Organization rejoined in 1955 and others. As Robert F. Byrnes puts it, the Soviets were seeking to show that they can function in a global arena as a "normal" country, thus creating a base for coexistence as one of the two global systems.<sup>5</sup>

As discussed in Chapter 2, the export of architecture and technologies was not a new thing per se: in the instance of America that in 1920-1945 was managing projects in the Latin American region, in China (until 1937) and even the Soviet Union itself before 1935. Nevertheless, it was difficult to imagine this going at a much bigger scale for the geopolitical reconsiderations of the post-war period suggested that neither in the West nor the East possessed a developed system of international institutions facilitating such a massive transfer of knowledge, money, labor or technology. Hence, at this time, leaders or governments would initiate cooperation in the socialist camp and by private actors under a standard foreign policy in the capitalist camp. The market for the socialist camp was

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<sup>1</sup> Rubinstein, *The Soviets in International Organizations*, 34.

<sup>2</sup> Rubinstein, *op.cit.*, 35-36.

<sup>3</sup> *ibid.*

<sup>4</sup> Anderson, *op.cit.*, 218.

<sup>5</sup> Byrnes, "Improved Manners and "Peaceful Coexistence, 1953-1956" in Campbell, "Arthur E. Adams (Ed.), Readings in Soviet Foreign Policy," 320-43.

only emerging. The first steps towards a more global technology transfer were made when the US proposed the Marshall Plan, and the countries of the Warsaw pact could receive loans to rebuild themselves. In 1954, Nikita Khrushchev and the Soviet political establishment realized that although they possessed new zones of control over several areas in Eastern Europe and the communist regimes in East Asia, they now had a chance to spread their influence over new countries (namely newly decolonized Indochina) or lose to NATO and the World bank. Thus the Soviet policy changes decisively in several ways:

- there was a shift from the doctrine of supporting the world socialist revolution to that of mutual co-existence of two systems;
- an equal and competitive system of institutions to articulate that co-existence (universal norms and vocabulary for documentation, bank operation system to process contracts, institutions of all levels from pre-construction investigation to constructor firms, local material production enterprises, transport enterprises) was improved;
- architecture-wise Socialist realism was abolished, for it demanded much more significant investments into high-quality materials that could not provide the necessary quantity of buildings.<sup>6</sup>

Thus, the Soviet Union showed a visible shift of attitude towards foreign relations seeking to reach out to more potential clients, independently of geographic and post-war circumstances, which in terms of the process of international cooperation led to a geographical and typological diversification of construction activities and replaced the post-war reconstruction programs.

As much as the Soviet leaders were overwhelmed by the outcomes of the Second World War, were they enthusiastic about the technological progress demonstrated by the first satellite Sputnik sent by the USSR in the open space in 1957 and Yuri Gagarin's orbit mission of 1961. Therefore, the general attitude of the technology transfer as well as oriented towards what was called the "scientific and technological revolution." Such a change was supposed to provide high-end facilities and make all people reach the communist society in only 20 years.

The scope countries, as selected for this research, represent the Middle East and Southeast Asia and the elements of Kremlin policy in their regard were (1) to promote the erosion of influence exercised by former colonial powers; (2) to support them in their confrontation with others; (3) to support "national democratic" and "anti-imperialist" movements even if local communist parties are to sacrifice (4) find the way into the Mediterranean and the Indian Ocean to realize former ambitions.<sup>7</sup>

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<sup>6</sup> Anderson, *ibid.*

<sup>7</sup> Roeder, "Soviet-American Relations in the 1980s," 168.



Fig. 3-1. Nikita Khrushchev (center) at a meeting of the United Nations General Assembly, New York City, 1960 (U.S. News & World Report Magazine Photograph Collection/Library of Congress, Washington, D.C., neg. no. LC-USZ62-134149)

### 3.1 Built environment of the scientific and technological progress

The radical changes of 1955 sacrificed architectural design to monetary economic expediency.<sup>8</sup> In 1960, the Party committed to building speedily 150 million new apartments in five years for the urban population was unceasingly growing, and many families were still living in slums and barracks inherited from the very Revolution and the Civil War times. The experiments with new residential quarters of fast-assembling and cheap housing in the 1950 and 1960s remained the subject of the domestic market, including the Soviet republics and the countries with marionette governments in the East of Europe largely. Kremlin considered countries stepping on the way of liberation with a less invasive approach for being out of the scope of direct political influence. The new policy aimed to promote the socialist way of living as that of advancing science and technology. Thus the typology of architectures for the technology transfer was mainly set to render this new "reality" visible and put it at the service of soft power.

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<sup>8</sup> Zile, *Programs and Problems of City Planning in the Soviet Union*, 1963, 50-52.

many others.<sup>16</sup> A program under the Ministry of Higher Education Facilities (Minvuz) of the USSR aimed to support technical education amidst developing countries.

In Hanoi, a range of five research chairs was created (dedicated to research in Geophysics, Electronics, Construction tests, Chemical technology) as parts of the Hanoi University of Science and Technology. Continuing the policy of towns-institutes inherited from the late Stalin times, the university complex was to gain a dominant role in the city and create an educational quarter.<sup>17</sup> One of the innovations introduced as a part of Soviet modernist architecture was the consideration of the local climate and environment. The main university building was oriented towards the Lake Bai-Mau, and the classrooms oriented North. When the functioning of CMEA and the international cooperation process advanced, however, the correlation to the local environment would be considered under the Soviet standards (e.g., Professional Technical School for the Ministry of Construction of Vietnam by O. Tchernyshev, 1978 and Social Sciences Institute of the Central Committee of the People's Democratic Party of Afghanistan by V. Bondarenko, 1982). In total, there have been built forty-six educational facilities (table 3.1).



Fig. 3-6. Yangon Technological University, 1961 (Yangon architecture guide, 354-355.)

A closer look at the architecture of educational space with the Technical School in Phnom Penh is a representative instance of the Soviet international cooperation in the region. In 1980 the buildings of

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<sup>16</sup> RGAE 365 6 300

<sup>17</sup> RGANTD R 621 3-4 240

1962 by S.Mikhaylov and V.P.Naumov were renovated by V.Lavrov and A. Solntsev from Giprovuz.<sup>18</sup> The Soviet part took the responsibility of the entire project, including the site development preparation and soil investigations. The new complex was decided to be built 3km away from the capital and would have the capacity of 920 students and 200 teachers and include the faculties of Architecture and Construction, Electrical Engineering, Mining, and Hydraulic. Amidst regular university building amenities, the project included technical laboratories supplied and equipped by the Soviet Union. In terms of designing, special attention was paid to the climatic condition of the region. The auditoriums and classes were designed to be naturally ventilated, the Southern parts of buildings were either conceived with sun-protecting galleries or equipped with brise-soleil. The project was supported by a collaborative work of eighteen Soviet specialists and supervisors and two hundred sixty local construction workers, which during thesis years became a common practice in order to involve the local labor market and avoid the mass presence of Soviet people abroad.

At all levels of contribution, be it big-scale infrastructural projects, educational or sport facilities, the participation of the Soviet Union during this period is much less ideological in terms of architectural or urban discourse. It mostly focuses on the achievements of technological progress and the built environment that such progress can deliver. Additionally, this happens against a background of a general global tendency of turning to futuristic ideas that were believed in many countries, including the Metabolism in Japan, to rejuvenate the disoriented post-war societies and economies with the outstanding achievement of the technological progress.

## 3.2. Force of education

Educating young political regimes has been a prominent part of the Soviet international cooperation agenda. On the one hand, the spread of education could introduce contemporary knowledge, high-end technologies, salubrity, and hygiene; on the other hand, it supported the spread of ideologies and lifestyles.

We can classify the ways of cooperation through education into two types and several subtypes. The first type is to host students and researches and educate them, providing supervising, scholarships, and housing. We can consider the subtypes as 1A — visiting professors and lecturers who come to introduce their topic but also communicate with the auditoria and create a professional network; 1B — foreign specialists involving in the local academic processes through lecturing or publishing; 1C — visiting delegations of professionals who can familiarize with the local experience, technologies, methods or/and to purchase technologies or products, or sign contracts of one-sided or bilateral cooperation; 1D — leaders and high bureaucrats who can promote the bilateral relations or organize the up-to-down schemes of information distribution; 1E — engaging and publishing research on the other.

The second type is the opposite, and it comprises sending people abroad. It can include: 2A — dislocating the teaching staff and trainers in the foreign country temporarily; 2B — organizing or reorganizing the educational institutions with or without; 2C — provide the foreign partner with

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<sup>18</sup> RGANTD R 621 11-4 2988



teaching materials, experimental materials, and stations, theme journals. Figure 3.7 shows the constant growth in numbers of Soviet specialists who were involved in the projects abroad.

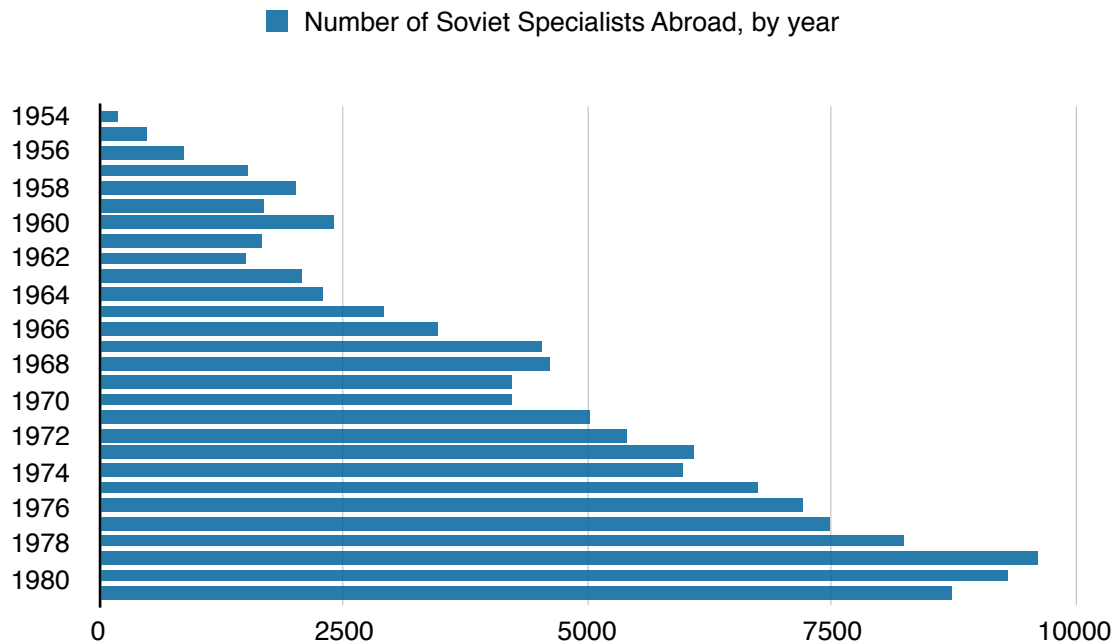


Figure 3-7. Exchanges of Scientists and Specialists, 1954-81 (Source: USSR Facts & Figures Annual, V.8, Academic Interantional Press, 1984, 251.

## Students and researches in the USSR

In one of the rare series of interviews with international students in architecture in Moscow published in the July 1956 number of the professional magazine *Arkhitektura SSSR* [Architecture of USSR] and summarized different topics, students were working on in Moscow. A student from China, Zhu Chan Zhong, defended his doctoral dissertation "The Experience of Soviet Cities in Reconstruction of City Centers" under professor N.Polyakov who in 1930–1949 belonged to the Chair of Public Buildings and also supervised the work of the future chief architect of Pyongyang Kim Jeong Hi. Zhong is said to be the Nanjing University graduate, having worked as an urbanist and an assistant professor of Peking University. His first article, *Main Features of Chinese Architecture*, had been published in the very same magazine (1955:8). Further on, the article introduces Li Tsai from the Architectural Department of Peking University) and E Moufang, who were researching housing. Li Tsai had been working on urban projects in Northern China and, at the time, bared interest in six to eight-story buildings. E. Moufang focused on lower-rise buildings. Among other students Frantisek Urbanek from Czech Republic, Ladislav Gornyak from Slovakia, Kim Gyu-Sik from North Korea (coming to Moscow to help restoring the postwar Korea), Ismail Zakuli from Albania and his friend Mosco Socrates, Fenke Eide from Hungary submitted his dissertation titled "On the development of



Figure 3-8. Figure 3-8. An international student writing "Moscow — the capital. Friendship — peace." (The Ministry of Education of Russia, <https://studyinrussia.ru/actual/articles/traditsii-obucheniya-inostrantsev-v-rossii/>)

Hungarian architecture" and became the director of the Institute of the Civil Construction Project, Bender Tiberiu worked in the National Committee of Construction and taught in the Bucharest Construction Institute. Another graduate, Ulman Irzhi (Czechoslovakia), gained a prize for the best theatre project in Brno. Succeeding a called Yusef Lutsky and Jerzy Andryusyuk from Poland and the Vietnamese graduates Do Huu and Ngo Dieu Tuin. The coming graduates Misha Tuvshingarlin from Mongolia, Kish Laiosh from Hungary, Germans — Uda Zareik and Lotar Kwasnitza and others.<sup>19</sup>

According to the only accessible today source — the list of dissertations of the Moscow Architectural Institute — the total number of international students who defended their dissertations was constantly growing between the 1960s and 1991 when it dropped dramatically. Significantly more research was done on housing (especially by Vietnamese students in the 1970s) and much less on monuments and theaters or electric plants. That suggests that the dissertations were a response to the current needs in the students' home countries where electric plants demanded too high expertise, and venues of entertainment were not a priority.

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<sup>19</sup> Arkhitektura SSSR, Архитектура СССР [Architecture of USSR], 56:7

for civil buildings and the acoustics, B.E. Ulitsky, on concrete and wooden bridges.<sup>23</sup> Finally, two professional The Material Resistance (M. Peliáev) and The Statics of Buildings (A.V. Darkov and I.V. Kuznetsov) translated to Vietnamese. The laboratories were equipped with high-end and indispensable 60-tons hydraulic compression head, the Charpy testing machine, the Brinell press.

The textual materials and documentation were provided from the late 1930s. In China, although the official "friendship" begins in 1951, the Huang He hydro-technical commission in 1937 demanded VOKS to provide them with the materials on the Volga-Moscow channel construction.<sup>24</sup> Some books would also arrive in China through the USSR. On December 21, 1937, the VOKS in response to the demand to the Saratov State Medical University provided Mr. Zheng Shu Xiao, the general consul in Novosibirsk with one volume of works and a copy of the General Catalogue for 1936-37, books from the University of California through the Bureau of Book Exchange.

### 3.3. Summary and discussion: towards a new ideology in international cooperation

Significant changes in the domestic and foreign policy under the Khrushchev government were a Soviet response to the current American foreign policy. It led to the creation of two systems for global international cooperation. The Soviet government shifted from the doctrine of supporting the world socialist revolution in a very closed continental spectrum to that of mutual co-existence of two systems and promotion of the Soviet way of life via demonstration of its technological progress in a freewheeling global scale. The international cooperation of the Soviet Union mirrored its national trends which were represented by the abandonment of the "architecture of excess" in favor of increasing housing capacities and urban amenities to face imminent growth of cities and achieve the "developed socialist" way of life via building capacities in technical education, sport, and leisure facilities. The beginning of international university exchange programs and joining UNESCO in 1954 brought the Soviet voice to the platform dedicated to the promotion of culture and education. Before that, students could rarely study at Soviet universities; they used to come through complex political treaties, and Soviet professors were less engaged in research in situ and teaching students in foreign countries for decades. The development of the built environment was undeniably politicized, and more actors appeared in the regions marked by the postwar liberalization movement. Their built environment was devastated, the economy weak, and the infrastructure was lacking or was of inferior quality. Indonesia attempted to show its presence in the region at the Fourth Asian Games but lacked technology and infrastructure. The Egyptian government sought to develop the largest in the region energy development project against a background of growing economic and military power of Syria and Israel. Myanmar and Cambodia did not serve the Soviet technological progress showcasing, yet could integrate the realm of developed socialism through technical education facilities, seldom banks or healthcare facilities. Although any freedom of political choice here is questionable, considering the absolute limitation of choice between the US and the Soviet Union patronage, one or another sufficiently functional system in the global construction realm created a possibility of choice.

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<sup>23</sup> *ibid.*, 15

<sup>24</sup> RGAE P5283 9 122

To strengthen its construction capacities, the USSR integrated the global construction market and reached the status of the second global economy possessing a competitive system of institutions to manage the cooperation. It could be achieved through the modernization of its intrinsic systems, which comprised a reformation of the Ministries and building new institutions and tools to practice architecture, city planning, and infrastructural development abroad more efficiently. The tools included universal norms and vocabulary for documentation, a banking operation system to process contracts, institutions at all levels of project implementation from the site investigation, design and construction to supporting local material production and transport companies, and some other aspects. It was regulated at the international level by the CMEA and later on by the IBEC. Thus in order to implement its technological achievements abroad, the system and the tools related to the construction process in the USSR underwent an essential inner reformation.

Judging by the nature of contracts concluded during those years, international cooperation in terms of construction can be synthesized as projects of high-profile engineering, sport, and leisure facilities, and educational facilities focused on technical knowledge. With educational and healthcare facilities, once built, needed the Soviet Union provided more extended support, hence educational programs and equipment for many years following the project completion and medical and teaching staff would be dislocated to support the functioning of the facilities for up to 10 years. The infrastructural projects, sport, and educational facilities were built in a context where no previous facility of a sort existed. Moreover, they either were in the trend like Gelora Bung Karno stadium in Jakarta or needed like the Aswan High Dam or university buildings in Cambodia or Vietnam. As with the growth of construction geography, Soviet specialists were to work in natural environments significantly different from their own, and the detached from reality Stalin architecture was abandoned. Their design became more considerate of local climate and the specificity of local construction materials and architectural details.

In comparison, Jeffrey Cody notices that the Europeans in the decades after the Second World War were witnessing a trend towards the overwhelming promotion of the American lifestyle in design, publication, architecture, and the US also saw themselves and their architecture as a vehicle of the cultural leadership. If between 1945 and the early 1950s, the US attitude towards the foreign-built environment consisted in building US military installations, oil refining, and steam plants or reclamation works and consulting about construction machinery, from the 1950s and further the Marshall Plan institutes began to serve the interests of American construction companies. Thus such companies working in chemical and oil refining engineering as Foster-Wheeler, Kellogg International, Procon, and others got constructs to rebuild the British field industry by 1953 or Knappen, Tippetts, Abbett and McCarthy rehabilitated the Corinth canal, several ports and installed hydraulic dams in Greece, Tigris dam in Iraq and others.<sup>25</sup>

The US "glove" created support for American companies to cover a bigger market. The existence of a healthy pluralism among market actors in the US enabled them to deliver higher quality projects with a very diverse geography. We may notice it that although the discourse promoting the American lifestyle and the consumerist culture was influential, it is more likely for societal choices and changes, rather than the government or ideologies controlled and imposed it. Such a comparison shows that the

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<sup>25</sup> Cody, Steinhardt, and Atkin, *Chinese Architecture and the Beaux-Arts*, 127, 138.

# Chapter 4. Resilience in the Post-cataclysmic Built Environment of Central Asia in the 1960s

## 4.0 Introduction: Questioning the integrity of the USSR

The sensitive status of former Turkestan always obliged the government to "sweeten" the existence of the Central Asian Republics not to a less extent by paying specific attention to the built environment. Smoother integration of those republics into the Soviet Union demanded massive investments of finance, technologies, and labor that found its reflection through the socialist way of urbanization and development of the cult monuments and hyperborean urban projects for the sake of glorification of the "empire" among the commoners. When the October Revolution stroke and transformed Russia from one Empire to another, the period of uncertainty concerning the future of the imperial Turkestan did not last long and was retaken by the Bolsheviks in 1918. In continuity with the nineteenth-century heritage policies inspired by Violet-le-Duc's Cult of the Monument, both Stalin and post-Stalin governments sought to produce active preservation cultures for the modern socialist society alongside new monuments. Turkestan, left on the outskirts of the new Soviet Empire, had not become fully integrated from Stalin's perspective, and the idea to transform the minds of people through the new socialist architecture and urbanism was more than ever relevant. This attitude grew strong notably within Khrushchev's, later Brezhnev's cultural agenda.<sup>1</sup> As Paul Stronski puts it, Russian architects and planners strived to integrate Tashkent and other Central Asian cities into the Soviet empire and "Tashkent, an ethnically diverse, primarily Muslim city [...] became the prototype for the Soviet-era reimagining of urban centers in Central Asia."<sup>2</sup> However, Tashkent was the only city with a history of many centuries, the others — Almaty (previously Verny), Bishkek (Frunze), Ashgabat appeared on the map only at the turn of the nineteenth century, Dushanbe — already during the Soviet period. All these cities received the new master plans to the extent that some of them, such as those of Almaty and Bishkek, resembled each other.

Another specificity of the period and the study region is notably in its direct submission to Moscow, unlike China, that had its government and would not ultimately follow the decisions of Kremlin. Such a position allowed Soviet architects and planners to implement their ideas with no restrictions.

### Tashkent Earthquake against a background of stagnation

On April 26, 1966, a series of 180 earthquakes that destroyed 2,860 sq.m of housing ravaged the city of Tashkent. Moreover, this was happening against a background of political changes within the Communist Party of the USSR and in continuity with the foreign policy left by Khrushchev's government. This being said, such large-scale construction works as the Aswan High Dam in Egypt,

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<sup>1</sup> Demchenko, "Decentralized Past," 64–80.

<sup>2</sup> Stronski, *Tashkent*, 2010, 350.

the Naglu hydraulic development in Afghanistan by the Hidroproekt Research Institute, were ongoing in 1967. The Soviet government, having entered a period of architectural austerity with a much wider geography of projects since Khrushchev, faced a certain additional creative stagnation under Brezhnev government because of introducing the new ideology of the Developed Socialism and the cult of Brezhnev. Besides the economic slowdown following the Cuban Missile Crisis of 1962, the oil and gas export-based economy became dominant from the 1970s.

In Tashkent, the new events of big-scale interventions were to happen for the first time after the postwar reconstruction for the scale of the disaster was remarkable, yet it demanded a shorter time of project realization and a more pragmatic approach. The bottom line of the reconstruction incorporated the development and specialization of all existing and necessary to the city spheres of economics through a comprehensive reconstruction of enterprises, crucial urban networks, creation of new green spaces, and an improved road system.

## Addressing the reconstruction with prefabricated postmodernism

The shortage of housing in the USSR and other countries of the block made the industrialization of construction and long-prognosis planning programs come to the front in the 1960s. All Socialist governments under the aegis of the Soviet Union promised to provide each citizen with "adequate dwelling."<sup>3</sup> The program was highly proliferating in the region and not disconnected from the global discourse on postmodernism. The need for the ornament or at least something that would respond to the local environment and keep the spirit of the land visible, for instance, was one of its manifestations. If one inscribed this into the co-called "Tulip Debate"<sup>4</sup> in Hungary alongside tropical postmodernism, instances of prefabricated housing in Tashkent seem no less a poor choice in the buildings such as No 67/70 on Bogdana Khmel'nitskogo with drawings by Nikolay Zharskiy or Beruni street apartment complex, which meanwhile the collaborative US-USSR report presented as a success of the new cities development. Although more effort was put into individual buildings or architectural

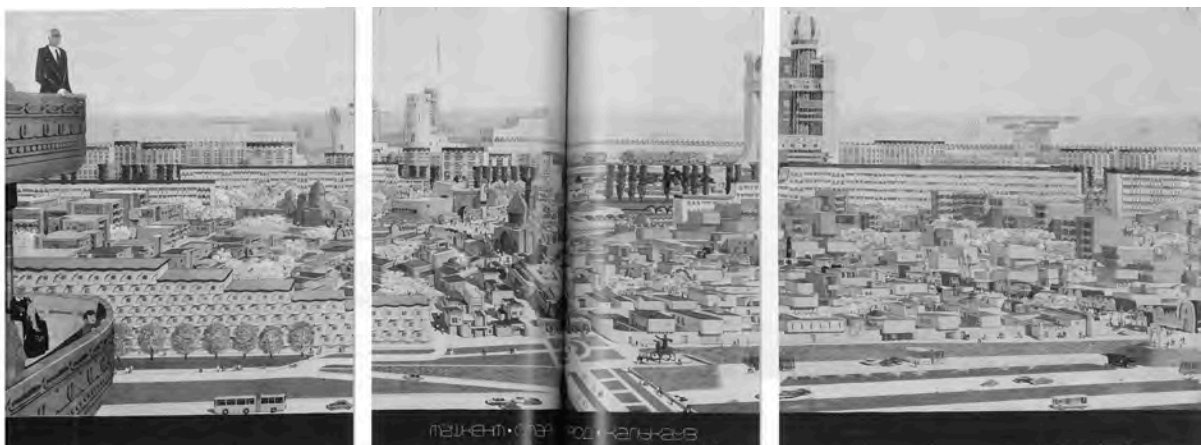


Fig. 4-1. Perspective view of a micro-district by S. Adylov, A.S. Kosinsky, et al. 1974-78 (Meuser, *Seismic Modernism*, 194-195)

<sup>3</sup> Virag, "The discounts of socialist modernity and the return of the ornament: the Tulip debate and the raise of organic architecture in postwar Hungary" in Kulić, *Second World Postmodernisms*, 50.

<sup>4</sup> Kulić, *Second World Postmodernisms*.

spaces such as the monumental Lenin Square or the Palace of People's Friendship, or the subway, housing diversification remained almost an impossible task. The picturesque perspectives of S. Adylov painted in 1974-1978 (fig. 4-1) never realized, yet he could fulfill his desire for organic modernism in Chorsu Bazaar, the building ensemble on Khalid Alimzhan Maidomni Street or in the towers by O. Aidinova, all built in the late 1980s.<sup>5</sup>

## Seismic urbanism

Seismic issues of such a scale were to be addressed for the first time since the postwar reconstruction period. Closer work with urbanism would be implemented in Afghani and Vietnamese capital modernization projects of the 1960s-80s. It was the first large-scale trial of the new (post-Stalinist) urbanism, which was also to test the Soviet economic prognosis capacity and the relevance of its modernist architectural approach. The long span development was one difference compared to the postwar reconstruction. More specifically, it meant that the urban, not architectural ensembles, would be built conceived holistically and at once. From the 1960s, they developed the plans for 25-30 years spans. From 1957, the Council of Minister's policy aimed at the growth of residential areas and the improvement of the construction quality. Beginning with this period, city planning, public spaces, monuments, and landmarks were designed case by case, but housing construction was fully industrialized.

### 4.1. Tashkent becoming Soviet

In the first years after the Revolution, the old capital of Russian imperial Turkestan demanded architecture to follow the social and economic shift. As Paul Stronski describes it, "the Soviets planned to transform Tashkent from a feudal city of the tsarist [time] into a flourishing garden replete with fountains, a lakeside resort, modern roadways, schools, hospitals, apartment buildings, and [...] factories."<sup>6</sup> The intention was to showcase the successful assimilation a city with different national identity in the socialist environment.

One of the first Soviet-made master plans for Tashkent was developed in the 1930s by a group of planners supervised by N.N.Semenov. It already was reminiscent of other main cities, including big scale squares, avenues, and the main governmental square of Tashkent. Additions made by A.I.Kuznetsov, in 1939 pointed at the primary role of the center and the necessity of reconnection with the old town. Hence, the new streets were made in the fabric of the old town and widened; however, the plan envisioned the city as a holistic and stagnant ensemble with no sign of long-term development thinking.

In the 1930s, the radical Salinisation of architecture and Socialist Realism mainly formed the center of New Tashkent. However, the earthquake of 1966 led to the creation of a new city. The transformation of the center for new Tashkent led to either total dismantlement of tsarist buildings or partial their replacement by more monumental multifunctional buildings. This action was reminiscent of the reconstruction of New Arbat when the original city structure was buried under the monumental complex of buildings as if pierced on a grandiose axis. Among examples of individual buildings that

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<sup>5</sup> Meuser, *Seismic Modernism*, 182–83, 196,197, 237.

<sup>6</sup> Stronski, op.cit.

dominated the urban fabric may be named the Palace of Peoples Friendship (E. Rozanov, E. Sukhanova, and others, engineers V. Krychevsky, I. Lentochnikov, and others, 1970). A.V. Ryabushkin, in his fundamental study *Arkhitektura SSSR. 1917-1987* [The Architecture of the USSR, 1917-1987] defines the final stage of Soviet presence in Uzbek architectural world, depicted in the Palace of People's Friendship:



Fig. 4-2. The People's Friendship Palace by E.Rozanov, V.Shestopalova, Y.Bolduchev, 1970 (postcard by Polyakov 1983).

*“The Lenin Palace of People's Friendship - remarkable phenomena of our 80s architecture - is the time of the quest for the new creative solutions related to the tradition. Here the classical foundations and the traditional motifs are genuinely reconsidered and interact with the innovative function and construction techniques. Different from our 30s-50s, we do not copy the past as we used to, for it is nonsense. [...] We aim to create a perfect, functional modern building with a strong identity, different from the architecture of pure functionalism...”<sup>7</sup>*

This new building, in a sense, represents Postmodernism as seen by Soviet architects before the 1980s. It is filled with socialist function and incarnates the very spirit of Uzbekistan in its decor. It also vividly illustrates the tendency to build public markers inside a socialist city where the prefabricated elements imprisoned the housing by poverty and likeness. The examples of 1935 built Gagarin Street in Chlnazar, the TDSK series of houses from prefabricated blocks, and the apartment blocks on Bogdana Khmel'nitskogo 69 in Tashkent, show how the housing development remained limited as compared to the monumental dominants inside the city. Whereas in the Palace of People's Friendship, the decoration dominates and even bears effects on the volume, making it look more lightweight as if representing the modernity in the desert, the apartment buildings are essentially the same as in Moscow. In the next series of the 1970s, the architects attempt to consider the climate conditions with pivoted apartments or deepen the flats and leave balconies open and shadowed with sharp arches slightly reminiscent of Louis Kahn's work in CEPT University in Ahmedabad. However,

<sup>7</sup> Vylinkin, Zhuravleva & Shishkina, Былинкин, Журавлев, Шишкина, *Sovremennaya sovetskaya arkhitektura 1955 - 1980*, Современная советская архитектура 1955—1980 гг. [Contemporary Soviet architecture], 1985, 215.





Fig. 4-5. Bogdana Khmel'nitskogo 69 (Meuser, 177)

in general practice, the maximum that the socialist economy could afford was the co-called firewall designs, traditionally with the use of monumental mosaics in tones of blue. More rarely can be noticed attempts to resurrect the traditional form of houses such as mahalla, the idea implemented in the District C-37. A large apartment complex comprises a range of low-rise individual houses, interconnected by verandas and creating a horizontal apartment wall boarded from the big avenue by apartment towers. The low horizontal blocks of houses resemble the traditional zigzagging dwellings of old Tashkent that provided certain areas of the yards with necessary shade at different periods of the day. The plans of the 1967 and 1980 also show how those commonly used dominants became less cost-effective along with the initially planned greening and the market and sparse green areas inside the micro-districts of residential quarters as represented on the plan of 1967 are sacrificed to more dense residential areas that came as a response to the growth of population.

Interestingly enough, the Japanese architect Kenzo Tange worked on a reconstruction project for Skopje one year earlier. One may suggest that in the case of Tashkent, planning a reconstruction at the scale of utopia could not happen in the Western World. The mid-60s became a new turn for city planners to think of large-scale concepts and architectural vocabulary. Such a scale was made possible in countries with totalitarian political regimes and absent private ownership. If for Tashkent reconstruction, Soviet planners attempted to rediscover the international style and make it more local adjusting it to both local environment and aesthetics, the design of Tange might have become a strong stimulus for the Soviet one as he was working in the country's capital that long ago started to question the Soviet leadership although could not confront it physically.



Fig. 4-6. Model of reconstruction, 1967 (Stroitel'stvo i arkhitektura Uzbekistana Строительство и Архитектура Узбекистана [Building and Architecture in Uzbekistan], 1967:5-6, 46f)



Fig. 4-7. Plan of reconstruction, 1980, (Meuser, 226-227 [modified])

## Kenzo Tange in Skopje

Tange<sup>8</sup> received the offer directly from the United Nations in January 1965 to work on the reconstruction plan for the capital of Yugoslav republic demolished by an earthquake of July 1963. Differently from Tashkent, the foreign countries and international organizations provided support to

<sup>8</sup> His office members who worked on this project included Arata Isozaki who was to lead the architects team with Sadao Watanabe and Yoshio Taniguchi

the Yugoslav government. The competition was organized around the city center proposal, which on purpose was left empty after the more general (regional) plan was drawn by a Greek firm Doxiadis Associates and a Polish architect Adolf Ciborowski, previously in charge of Warsaw reconstruction. The head of the supervising team for planning and reconstruction became Earnest Weismann. The competition involved three international design and four Yugoslav firms besides Tange.

Lin suggests that Tange introduced his idea of the "City Gate" from the Corbusian *Ville Contemporaine*, where a new hub was to be created via the installation of the gateway structure connecting the urban to outer transportation lines (rail, bus, car) including highways. The City Gate settlement was in multiple layers and included office towers, shops, hotels, restaurants, libraries, and exhibition halls. All connected to an elevated pedestrian system, functioning as the central axis and connecting the city to spaces of civic activity, such as the Republic Square, surrounded by municipal buildings and juxtaposing the Vardar River.<sup>9</sup> The relationship with space and surrounding nature was crucial for Tange.<sup>10</sup> The new blocks of apartment buildings were seen as ramparts to the survived historic city blocks (therefore the name the Wall City). These new apartment clusters placed close to business districted were supposed to revitalize the life in the city recovering from the disaster.<sup>11</sup>

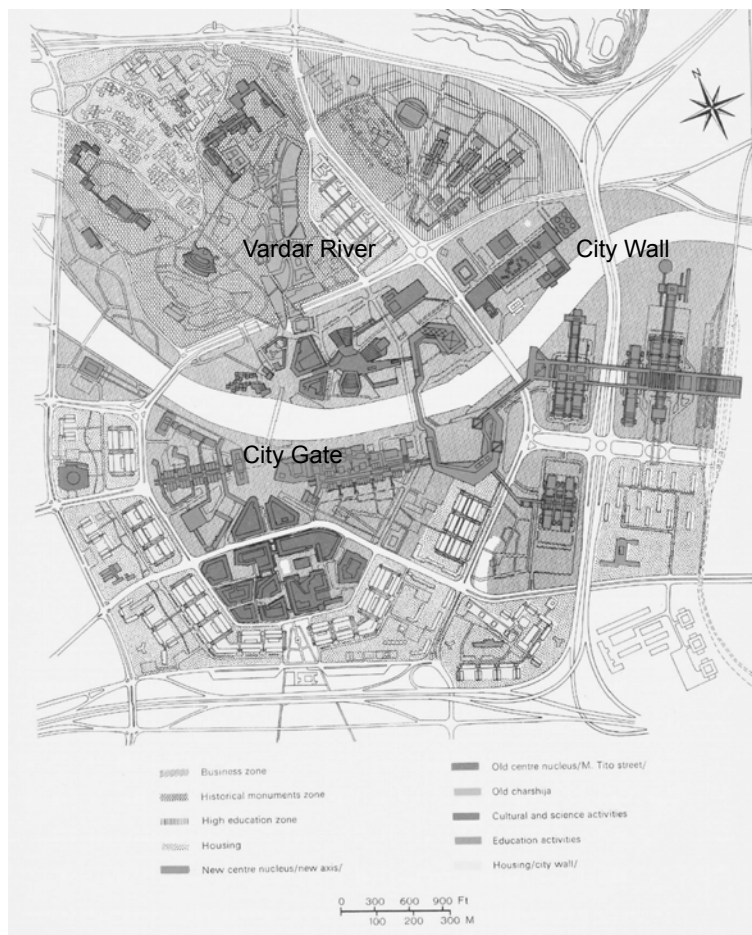


Fig. 4-8. The master plan for the reconstruction of Skopje, 1965, by Tange (Lozanovska, originally from *Skopje Resurgent*).

<sup>9</sup> Lin, *Kenzo Tange and the Metabolist Movement*, 188.

<sup>10</sup> Lozanovksa, "Kenzo Tange's Forgotten Master Plan for the Reconstruction of Skopje." (accessed Jan 17, 2020)

<sup>11</sup> Lin, *op.cit.*, 189.

Tange's work could be placed within the becoming more complex discourse, for instance, based on the return to classic vocabulary and somewhat related to Luis Khan's essay of 1960 called "Form and Architecture,"<sup>12</sup> where he envisioned his concepts of the "Viaduct Architecture" for the Philadelphia plan.<sup>13</sup> The whole theoretic process representing Tange's path as an architect and a thinker comes back to his plan of the Tokyo Bay of 1960, where he criticized the enclosed historical structure of Tokyo inappropriate for the city of the future and his Skopje plan where he is much more delicate with details, the historical circumstances and the landscape. Proper use of the river banks and the Kale Hill brought him a high appreciation of the jury. Ultimately, Tange sought to create a city in which the development of its parts would depend on the ultimate form. This ultimate form that comes to articulate the city became the City Wall and City Gate as architectural dominants.<sup>14</sup> In a sense, he dreamed of such a project for Skopje because conceptually and politically, it was possible since Yugoslavia was a socialist country without private ownership, making any grandiose plan implementation possible. His role could be somewhat similar to Le Corbusier with his *Ville Radieuse* that he envisioned looking at the Soviet political system. Both the Wall and the Gate City could not see the light the way they were conceived; eventually, the elements of the Wall lacked coherence due to a different understanding by different architects who were in charge of the project. The Gate for its unimaginable scale could never be finished, and Tange realized only the railway nod, which was yet too big for the number of inhabitants.

## 4.2 Summary and discussion: possibility of exceptions

The earthquake of 1966 made the reconstruction of Tashkent the most significant reconstruction projects for the Soviet Union to be involved in the postwar period. In the context of the Cold War, the country had proved its resilience skills, especially given that the reconstruction of Skopje — one center of opposition within the socialist camp — was being supported by many Western forces.

The vital feature of Central Asian socialist cities was in its submission to Kremlin and the total absence of constraints for the local governments that led to implementing all ideas from the details the boldest projects such as the construction of the Karakum Canal, which is the example that first was to create new agricultural lands but eventually led to an ecological disaster.

Certain aspects of the Soviet building practice in their Central Asian republics resemble those of the Roman Empire. Just as Romans did, the Soviets developed their model for the fast and efficient construction of "colonies." With a decided palette of elements, any new city was thought to be quickly built, and the vocabulary used for that could help to integrate it into the empire. It happened through a transformation of the ordinary people's thinking defined by elements of their daily life such as houses they inhabited, streets they walked, public buildings they used. The nationalist propaganda supported through designed with the features of neocolonial monumentalism architecture and urbanism aimed at the glorification of the Soviets in every corner of the city. However, the sensitive nature of the region,

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<sup>12</sup> see Latour Alexandra, ed., *Khan Louis I: Writings, Lectures, Interviews*, 1991.

<sup>13</sup> Kahn envisions viaducts as perfect mega-structure boundaries for the city, which at the same time liberate it from the traffic flows

<sup>14</sup> Lozanovksa, op.cit. and Lin, op.cit., 192.

the unpredicted disaster, and the global image of the country forced its leaders to soften their standard policy of demonstrating the achievements of socialism as the regime of technological progress. They had to design with better consideration of the local climate and cultural environment. Despite the ideological limitations, Tashkent needed to become the objects of national pride and an etalon Soviet city with no trace of either tsarist or Stalinist past, where the most recent infrastructural innovations and highest living standards were applied.

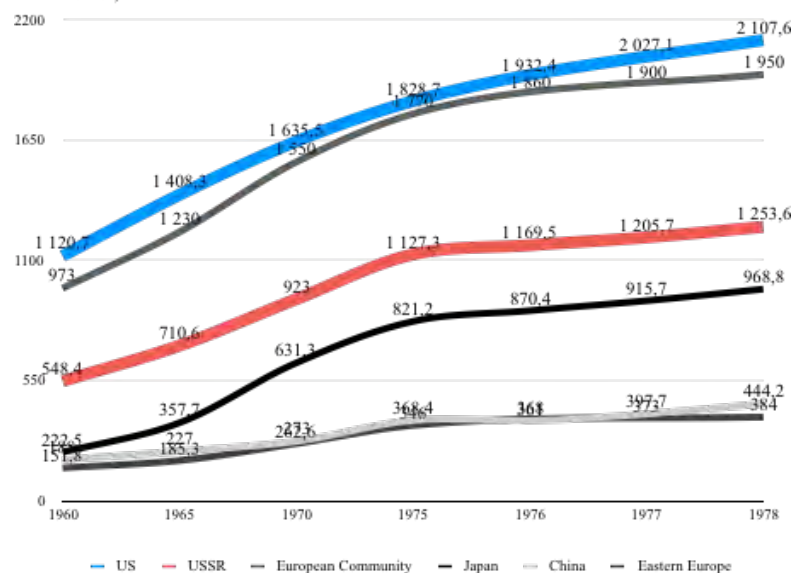
Ultimately, the pattern representing Tashkent reconstruction can be summarized as the leading socialist regime demonstrated resilience and dialogue regarding a politically sensitive region and had to behave more cautiously than with other foreign countries.

# Chapter 5. Liberalization of the Built Environment Cooperation in Southeast and Central Asia, the 1970s-80s

## 5.0. Introduction: The socialist capital dream

In the book commissioned in 1980 by the US Council of Foreign Affairs and titled *Soviet-American Relations in the 1980s: Superpower Politics and East-West Trade*, Lawrence T. Caldwell reminds us that the policies and position of the USSR would define global politics and the very survival of both America and the Soviets. Not to forget that the Soviet Union was the second biggest economic power demonstrating constant growth from the 1960s after the leading United States (fig. 5.1). However, both had been experiencing an erosion of their political hegemony since the 1960s as a result of the growing number of global political actors (new military powers in Israel and Syria, for instance). The tendency was changing to move away from the confrontation to strategic stability, which allowed stronger collaboration between the two superpowers.<sup>1</sup> Thus at this point in history, the USA and the USSR were measuring more rigorously their participation in the global processes and gradually putting effort into the achievement of "a more humane, peaceful, and just world."<sup>2</sup>

Figure 5.1. Growth in Gross National Product, 1960-1978 (Billions of 1978 USD) by Central Intelligence Agency, Research Aid. Handbook of Economic Statistics, 1979, Washington D.C., August 1979, 22-23.



Another factor that united both countries was the scale and the rate of urbanization. Experiencing drastic changes in their urban-rural population balance, changing from 97,6 million to 149,3 million

<sup>1</sup> Caldwell and Diebold, *Soviet-American Relations in the 1980s: Superpower Politics and East-West Trade*, 1981, 21-28.

<sup>2</sup> Shaffer, "Soviet-American Relations in the 1980s: Superpower Politics and East-West Trade. By Lawrence T. Caldwell and William Diebold Jr. Introduction by John C. Campbell. New York: McGraw-Hill, 1980. xviii, 314 Pp. Tables. Figures. \$10.95, Cloth. \$7.95, Paper.," *Slavic Review* 42, no. 1 (1983): 101-2, <https://doi.org/10.2307/2497446>.

in the US and from 64,4 million to 136 million in the USSR within three decades, required considerable urban planning, both by reconstructing the existing towns and creating new settlements.<sup>3</sup> The Soviet urban thought was in transition from a new focus on post-earthquake reconstruction in Tashkent and had tested a new vision of a city aiming into the future with the modern urban fabric, zoning, and a much more futuristic visual for the architectural form. In Vladimir Kulić's edited book *Second World Post-modernities: Architecture and Society under Late Socialism*, the "new Soviet" city also sought to meet the global tendency of postmodernism in architecture.<sup>4</sup>

While the Arms Race was slowing down, the international cooperation and investments into the "friend countries" became a new trend, in which "the geostrategic and political interests motivated Soviet altruism — mirroring the development aid by the capitalist camp."<sup>5</sup> Thus began the transfer of urbanism and architecture from the Socialist bloc to Asia, Africa, and the Middle East; the exemplifying Soviet-Vietnamese and Soviet-Afghan cooperation followed the conflict of interests.<sup>6</sup> At the same time, Soviet experts were gaining international experience and observing their competitors in many other locations such as Cairo, Accra, Jakarta, as well as in Cuba, Brazil, Mongolia, and Ghana. In the last loop of confrontation with the USA in Vietnam and Afghanistan, both sides opted for cooperation in the construction field as much as they did in politics in general. Technical assistance schemes by both sides interestingly intertwined in many spheres of the built environment, yet the urban pattern development was primarily controlled by the Soviet Union. As compared with the 1970s, when the ideological confrontation between socialism and pluralistic democracies was more striking, substantial changes were happening on both sides. Such was signaled by fissures of the ideologies on both sides and the crisis of consumerism and competitive psychology in the West against the tendencies of shifting towards an affirmation of individual values in the USSR.<sup>7</sup>

## 5.1. Hanoi learning from the "first successful" socialist capital

### Hanoi seeking the capital look, 1955-1990

The 1955-1990s were marked by a robust Soviet impact on Hanoi's urban fabric as well as the infrastructural development of Vietnam in general. The adoption of socialism in the Democratic Republic of Vietnam enabled rehabilitation and reconstruction in North Vietnam through the aid agreements were formalized through the Economic and Technical Cooperation Agreement on May 6, 1955, and the Trade and Maritime Agreement on March 12, 1958. During the 1960s and 70s, the assistance ceased and restarted in 1975, following the establishment of the Socialist Republic of Vietnam.<sup>8</sup> The re-emerged aid project was further fixed in the Treaty of Friendship and Cooperation of November 3, 1978. During this time, the USSR was involved in about 300<sup>9</sup> projects, and Vietnam was aspiring to the Soviet Union model. Vietnam was seeking to respond to its wars similarly to the destruction of the Second World War that the USSR had to overcome. The Soviet Union was considered the only country in the world that succeeded in creating advanced and prosperous socialism.

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<sup>3</sup> Planning New Towns: National Reports of the US and the USSR by US Department of Housing and Urban Development, Office of International Affairs. 1981

<sup>4</sup> Kulić, *Second World Postmodernisms*, 2.

<sup>5</sup> Beyer, "Competitive Coexistence: Soviet Town Planning and Housing Projects in Kabul in the 1960s," 317.

<sup>6</sup> Łukasz Stanek, "Introduction: The 'Second World's' Architecture and Planning in the 'Third World,'" 299–307.

<sup>7</sup> Beyer, *op.cit.*, 26.

<sup>8</sup> Logan, "Russians on the Red River: The Soviet Impact on Hanoi's Townscape, 1955-90," 443.

<sup>9</sup> Based on the RGAE database



The Soviet participation in creation of modern Hanoi went in two stages, before and after the American aggression — the first one, in Vietnam divided into South and North, and the other in Vietnam united (July 2, 1976), which led to different scales of approach and also different position of the Soviet professional sphere that had overcome noticeable changes. The formation of the first stage happened after the liberation of Vietnam from the French rule on October 10, 1954, and Ho Chi Minh chose Hanoi to become the socialist capital and to showcase how the new nation's urbanity and the urban life would look. However, in 1954 the few architects formed by the French Beaux-Arts system seemed incapable of constructing the socialist city the Vietnamese government envisioned. Although the Soviet Union and the allied countries of the block took effort in more than 30,000 Vietnamese, among which were research students, trainees, undergraduates, and advanced research students, the lack of experience demanded direct assistance of the USSR.<sup>10</sup> Thus, the housing and urban planning system remained mostly under the Soviet influence until the policy shifted in 1986 with the implementation of the economic reform *Doi Moi*, and the housing production was de-monopolized.

## Master plans for Hanoi

The potential development of Hanoi was seen in the functional zoning and its simultaneous expansion utilizing esplanades as a structuring pattern for various urban areas. The geometrical layout within a large-scale rigid structure was similar to the plans of Leningrad or Tashkent. The Soviet planners proposed their first zone plan of Hanoi in 1965. The detailed plan for the city was developed by the former chief architect of Kharkiv, Igor Arefiev, in 1960—1961. Although it was never implemented mainly due to American bombing raids between 1965 and 1972, it provided patterns for the plan which objectives consisted in:

- revitalizing the Ancient Quarter;
- promoting development from the West Lake towards Southwest of Hanoi across the Red River;
- extending the city center from around the West Lake;
- the new infrastructure projects consisted of a railway network across the river, including two new bridges and an extension of the existing already Long Bien Bridge.<sup>11</sup>

In 1954, the government began to promote urbanization and enhanced the flow of people from the countryside. The appearance of the Soviet influence first comes obviously in the residential areas. The housing was to provide well-appointed flats along with cultural and other amenities. The first 5000 such flats were built using prefabrication and standardized plans between 1955 and 1960.<sup>12</sup> The Soviet-inspired flats were constructed between 1955 and 1960 in Pho Hang Tre of the Ancient Quarter and some low-rise housing in the new areas of Dai La, An Dong, Phuc Xa, and Mai Hong. From 1961-1963 some newly-built 99,700 square meters of accommodations could yet not satisfy the demand.<sup>13</sup> However, US aggression and embargo interrupted this process.

The latest Soviet-made plans for Hanoi, the planning schemes of 1975 and 1980 are known as the *Leningrad Plan* developed by Sergey Sokolov, the head of the team of planners from the Leningrad

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<sup>10</sup> Logan, *Hanoi, Biography of a City*, 193.

<sup>11</sup> Logan, *op.cit.*, 210.

<sup>12</sup> Phe & Nishimura, "The Historical Environment and Housing Conditions in the '36 Old Streets' Quarter of Hanoi. A Conservation Study", 5.

<sup>13</sup> *ibid.*, 204.



Scientific Research Institute of City Planning (Len-NIIP gradostroitelstva [Лен-НИИП градостроительства]). The estimate and the understanding of the local environment happened to be insufficient as a lot from the original project could not be implemented due to an unexpected demographic crisis, insufficient consideration of local culture, and the economic situation. The most obvious evidence of it remains in the infrastructure — the new airport at Noi Bay was built far away from the city center as the population growth was considered unceasing. The implementation of the new master plan for the capital of Vietnam began in 1980. Nevertheless, already before that, engineers worked on communications and street improvement with the Research Institute of Engineering Equipment. The infrastructural improvement project of 1978 included the new water supply system, and among the first streets to be reconsidered were Lang, Kimanen, Dingtam, and Daikoviet.<sup>14</sup>

Following the contract of March 15, 1974, the Research Institute presented in 1976 a report on the feasibility of the new area to be developed on the left side of the Red River.<sup>15</sup> On September 6-7, 1976, the project was presented to the local government. According to this project, Hanoi was to become a capital of 1 million inhabitants within 30 years. Two projects were presented, yet only the latter was retained. The discussion on the project was held between Victor Smirnov, later be in charge of the whole project on the Soviet side, and Mr. Do Mioy for the Ministry of Construction and Mr. Tha Mi Zuat for the architect in chief of Hanoi. The project was received by an equivalent to the Soviet research institute, Hanoi-project under the Ministry of urban planning of Vietnam and was to respond to the five goals set by the government in 1974:

- *Hanoi must fulfill the characteristic features of a capital (has to be modern but preserving its national character; match the country and its peoples' spirit); The significant new buildings must include the Central Committee of the Communist Party of Vietnam building, the National Assembly building, the Central Government building, science and research institutes buildings, higher education facilities, monuments, theaters, cinemas, and other cultural venues. The city has to be an important economic and industrial center and demonstrate the achievements of technological progress.*
- *The suburbs have to respond to the demands of the capital: to supply food, regulate the population growth, rationalize the distribution of production forces, environmental safety, provide organized cultural activity and recreation, proper placement of transportation hubs and buildings, water and electricity supply for the main supporting towns in the vicinity of Hanoi (Xuan Mai [...], Vinh Yen, Bakin). The suburbs should eventually grow 12-15 times.*
- *The population should exceed 1 million in the city and 1 million in the suburbs.*
- *The land should be distributed as 100-120 square meters per inhabitant. The urban development should concentrate on the right bank of the Red River and around West Lake.*
- *Layout: 1) The new center (to replace the overloaded old town) has to be moved to Ba Ding; this center will be created around a monumental square dominated by the mausoleum of Ho Chi Minh, the National Assembly and the Central Committee of the Communist Party of Vietnam buildings; 2) the historical monuments have to be preserved; 3) the buildings should not remain lower than five or exceed twelve-stories to save land; 4) old areas need to be rebuilt into finished and beautiful holistic quarters; 5) big avenues, residential areas, parks, and water bodies have to provide a proper ventilation for the city; 6) railroads have to be put*

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<sup>14</sup> CGANTD 29 3-3 146

<sup>15</sup> CGANTD 29 3-3 133

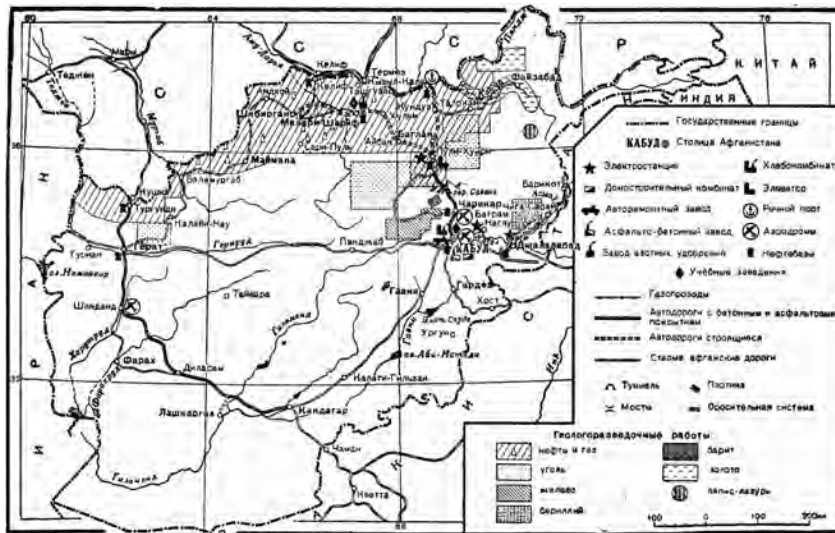


Fig. 5-6. Map of Soviet aid to Afghanistan (Arunova, *Afghanistan. Spravochnik*, 197)

for the Afghan economy."<sup>24</sup> The process started with the contract signed on April 11, 1962, between the Royal Afghan government and the USSR. After the agreement on "the financial assistance to the friendly state,"<sup>25</sup> Kabul was to become "the capital of independent Afghanistan — new political, governmental, cultural and trade center [of the region]."<sup>26</sup>

## Kabul master plan

As mentioned in Chapter 1, in 1960 was launched the new paradigm of long-term prognosis in urbanization and urban development in which the improvement of the living conditions was seen as benefiting from urban development. The Soviet experience was positioned as contemporary and as it was further adjusted to cultural and natural conditions, aiming to create a comfortable environment for people by the efficient use of finance and material resources.

The new master plan for Kabul was created between 1962 and 1966. The Soviet side submitted the so-called "Basic principles" to the Municipality of Kabul in March. Along with plans of micro-districts, 1 and 2 in 1964, Soviet specialists and technicians worked on projects for sewage, water purification, and central heating. The same year the National Research Institute of Telecommunication Works in Kabul to route the first transmission lines in the city. This development of the primary level of urban modernization focused on major networks to provide the necessary amount of water, electricity, and industries.

The ideas pursued in the first stage of city development were formulated as:

- growth and improvement of the administrative and civic centers;
- introduction of better living conditions to the population in general by constructing educational and healthcare facilities;
- creation of better sanitation and introduction of modern conveniences
- laying out of the most important roads and structures for transport.

Such primary goals were planned to be achieved through:

<sup>24</sup> Bowley, "In Afghanistan, a Soviet Past Lies in Ruin," (accessed October 16, 2018)

<sup>25</sup> RGANTD in Samara R147 6-4.

<sup>26</sup> RGANTD in Samara R147 6-4, 1.

- systematic and consistent development of the entire city;
- an expansion of the administrative and civic centers of the city at the expense of the adjoining sites and demolition of inadequate houses;
- the new residential areas were to occupy lands when their location and natural conditions fit the first stage;
- growth of industries;
- transport development;
- engineering works including lowering the ground levels, drainage of 350 hectares of swamps, deepening of the Kashmir-khan lake, and setting of a water reservoir in the vicinity of the future stadium.
- water supply and sewage systems;
- installation of a centralized heating system;
- construction of power plants and total electrification.<sup>27</sup>

In terms of urbanism, the master plan aiming to modernize Kabul was first developed in collaboration with the chief architect of Kabul Emetullah Enayat Sera in 1960. Then the new plan of 1962 followed as a fruit of the Soviet-Afghan agreement. A group of specialists led by Sergey Kolesnikov from the Research Institute of Urban Design in Moscow designed a plan in a modernist spirit. The plan suggested overall functional zoning, a new road network, the up-to-date infrastructural networks including public transportation, electricity, the water supply systems, the introduction of public parks, and pedestrian circulation and overpasses. The plan also proposed a radical reconstruction of the city center, the creation of the central axis of Pashtunistan Avenue, the typical architectural ensemble of the central square with the parade axis, and the governmental buildings. The sports facilities, educational institutions, markets, multifunctional shopping, and cultural complexes were expressing contemporary architectural ideas of the 1960s, making the future of Kabul resemble that of Chandigarh or Brasilia.

The analysis of the Main Statements on the Plan of Kabul explains that to make Kabul look like a modern capital, a network of new buildings needed to serve the new governmental, political, administrative, and economic functions. Those buildings would respond to the idea of the new Kabul as a center of the government, culture, and trade. The plan was modified at least twice before 1970 and was based on the Soviet achievements of the scientific and technical progress and was reminiscent of the projects of new towns in the USSR itself. Although it is difficult today to describe what was built, the most enduring physical evidence might be the prefabricated concrete residential complexes of micro-districts with multi-story apartment buildings in large scale self-contained neighborhoods as in the plan of 1964. The first such large-panel-prefabricated housing block was erected between 1960 and 1961, followed by various amenities. The houses as in Tashkent were adjusted to the so-called fifth climatic zone to withstand the local conditions and provide maximum comfort. In Kabul, see the light the two major types of houses: type 1 in houses 1, 2, and 3; type 2 in houses 7-10. In terms of size, it followed the old developed principles announced by Kolli and were figured as units of 25 - 30,000 inhabitants. The construction of such was yet not cost-effective and slow and eventually abandoned due to the war.<sup>28</sup>

<sup>27</sup> RGANTD in Samara R147 6-4.

<sup>28</sup> Beyer, *op.cit.*



Fig. 5-7. King Zahir visiting the Soviet-built, US-equipped international airport in Kabul (Life, August 9, 1963, 22)



Fig. 5-8. US-built Qandahar International Airport, Morrison Kurdsen (Times Life Picture/ Getty Images)

Among the infrastructural projects can be named the USSR help in the construction of Kabul airport, however, filled with the equipment provided by the United States. The Soviet Union and West Germany assisted the electrical network of Kabul and the power stations construction in the 1960s.<sup>29</sup> Twenty years later a new lap of development started with educational facilities: a complex of

<sup>29</sup> Burke, "Fight for the Land of Hindu Kush," 20, 23.

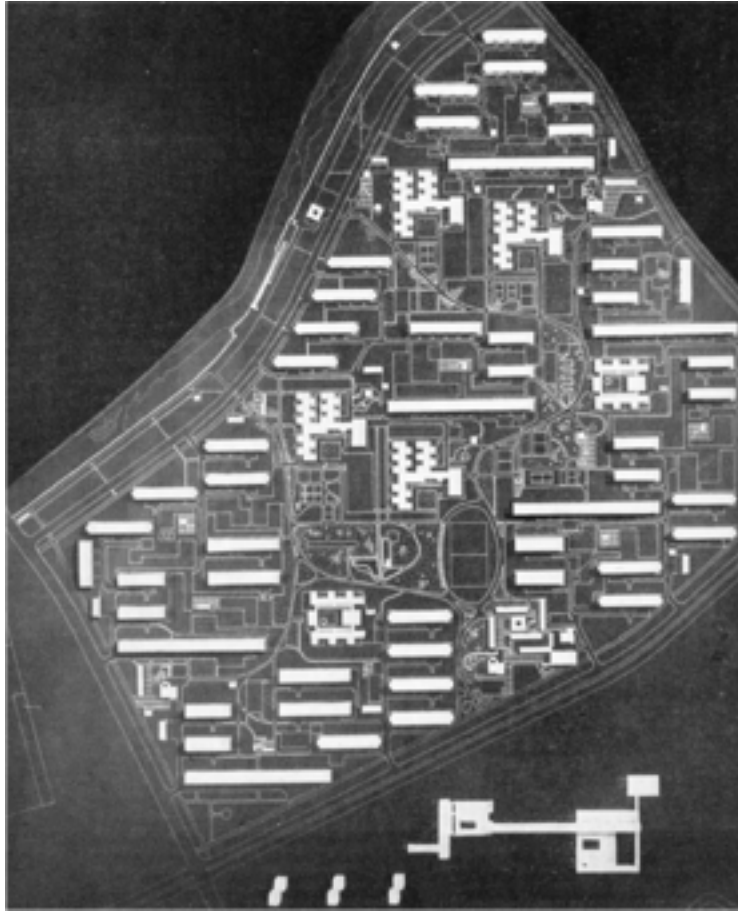


Fig. 5-9. Master Plan of micro-district No. 1 in Kabul by I.Kibirev, A.Labin, D.Levin, 1965 (source: *Arkhitektura SSSR*, 10, 1965, 49)

buildings for the Institute of Social Studies of the Central Committee of the People's Party of Afghanistan is built by Giprovuz directed by A. Potokin, designed by V. Bondarenko in the atelier number 7 and the construction began in July 1981.<sup>30</sup> Another interesting example is the Soviet House of Science and Culture, a modern concrete building that became a place for gathering and propagation of modern ideas "that for a while, refashioned Kabul."<sup>31</sup> Finally, as in all other cases, some other projects dedicated to the essential industries' development were not forgotten. The Physics and Chemistry Complex is built in Kabul by the Research Institute of Nitrogen Fertilizing under the Ministry of Chemical Industry of the USSR. In 1955 Khrushchev invested 100 million US Dollars into the asphalt paving of Kabul's road system. Eventually, more power and industrial plants and roads were built in the 1960s. The knowledge-intensive project of the Salang Tunnel crossing the Hindu Kush mountain range that linked the North of Afghanistan to its South opened in 1964.

### 5.3. Summary and discussion: respecting the context

In 1976 the US covered 16% of all global construction along with other countries such as South Korea and Japan. Western Germany and Italy, pumped with private construction firms, held 49% of the global market. In 1979 and 1980, the *Engineering News-Record* ranked 81 American construction firms among 150 international designers.<sup>32</sup> Cody adds to this that US artists, industrial designers,

<sup>30</sup> RGANTD in Samara 621, 11-4, 27.

<sup>31</sup> Bowley, *ibid.*

<sup>32</sup> Cody, *Exporting American Architecture*, 158,162.

intellectuals, and businessmen simply traveled around the globe "like old-fashioned door-to-door salesmen, harvesting sales contracts" to lead people "out of the darkness of socialism, communism, and inefficient, tradition-bound economies toward the guaranteed promised land of skyscrapers, supermarkets, and shopping malls."<sup>33</sup> Indeed, by the end of the 1980s, the failure and inefficiency of the Soviet system were clear; however, Vietnam was still praising the Soviet Union as the first country that succeeded in building socialism. The Afghan government sought a better deal and wanted to allow different actors to the market. During this period, amidst massive Soviet constructions, we notice some interventions by the US or Germany to be allowed as a part of the doctrine of mutual coexistence.

The process of project implementation was similar to that of the 1950-60s. However, at this point, local technologies were advancing, and more local companies got involved. The salary was shared between local workers and the Soviet ones. Recalculation meetings were a part of the normal designing process, making it a process of dialogue.

In terms of the tangible result, the cities of Kabul and Hanoi were designed as new capitals. The image of the modern capital with futuristic forms and traditional decor and climatic solutions was implemented. The cities received their master plan with the development scheme until 2020, and in detail, they included plans for micro-districts, apartment houses, cultural buildings, universities, public spaces, and parks design, and infrastructural projects.

The documents left by the Soviet side prove that the newly built environment contribution pattern they were creating was to bring economic growth through more dialogue with local actors and better considerations of the local particularities. More specifically, those were considerations of urban comfort, a better relationship to the city. For instance, more attention was given to new types of infrastructures such as airports, the latest concepts of sanitation, green belts, traffic improvement, and housing solutions. However, the mismatch of the Soviet economic system and the global one could not adequately respond to the realities of the countries, and many projects could not see the light. However, the Soviet Union still showed competitive technical achievements at the level of crucial infrastructural development and urban city networks, sometimes with mega-projects. Therefore, targeting the underlying layers of countries and city development, providing, through project implementation, necessary and better quality of life, boosting economies to new levels, nurturing local experts, and providing facilities for the long-term growth and independence. Such global achievements were not yet on the table in 1946-1991; however, they have become aims of sustainable project development indispensable in today's global cooperation.

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<sup>33</sup> *ibid.*, 162.

# Conclusion

## Summary of chapters

Chapter 1 showed how the international cooperation of the Soviet Union was set as a process. We showed that there was a gradual change from the propagandist doctrine of the late 1920s and 1930s to an institutionalization. Through a series of political resolutions the International Union of Architects was first integrated to bridge with the international professional community under Joseph Stalin and with drastic political changes of Nikita Khrushchev's government, the USSR accessed the global construction and education market through joining UNESCO and creation of Comecon as an integrated space of economic activity for the construction among others. The cultural exchange was active through meetings with foreign architects at specific events, exchanges of delegations, and literature. Access to the international cooperation market was supported by internal institutionalization. As a result, by 1983, more than 600 bilateral agreements were concluded. The Chapter also summarized the ideas of the Soviet architectural paradigm that went through the stages of holistic ensembles, technocratic domination of infrastructural, educational, sports facilities, and mass-housing to based on long-term prognosis large-scale urban projects and both postmodernist and vernacular architectural tendencies.

Chapter 2 (1) explained that in terms of background, the first poles of the USSR Cold War cooperation in 1946-1956 become East Asia and Eastern Europe as a result of proxy-conflicts with the West.

(2) In terms of the cooperation process, it was somewhat limited and scattered and worked only in the vicinity of the Soviet Union borders in China, North Korea, Mongolia, and in the countries of Eastern Europe. The ideological constraints and undefined cooperation system are among factors that were slowing the process.

(3) The tangible result of the cooperation appeared to be represented by industries and infrastructural networks as prevalent over architecture in number. Architecture and city were thought as a whole and took the shape of architectural ensembles made of streets, squares, and the adorning architecture together using a vocabulary of symbolism.

(4) Either by architectural and urban reconstruction or industrial and infrastructural development, the Soviet Union sought to promote or impose itself by creating built environments that demonstrated authority and had Socialist Realist features.

(5) In comparison, the reconstruction in other countries is different. In general, the European reconstruction was dedicated to faster economic recovery and social needs, while the Soviet-style reconstruction was about heroic memorials and praise of the leaders and the People monumentally. Therefore, the pattern of the period can be synthesized as decorated hardware of ideology for masses.

Chapter 3 (1) explained how in the 1950s, the USSR changes its foreign policy from a continental closed one to the freewheeling global one to balance the US foreign policy, which had long-term influences on the global nature of the Soviet Union cooperation in 1956-1970s. The new doctrine of scientific and technological progress will support knowledge-intensive projects in the countries liberating from colonial rule, mainly in Southeast Asia and Africa.

(2) In terms of process, as the USSR was aiming at normalization of its image in the global arena, where the market atmosphere was growing stronger. For that reason, they become a leading part of the two-sided system of multiple institutions in the global economy and politics. USSR begins to use practical tools widely at the international level such as CMEA, UNESCO, IBEC, WHO, and at the domestic level, improves the system of research institutes.

(3) With the new ideology of the scientific and technological progress, the Soviet Union's cooperation focus shrinks to high profile engineering for the country, the sport and leisure facilities, or sharing the technical knowledge. Therefore, the main contributions are large-scale infrastructural projects such as dams and roads, stadiums and recreational facilities, and technical schools and universities, all for the first time built with local climate considerations.

(4) By capitalizing on their technical skills in a wide range of countries, the USSR created the built environment that should respond to the needs in the trend, was climate-considerate, and useful in the long run. The ideology was in the demonstration of the technical capacity.

(5) The US and the USSR become the only two global forces, and as the Soviet Union becomes more competitive and less aggressive with their influences on the built environment, yet each side chooses to follow different principles. US becomes the vehicle of cultural leadership versus the USSR that claims to bring the scientific-technical revolution. The pattern of the period can be represented as a broad application of the technology that still stays ideologically non-flexible yet has to show flexibility at the global market of international cooperation as responding to needs and trends and not imposing unnecessary symbolic buildings.

Chapter 4 observed how (1) the notorious Tashkent Earthquake of 1966 demanded the implementation biggest reconstruction project after the War and needed to prove the leading socialist country's resilience ability.

(2) In terms of process, a natural disaster, for the first time after the Ashgabat earthquake of 1948, demanded the mobilization of resources of the whole country and pushed Soviet planners to invest all their newest research into this project, exclusively local and thus with no regulatory thresholds.



(3) In terms of the physical result, Tashkent reconstruction plan of 1967 defined all new buildings, so they respond to acute issues, such as seismic activity and reconsideration of all buildings in a new style — localized version of Soviet modernism — which, however, degraded into likeness and a symbol of poverty.

(4) In terms of evaluation, although Tashkent instance differs from others, it represents a platform of a fundamental for the further projects experiment in which the USSR will show the leading socialist country resilience capability in the post-cataclysmic built environment as reconstruction of a (regional) capital of a socialist country, with the achievements of scientific and technological progress.

(5) The comparison with the Skopje reconstruction by Kenzo Tange showed that even if the reconstruction was happening in two socialist countries, even the commitment of Western countries was not enough to realize the project entirely within the existing economic realia. In contrast, the Soviet Union need to protect its image as a leading global power forced it to achieve more significant results. The pattern of this period can be summarized as the USSR showing remarkable resilience skills and dialogue as a response to the sensitive domestic situation that could put at risk its global image.

Chapter 5 described the context of the 1970s-1980s, where (1) the world depended on decisions made in Kremlin and Washington, but their influence was gradually experiencing erosion due to the emergence of new stakeholders in the global arena. However, during this period amidst massive Soviet constructions, we notice its liberal attitude allowing interventions by others. Vietnam and Afghanistan became the scene of such a process.

(2) The implementation process was similar to the 1950-60s. However, at this point, local technology is advancing, and more local companies are involved in the process. There is a lot more dialogue between Soviet specialists and foreign customers.

(3) The cities of Kabul and Hanoi were designed as new capitals of the new regime, as seen in the 1970s. The image of the modern capital with futuristic forms and traditional decor and climatic solutions will be implemented, and both cities will receive their master plan with development schemes until 2020.

(4) The built environment was believed to bring about economic growth through considerations of urban comfort, better relationship to the city as more attention was given to new infrastructures, latest concepts of sanitation, green belts, traffic improvement, and housing solutions. However, the mismatch of the Soviet and the global economic systems could not adequately respond to the realities of the countries, and only a few projects saw the light.

(5) Compared to the positions the US construction companies occupied globally, by the 1980s, the imminent failure of the Soviet system became apparent, yet certain countries would still rely on the Soviet experience for different political and social reasons. The built

environment contribution pattern they were creating was to bring economic growth through more dialogue with local actors and better considerations of the local context.

## Conclusion

This research has shown that the history of Soviet contribution to the global built environment can be studied through a series of patterns representing the architectural thought and its physical implementation in the form of architecture, urban planning, and infrastructure on one side and connected to it political and socioeconomic environment on the other. The background, process, tangible results, and evaluation of each discussed period can be summarized as:

1. It was easier to introduce Socialism in the countries where societies had overcome the struggle against imperialist forces;
2. The construction process was changing from unquestionable Soviet domination to more participative practices and dialogue as the Soviet Union was accepting its role as stably existing second global power, the existence of which was globally accepted as a norm.
3. Although there was a reinforcement of ideology in architecture until 1954, the global progress of technologies and the change in the Soviet policy towards the technological progress-oriented doctrine, gradually annihilated the visual aspect of architecture and rendered it more practical and close to the international concepts; The knowledge-intensive projects were growing, and local environment and actors were given better attention.
4. The social model was changing from a mass thinking with communist values, to capitalist thinking with more individualistic values and as the image of the USSR in the global arena was normalizing, its actions were changing from force domination to liberal participation in the global processes of international cooperation and at the global construction market.

Therefore as (1) in political science, the Soviet contribution changes from hard domination to liberal participation. Such a statement is correct at the macro level of the built environment history; however, at the specific level, this appeared to vary. Such additional factors as business-attitude and the need to maintain the image of a leading force in the international arena introduced modifications to the general process. Ideology remained in the background, although the general change was towards the practical.

(2) As big actors need to be agile to respond to global trends, or they will lose their leadership. The export of ideology to strengthen the Socialist Bloc gradually became only the background of the contribution process, which itself shows how socialist countries were intrinsically approaching capitalism.

(3) While the foreign and domestic policy did define the approach to the built environment contributions, the need for leadership replaced pure ideology and was defining the behavior of the USSR in the global arena the most.

<b>Period</b>		<b>1946-1955</b>	<b>1955-1970s</b>	<b>1966</b>	<b>1970s-1980s</b>	<b>1946-1991</b>
<b>① Background</b>	Socioeconomic	General destruction or poverty	Decolonization and anti-imperialist movements	Post-earthquake urgent state	Postwar urgent state and new social paradigm	<b>Spread of socialism into the decolonized areas</b>
	Geo-political	End of WWII, Korean War, Berlin conflict	Global race	Sensitive region	Wars in Vietnam and Afghanistan	<b>From race to stabilization</b>
	Environmental	-	-	1966 Tashkent earthquake	-	<b>Random</b>
<b>② Process</b>	One-sided	○	○	○		<b>Change from one-sided domination to dialogue</b>
	Dialogue			○	○	
<b>③ Tangible result</b>	Infrastructure	Fundamental industries, networks, infrastructures	Complex infrastructural projects	Complex infrastructural projects	Complex infrastructural projects	<b>Constantly growing number, more knowledge-intensive technologies</b>
	City	Holistic architectural-urban ensembles	None	Massive urban planning based on prognosis, non-ensemble architecture		<b>From holistic to practical, from a unified image to local features</b>
	Architecture	Social realism	Soviet modernism	Soviet modernism and localization	Soviet post-modernism and localization.	<b>From a unified image to local features</b>
<b>④ Evaluation</b>		Considerate of the needs of the government	Considerate of needs in trend	Unusually considerate of people, yet cares of its own image	Considerate, responds to needs of the the society	<b>Turning “altruistic” or changing from domination to participation.</b>
<b>⑤ Pattern</b>		dominant, decorative — ideological, mass-oriented	technological change-oriented, non-flexible — business-oriented	resilient, climate and context-considerate — duty-bound	local context-oriented — cooperative	<b>From domination to dialogue</b>

During the Cold War and until its collapse, the USSR was number two in global leadership. To protect its leading position the USSR chose to keep up with the global trends and learned to solve real problems instead of aggressively imposing the ideology. The Soviet government, while restricting humanitarian thinking and creative and civic freedom, favored industrialization and technical progress for the sake of preserving its place as the only United States opponent. Technical achievements became their name card in the global arena. Importantly, beyond the stylistic matters in architecture or the socialist town planning, that have long been the subject of earlier research for its ideological aspect, the contribution consisted in improving or creating fundamental layers of countries and city development, providing, through project implementation, necessary and better quality of life, the base to invigorate the economies, nurturing local experts and providing facilities for the long-term growth and independence. As such global achievements were not yet on the table in 1946-1991; however, they have become aims of sustainable project development indispensable in today's global cooperation. Thus understanding the Cold War period, which has created this powerful system, gives us an insight into today's international cooperation. It also shows that the absence of private ownership and enterprises, of agile and liberal domestic policy, and ideological restrictions did not allow the Soviet Union to reach leading positions at the international construction market nor to offer a significantly aesthetic corpus of projects.

Although the all-encompassing inventory could not be made within one research time limits, this research provides new statistical data, reveals many paths and sources for future researches and gives a systematic understanding of the Soviet contribution to the global built environment of the Cold War and tells the Soviet history from one more perspective.

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