

**Plans, Plants, and Sense of Place:
Urban Greening Across the USSR, 1932-1964**

by

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Dedication

To beloved travelers, who came and went while I wrote.

Elias (2014–)

Memee (1910-2015)

Zephyr (2017–)

&

Barry (1943 –2019)

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Table of Contents

Dedication	ii
Acknowledgements	iii
List of Maps	viii
List of Figures	ix
List of Abbreviations	xiv
Abstract	xv
Chapter 1. Introduction	1
Who Listens to Skylarks?	3
Ideals in Concrete and Space	8
From Context to Content: Research Approach	10
Greening Soviet Siberia	14
Divergence and Convergence in the Historiography of Greening	18
Chronology and Chapter Overview	31
Conclusions	44
Images	48
Chapter 2. “The Most Beautiful City in Siberia”: Landscape and Identity in a Soviet Factory Town	58
A City Distinguished	61
Modern Calling Cards and Landmarks	73
Pre-Revolutionary Visitors and Vistas	79
Sites of Sovietization, 1928–1959	87
Infrastructures of Industrial Modernity	92
Endeavors Tied to Place	102
Conclusions	106
Images	110

Chapter 3. The Stalinist Garden-Factory: Cultured and Hygienic Conditions for Work and Workers	119
A Period of Emergent Expertise	122
Building Socialist City-Industry Relations	127
Forests for the Factories!	132
A Youthful Field	138
A Gardener’s Notes	141
Enterprise Ensembles	146
For work and workers: greenery and productivity	153
Year-round Utopia	156
Threats: Pests, Wreckers, Inattention	159
Conclusions	164
Images	167
Chapter 4 “Let’s Care!” Patriotism, Politics and Plants in Postwar Moscow.....	182
Let’s Care, Let’s Adorn, Let’s Defend	185
1948 – Green Friends in the Gale	204
The Landscapes of Late Stalinism, Linked	218
Conclusions	229
Images	232
Chapter 5 “Let’s Dream!” Precarity and Patronage in Postwar Krasnoyarsk.....	256
The Acceleration and Industrialization of Postwar Siberia	257
Of Beautification & Backwardness: Krasnoyarsk 1945	262
Precarious Professionalism: Krasnoyarsk House of Architects, 1948	274
“Let’s Dream”: Aspirational Modernity in Krasnoyarsk, 1953	279
Conclusions	283
Images	286
Chapter 6. Hygienic, Efficient and Green: Designing City-Nature Fusion after Stalin	300
Ruptures, Rhetoric and Resilience	303
Sunlight Seems Plentiful, But...	306
Looking Backward: The Agrogorod Campaign	313
Indoor/Outdoor Communism	316
Synthesis and Standardization: the Mikroraion	319
Territorial Balance: The Future is Fusion	326
DeStalinizing the City Block	328

A New Quality, Distinct	332
22 nd Party Congress: Green Cities, Garden Cities	335
Not Greenery in a City, But Cities in Greenery	337
Conclusions	342
Images	345
Chapter 7. Can Trees Talk Back? A Coda.....	365
Talking Trees and Toxics	367
A Most Important Task for Science	380
Who is to blame?	383
What is to be Done?	384
Tying Trees to Place	386
A lacework birch or a severe pine?	391
Green Victim, Green Voice	393
The agency of plants and planners	395
Conclusions	396
Images	400
Bibliography	412
Archives & Websites	412
Primary Sources	413
Secondary Sources	426

List of Maps

Map 1.1	Major Terrain Feature of the Soviet Union, 1974.....	48
Map 1.2	Permafrost Regions in the Soviet Union, 1984.....	49
Map 1.3	Population of the Soviet Union, 1974.....	50
Map 2.1	Krasnoyarsk City Map, brochure for tourists circa 2000, front and back.....	111
Map 3.1	The First Five-Year Plan of Economic Development of the USSR, 1930 showing development agenda for European and Asian parts of USSR.....	167
Map 3.2	Nikolai Miliutin's assembly-line plan for the Nizhni Novgorod Auto Plant, 1930.....	167
Map 3.3	General Plan for the Reconstruction of Moscow, 1935 by V.N. Semenov and S.E. Chernyshev.....	168
Map 3.4	Factories shown on a plan of Moscow, from <i>Issues in Architecture, 1937</i>	169
Map 3.5	Location of Factory Greening sites mentioned in 1936-37 Soviet Academy of Architecture texts.....	180
Map 4.1	Tree Species distribution in European Russia, from <i>Ozelenenie Gorodov i Poselkov (Greening of Cities and Hamlets)</i> , 1946.....	236
Map 4.2	Schematic map of the landscape-climate zones [<i>landshafno-limaticeskikh zon</i>] of the USSR, from <i>Greening Soviet Cities</i> , 1954.....	250
Map 6.1	Distribution of fast-growing cities in USSR, assessed from 1926-65.....	346
Map 7.1	Russia: Key Environmental Problem Areas, from 1996 Handbook of International Economic Statistics.....	400
Map 7.2	Soviet Union: Coal and Major Minerals, 1982.....	401
Map 7.3	Forest-Climatic regions of the USSR, from <i>Ozelenenie Gorodov</i> , 1960.....	402

List of Figures

Figure 1.1 Soviet Poster, 1917-21: "Chimney Smoke is the breath of Soviet Russia"	51
Figure 1.2 Illustration of a "Paysage [<i>peizazh</i>] of an Urban Industrial District" from <i>Architecture and Beautification of Industrial Enterprises</i> , 1953	51
Figure 1.3 Soviet poster, 1958. "Got drunk, got rowdy, broke a sapling. Now he's ashamed to look folks in the face. SHAMEFUL!"	52
Figure 1.4 Soviet agitational poster by I.B. Boim, 1930s: "The Duty of All Workers... to create a Green, Healthy City."	53
Figure 1.5 Figure-ground diagrams of "The World's Largest Cities" and their parks from Great Soviet Encyclopedia, 1930	54
Figure 1.6 Figure-ground diagrams of Cities of the USSR and their waterbodies, from Great Soviet Encyclopedia, 1930	55
Figure 1.7 Pages and logotype from Great Soviet Encyclopedia entry on the Garden-City, 1930, by N.L. Meshcheriakov	56
Figure 1.8 Pages from Great Soviet Encyclopedia, 1954 Entry on "Greening of Settlements"	57
Figure 2.1 Contemporary souvenir postcard of Krasnoyarsk Krai, showing mix of technogenic and natural elements	110
Figure 2.2 Photograph of central Krasnoyarsk with Communal Bridge, winter 2012, from tourist website	112
Figure 2.3 Contemporary Russian 10-Ruble banknote showing Krasnoyarsk landmarks	113
Figure 2.4 Cover of "Krasnoyarsk - in the eyes of architects and builders" Russian-language promotional brochure	114
Figure 2.5 Cover of 1986 Russian-language guidebook to Krasnoyarsk showing riverfront	114
Figure 2.6 City portrait - first image of Krasnoyarsk in 1986 guidebook	115
Figure 2.7 Large commemorative plaque "Krasnoyarsk 1628 - 1978 -- 300 Years" on building exterior in central city	116
Figure 2.8 Cover and frontispiece of <i>City on the Yenisei</i> , Nifant'ev 1973 showing iconic Krasnoyarsk views.....	117
Figure 2.9 Cover of 1970 <i>L'Architecture d'Au Jour'd'hui</i> , theme issue on Soviet Architecture	117
Figure 2.10 Pages on Central Stadium in Krasnoyarsk, from 1970 profile in <i>L'Architecture d'Aujourd'hui</i>	118
Figure 3.1 Table showing three classes of Industry, with respective Protective Zones of 2km, 250m, and 50m, from Nikoaev "Factory and the City" 1937.....	170
Figure 3.2 Images of between-building spaces at the Cheliabinsk Tractor Factory (ChTZ) in <i>USSR in Construction</i> , 1933	171
Figure 3.3 "Gorky. Perspective of the Molotov Car Works (GAZ) before reconstruction" from Nikolaev, "Factory and City" 1937	172
Figure 3.4 Photograph of greened territory at Molotov Car Works in Gorky (GAZ), from USSR in	

Construction, November 1936 (no.11).....	172
Figure 3.5 Prototype plans of factory greening in Moscow, Tashkent and Azerbaijan, 1937	173
Figure 3.6 Diagram of factory distribution in Stalingrad, showing Stalingrad Tractor Factory (STZ) at top right, 1937	173
Figure 3.7 "Reconstruction of Stalingrad Tractor Factory (STZ)" Rendering by Ivan S. Nikolaev and E. I. Evdokimova, 1937, showing "lower village and park by the Volga River."	174
Figure 3.8 "Reconstruction of STZ. View from the Volga. Architects I. S. Nikolaev and E.I. Evdokimova" from <i>Issues in Architecture</i> , 1937	175
Figure 3.9 Cover and page from 1939 issue of <i>USSR in Construction</i> , theme 'Rest Day'	176
Figure 3.10 Photograph of Kalibr factory workers playing chess amidst greenery while on lunch break, 1954.....	176
Figure 3.11 Photograph of Moscow 'Kalibr' Instrumentation Factory and greened territory, 1941.....	177
Figure 3.12 Cover of <i>Zavod-Sad [Garden-Factory]</i> , 1954	177
Figure 3.13 Site design plan for Kalibr Factory, in Lunts, <i>Beautification and Greening of Factory Territories</i> , 1948.....	178
Figure 3.14 Photograph of "Greening up Kalibr Factory" by A. Shaikhet, 1955. Included in 2015 PROzavod exhibit, at Moscow's Lumiere Brothers Center for Photography	179
Figure 3.15 Design-plan for main street [<i>magistral</i>] of factory in Central Asia, from <i>The Beautification and Greening of Factory Territories</i> , 1948 As was typical of post-WWII publications, no exact location is given.....	180
Figure 4.1 Newspaper <i>Vecherniaia Moskva</i> , 1945. Full page of articles on greening. April 24, 1945.....	232
Figure 4.2 pages from <i>Architect's Reference Handbook (Spravochnik Arkhitektora)</i> , 1946	233
Figure 4.3 Pages from <i>Spravochnik Arkhitektora</i> 1946 showing examples of foreign residential courtyards	234
Figure 4.4 "Open" and "shady" courtyards, page from <i>Spravochnik Arkhitektora</i> 1946 ²	234
Figure 4.5 Greenspace disposition in settlement plans, pages from <i>Spravochnik Arkhitektora</i> , 1946.....	235
Figure 4.6 Silhouette of common tree species, from <i>Ozelenenie Gorodov i Poselkov</i> , 1946	237
Figure 4.7 Classification of tree species by expected functions, from <i>Ozelenenie Gorodov i Poselkov</i> , 1946	238
Figure 4.8 Table of tree species with typical properties and recommended uses, from <i>Greening of Novosibirsk (Ozelenenie goroda Novosibirska)</i> , 1948	239
Figure 4.9 Graphical reference chart of types of trees and shrubs, from <i>Ozelenenie Goroda Novosibirska</i> , 1948	240
Figure 4.10 Design plan of typical 10-hectare district park, from <i>Greening of Novosibirsk</i> , 1948	241
Figure 4.11 Pages on greening in American cities, from <i>Gradostroitel'stvo (City-building)</i> textbook, 1945	242
Figure 4.12 Photographs of All-Union Agricultural Exhibit (VSKhV) in Moscow, from 1945 book <i>Gradostroitel'stvo (City-Building)</i>	243
Figure 4.13 Pages from 1939 All-Union Agricultural Exhibit guidebook: Pavilion of Gardening and exhibit gardens.....	244
Figure 4.14 Fold-out panorama of VSKhV exhibition grounds	244
Figure 4.15 pamphlet guide to Siberia Pavilion, VSKhV 1955	245

Figure 4.16 pamphlet guide to Floriculture and Greening pavilion, VSKhV 1955	246
Figure 4.17 Pages from 1955 VSKhV guide to Floriculture and Greening pavilion, showing greenery indoors in a Kalibr factory workshop.....	247
Figure 4.18 Photographs of green space at the Kalibr Factory in Moscow: Hero's Square, the Main Entrance, and "800th Anniversary of Moscow" Square.....	247
Figure 4.19 Painting " <i>Rodina [Motherland]</i> " displayed at RSFSR Art Exhibit in Moscow, 1950	248
Figure 4.20 Frontispiece and title page of <i>Greening Soviet Cities: A Guide for Design</i> , 1954 showing green boulevard leading to Moscow State University	248
Figure 4.21 Photographs of four landscapes scenes in Kliaz'minskii Forest-Park, near Moscow, from <i>Greening Soviet Cities</i> 1954.....	249
Figure 4.22 Photographs of four rest areas [<i>ploshchadka otdykha</i>] in residential courtyards, Moscow and Cheliabinsk, from <i>Greening Soviet Cities</i> 1954.....	249
Figure 4.23 Birds' eye view of Main Botanical Garden (GBS) in Moscow's Ostankino district, 1948	251
Figure 4.24 Photographs of Oak and Birch groves in Main Botanical Garden, from <i>Ozelenenie Gorodov</i> , 1951	251
Figure 4.25 Exhibition and Planting Plans for Main Botanical Garden of the Soviet Academy of Sciences, Moscow. 1951	252
Figure 4.26 Cover and pages from <i>Composition of Green Plantings</i> , 1954 showing a windblown pine in Crimea opposite two wind-rose diagrams of prevailing winds.....	253
Figure 4.27 Model plans and street sections showing best practices in greening relative to street orientation relative to cardinal direction, from <i>Composition of Green Plantings</i> , 1954	254
Figure 4.28 Photograph of workers sitting on tree-shaded benches in the plaza on the grounds of 'Kauchuk' factory, Moscow, 1954.....	254
Figure 4.29 Photograph of greenery on the site [<i>ploshchadka</i>] of the Kauchuk factory in Moscow, from <i>Composition of Green Plantings</i> , 1954	255
Figure 5.1 "Choosing a location for the city bridge in Krasnoyarsk" from Davidovich, <i>Spatial Planning of Cities</i> , 1947.....	286
Figure 5.2 "Development sequencing of Right-bank Krasnoyarsk" from Davidov, <i>Spatial Planning of Cities</i> , 1947.....	287
Figure 5.3 Photograph of Right-Bank Krasnoyarsk, showing prospect <i>Krasnoiarskii Rabochii</i> , new housing, and park. 1950s-60s.....	288
Figure 5.4 Photograph of street scene with amenities, Central Krasnoyarsk by Forest Technical Institute 1950s	289
Figure 5.5 Cover page from 1951 article "On the Greening of Cities in Siberia" with winter photograph showing monument to I.V. Stalin in factory administration plaza of Stalinsk, and epigraph from 'garden-city' poem by V. Mayakovsky.....	290
Figure 5.6 Page from "Greening Siberian Cities" 1951 article, showing entrance to Garden of Metalworkers and model street planting mix of coniferous and deciduous trees	291
Figure 5.7 Soviet informational / motivational poster "Let's Green Our City" Omsk, 1951	292
Figure 5.8 Photograph of Krasnoyarsk River Station (<i>Rechnoi Vokzal</i>), completed in 1952, showing street amenities (<i>blagoustroistvo</i>) in foreground	293
Figure 5.9 Photograph from Opening Day rally at Krasnoyarsk River Station, 27 July 1952.....	293
Figure 5.10 Photograph of "Festival of Song in Krasnoyarsk" held on Leisure Island (<i>ost. Otdykha</i>), June 1953	294

Figure 5.11	Photograph of new housing blocks and park along prospect <i>Krasnoiarskii Rabochii</i> , 1954..	294
Figure 5.12	"Pioneers at Leisure" Photograph of Soviet Communist Party childrens' organization members posed in woods with a bear cub, 1953.....	295
Figure 5.13	Drawing of Krasnoyarsk "Gorky" Central Park of Culture and Leisure, 1954.....	295
Figure 5.14	"Gardener-Enthusiast" Profile of local Michurinist and gardener in Krasnoyarsk, October 1954	296
Figure 5.15	Photograph of street greening on Krasnoyarsk' Right Bank, 1954	297
Figure 5.16	Photograph of "New Park of the Voroshilov Factory Works" Krasnoyarsk, 1954.....	297
Figure 5.17	Photograph of Krasnoyarsk embankment near River Station, June 1955.....	298
Figure 5.18	Photographic panorama of area near River Station in Krasnoyarsk, April 1957.....	298
Figure 5.19	Photograph "Installation of the Television Factory Park" October 1958, Krasnoyarsk	299
Figure 6.1	"The Industrialization and Economics of City-building" chapter frontispiece from <i>Contemporary City-building, Main Issues</i> , 1962	345
Figure 6.2	Photograph of five-storey "Khrushchevki" housing in Krasnoyarsk, 1950s-60s with birch tree and pedestrian path in foreground	347
Figure 6.3	Cover of <i>Architecture of the USSR</i> (1962:no3) showing mass housing with birch trees in foreground	347
Figure 6.4	Bird's eye perspective sketch of proposed "Bereznik" [birch tree] agri-town, 1950	348
Figure 6.5	Promotional rendering and present-day photograph of the ranch house recreated at 1959 American National Exhibit in Moscow (ANEM), scene of Khrushchev-Nixon "Kitchen Debate"	348
Figure 6.6	Original AP Photo image from so-called "Kitchen Debate" between V.P. Richard Nixon and Soviet Premier Nikita Khrushchev in display kitchen of ANEM model home, July 1959.....	349
Figure 6.7	Photograph of birch trees in residential courtyard, in "The Spatial Planning and Beautification of Residential Complexes" 1959	350
Figure 6.8	Figure-ground diagram of the development of residential 'structural units' (blocks, districts) in Moscow, in 1920s, 1930s, and 1960s.....	350
Figure 6.9	Photograph of Novye Cheremushki experimental block no9 and courtyard, from <i>Arkhitektura SSSR</i> , 1958.....	351
Figure 6.10	Pages from <i>Arkhitektura SSSR</i> 1958 no6, showing "experimental projects in the layout of residential districts and blocks".....	352
Figure 6.11	Bird's eye view of experimental residential block, showing courtyard programmatic functions, 1958	352
Figure 6.12	Bird's Eye perspective of "garden" in Novyi Cheremushki micro-district [<i>mikroraion</i>], from <i>Arkhitektura SSSR</i> , 1962 no3	353
Figure 6.13	Photograph of flowers and other greenery at entrance to mass housing blocks, 1960	353
Figure 6.14	Cover of <i>Satellite Cities [Goroda-Sputniki] from the Praxis of City-building Abroad</i> , 1958	354
Figure 6.15	Diagram of "Green Plantings scheme in a Satellite City" from <i>Suburban Zones of Large Cities</i> , 1963	355
Figure 6.16	Photograph of continuous greenspace between courtyard and mikroraion garden, from O.Ivanova, "Greening of Residential Territories" 1962.....	356
Figure 6.17	Photograph showing "wild" appearance of residential courtyard, with diagrams indicating how plantings obscure buildings from view, 1962	356

Figure 6.18	Diagrams of trees and shrubs used to block street noise, from <i>Arkhitektura SSSR</i> 1962 no1	357
Figure 6.19	Figure-ground diagram of city block morphology, showing the "ventilation and protection of blocks from prevailing winds" using layout and plantings, 1959	358
Figure 6.20	Soviet motivational poster, showing the moral 'airing out' of Soviet city-dwellers and courtyards through greening and maintenance, 1958	358
Figure 6.21	Diagrams of insolation [direct solar exposure] as a factor in building orientation and layout, 1940	360
Figure 6.22	Diagram of atmospheric currents over a city, showing benefits of topography and green plantings for air flow. 1954	361
Figure 6.23	Aerial present-day photograph of Akademgorodok, near Novosibirsk (established 1957)	362
Figure 6.24	Photograph of present-day Krasnoyarsk high-rise district, with residents' root cellars in foreground. Photo by author, 2014	362
Figure 6.25	Design proposal perspectives from Lengidproekt for the town of Divnogorsk, near the Krasnoyarsk Hydroelectric Dam, 1960s	363
Figure 6.26	Photograph of wall fresco [<i>panno</i>] of Krasnoyarsk sites and tree-planting, in cafeteria of Kirov District Administration Building, 1970s	364
Figure 7.1	Color renderings of ground-cover plants, from <i>Ozelenenie Gorodov</i> , 1960 ³	402
Figure 7.2	Soviet motivational poster: "Let's improve our home town!" 1959	403
Figure 7.3	Soviet poster "Clean Air for the Cities"	404
Figure 7.4	Latvian forest-protection poster "Do not let the nature go"	404
Figure 7.5	Soviet or Russian Tree-protection Poster "Caution!" Unknown date	405
Figure 7.6	Soviet Belarussian poster: "Greenery for the New Buildings" 1973	405
Figure 7.7	Soviet motivational poster "Glory to Country, with your labor!" 1976	406
Figure 7.8	Pages from <i>Industrial Enterprises in Cities</i> , 1965 by Ivan S. Nikolaev showing spatial and functional relationships of cities, factories, and greenery	407
Figure 7.9	Pages showing the greening of factory territories, from 1963 <i>Landshaftnaia Arkhitektura</i> volume	408
Figure 7.10	Pages from 1962 article "The Praxis of Greening Industrial Enterprises" by A. Kovalev, showing Kalibr Factory grounds	409
Figure 7.11	Photographs showing attempted greening of Northern industrial cities Kirovsk and Norilsk, 1963	410
Figure 7.12	Drawings of regional differentiation in tree root and height from 1963 article on greening in the Far North	410
Figure 7.13	Photograph of street scene in Krasnoyarsk with poplar stumps, 2012	411
Figure 7.14	'Forest' scene near Akademgorodok and Siberian Federal University in Krasnoyarsk, 2007	411

List of Abbreviations

The main external libraries and archives used in this work were:

- Canadian Centre for Architecture (CCA)
- State Universal Scientific Library of Krasnoyarsk Krai (GUNB)
- Krasnoyarsk Krai Regional Studies Museum (KKKM)
- Library of Congress (LoC)
- Russian State Library, online catalogue and holdings (RSL)
- Siberian Federal University library (SFU),
especially former holdings of Krasnoyarsk Union of Architects (KrOSA)
- State Archive of Krasnoyarsk Krai (*Gosudarstvennyi Arkhiv Krasnoiarskogo Krai*, GAKK)
- Krasnoyarsk Municipal Archives (*Krasnoiarskii Gorodskoi Arkhiv*, KGA)

Note that Russian archival holdings are organized according to *fond* (f), *opis* (op.), *dela* (del.) and *list* (L).

Note on Transliteration:

This dissertation uses a modified Library of Congress system of transliterating from Cyrillic to Latin alphabets, omitting diacritics except from certain author names, and in cases where the usual English spelling diverges from a strictly transliterated version: hence Krasnoyarsk, not Krasnoiarsk. For ease of reading, Krasnoyarsk is pronounced, roughly, KRAZ –nuh – yarsk, with emphasis on the first syllable. Ozelenenie is Ah-zel-eh-NAIN-ee-yeh. All translations are by the author unless otherwise noted.

Abstract

Abundant urban greenspace was an iconic feature of Soviet urbanism, proving resilient across political and aesthetic rifts that otherwise transformed Soviet built environments. In histories of socialist urbanism, these outdoor spaces are often treated as context rather than content, or their aspired-to functions dismantled and assessed separately within studies of Soviet communal hygiene, recreation and sport, or political-aesthetic culture. The blind spot thus produced distorts understanding of Soviet urbanisms' holistic aspirations, and impoverishes our sense of twentieth-century society-nature relations.

How did Soviet specialists envision the quintessentially modern nexus between urbanism, industry, and changing environmental attitudes? How did the theory and practice of urban greening and beautification develop in relation to other iconic elements of Soviet urbanism, from factories to civic ensembles to mass housing districts? Finally, how did specialists in greening engage with the socialist realist doctrine of 'socialist in content, national in form' when developing norms and models to be realized in cities across the USSR, particularly in Siberia? To address these questions, this research focuses on the history of the Soviet design-planning subfield known as the "greening of cities" (*ozelenenie gorodov*), drawing deeply on a broad range of professional literature, plus archival sources and site-specific evidence. It examines the evolving theory and reception of greening during the two most formative periods of Soviet built urbanism: the Stalinist period of "empire" style ensembles, 1932–1953, and the "laconic" industrially-produced modernism dominant following Nikita Khrushchev's speech at the 1954 Builders' Conference. The specialist handbooks, textbooks, and published conference

proceedings through which Soviet urbanists communicated with each other across regions provide evidence of how urban greening was conceptualized, standardized and circulated.

Chapters focus in turn on the greening of industrial territories and enterprises in the 1930s, of postwar civic ensembles and spaces of national display, and post-Stalinist mass housing districts or *mikroraiony*. Interwoven with these “typically Soviet” phenomena is the specific history of city-nature relations as they developed in the Siberian city of Krasnoyarsk, both public portrayals and professional ‘backstage’ involvement in shaping the form and reception of city-nature relations. The final chapter considers the agency of urban trees in relation to the emergence in the Cold War-era of a Soviet mass environmental movement.

I find that urban greenspace was envisioned as an infrastructure of socialist modernity. By rotating the bundle of functions associated with urban greenspace, and linking greening to larger political-national projects, practitioners weathered shifts that disrupted other aspects of Soviet architecture and urban planning. Ultimately, it was Soviet urbanists’ over-estimation of urban greenery’s agency, rather than their reputed disregard or antagonism to nature, that contributed to the Soviet city’s iconic spatiality. These spaces were not “open” but over-full with expectations.

Lacking effective agency to constrain urban hazards more directly, Soviet architect-planners turned to spatial- and phyto-mitigation measures. They placed trees—the “green friends” and Russian soul-double of patriotic propaganda—in harm’s way, in hopes of protecting cities’ human residents from those same harms. I contend, moreover, that the Soviet investiture of urban greenery with political-cultural agency produced unexpected consequences beyond the sphere of architecture and planning. When urban trees succumbed to the environmental pollution they were meant to mitigate, Soviet authorities could do little to de-link plants, politics and patriotism, even as a mass nature protection movement threatened the stability of the regime.

Chapter 1. Introduction

In 1930, the Soviet journal *Contemporary Architecture* (*Sovremennaia Arkhitektura*, or SA) published an exchange of letters between Le Corbusier and Moisei Ginzburg, both leading international figures in architecture and planning.¹ The competition to design a “Green City” outside Moscow had just ended, having attracted entries from architects prominent in both “Urbanist” and “Disurbanist” camps.² Le Corbusier was a proponent of the former. Ginzburg, who is today best known for his earlier work on urban communal housing, had recently switched his allegiance to the Disurbanists and now advocated distributed forms of housing and settlement. The entry submitted to the Green City competition by Ginzburg with M. Barshch, a leading advocate for communal living (an Urbanist position), represented a compromise. Its slogan advocated a particular kind of synthesis: “Not greenery in the town, but the town in green plantations.”³ Vegetated space, not buildings, were to dominate the socialist lived environment.

¹ The exchange was republished in English translation as an appendix to Anatole Kopp, *Town and Revolution: Soviet Architecture and City Planning, 1917-1935*, trans. Thomas E. Burton (New York: George Braziller, 1970).; The complete run of *Sovremennaia Arkhitektura* (1926–1930) has since been reissued in facsimile by the Russian publisher Tatlin. Note that I distinguish throughout the dissertation between the Russian group of Urbanists (*urbanisty*) of the late 1920s and “urbanists” or “urbanism” in general, denoting city life and the study of cities. In English-language studies of Soviet urbanism, it is rarely clear whether “planners” and “planning” connotes those involved in national economic planning [*planirovaniye*] or those involved in urban and regional planning [*planirovka*]; for the most part the decisions of the latter were subservient to the needs of the former. To avoid this confusion I use the terms “urbanists” and the admittedly clunky compound “architect-planners” to describe specialists engaged in city and regional *planirovka*, *zastroika* [build-up, or development] and *gradostroitel'stvo* [city-building, town planning].

² Urbanists sought to revise urban life and morphology under socialism; Disurbanists proposed replacing cities as such with something completely other. The “great debates” of the 1920s and early 1930s between Urbanist and Disurbanist camps, one of the few elements in Russian and Soviet urban planning history regularly included in introductory survey histories of modern Architecture, e.g. in Paul Overy, *Light, Air & Openness: Modern Architecture between the Wars* (Thames & Hudson, 2007); Kenneth Frampton, *Modern Architecture: A Critical History*, 3rd ed., World of Art (New York: Thames and Hudson, 1992); William J.R. Curtis, *Modern Architecture since 1900*, 3rd ed. (London: Phaidon Press, 1996); Francis D. K. Ching, Mark Jarzombek, and Vikramaditya Prakash, *A Global History of Architecture* (Hoboken, N.J.: J. Wiley & Sons, 2007).. The inter-relationship of these groups within the Russian avant-garde is a topic of intensive study. One such account can be found in Kenneth Frampton's *Modern Architecture: A Critical History*, pp174-177 (3rd edition 1992). On Le Corbusier's relationship to developments in early Soviet Russia, see Jean-Louis Cohen, *Le Corbusier and the Mystique of the USSR: Theories and Projects for Moscow, 1928-1936*, trans. Kenneth Hylton (Princeton, N.J.: Princeton University Press, 1992). A 1931 source critical of both positions names Le Corbusier as the leading Urbanist and Bruno Taut as the leading disurbanist. See N.L. Meshcheriakov, *O sotsialisticheskikh gorodakh*. Moscow: Molodaia Gvardiia, OGIZ, 1931.

³ On the Green City competition and leading entries, see Richard A. French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, Pitt Series in Russian and East European Studies. (Pittsburgh, Pa.: University of Pittsburgh Press, 1995), 35-37.. This and other entries to the competition were published in SA. See Barshch and Ginzburg, "Zelenyi gorod," SA no.1-2 (1930): 17-37. Ginzburg is known especially for his work on housing and his 1924 book, *Style and Epoch [Stil' i epokh]*, republished with foreword by Kenneth Frampton and translation by Anatole Senkevitch Jr (Cambridge, Mass.: MIT

Le Corbusier, who had been invited to review entries for the competition, was not persuaded. He wrote dismissively to Ginzburg on March 17, 1930 regarding the utopian aspirations of the competition, including its basic assumptions of what the modern city should be under socialism.⁴ The exchange encapsulated many of the challenges and contradictory aspirations of Soviet avant-garde architects and planners, for whom the task of eliminating differences between town and country was ideologically and logistically freighted.⁵ Regarding how modern city-nature relations might develop under socialism, Le Corbusier argued that some continuity with existing cities was necessary. He quoted Lenin's declaration that "if one wants to save the peasant, one must take industry to the country" but he preferred to focus his architectural energies on saving the town-dweller.

Allowing that the industrialization of the countryside would be a good thing, Le Corbusier asserted that "[t]he machine will make the muzhik think."⁶ He insisted, however, that the improvement of cities and city life required the perpetuation of urban density. There was no need to re-invent or re-locate Moscow, as some Green City competition entries had proposed. "Nature," argued Le Corbusier in his 1930 letter,

is good for the city-dweller whose mind has been galvanized by the city, who puts to work, in the city, the diligent mechanism of his mind. [...] it is not the peasant who looks at the trees in bloom and listens to the song of the lark. It is the town-dweller who does that. [...]

My dear Ginzburg, modern architecture has precisely the magnificent mission of organizing the life of collectivities. I was the first to proclaim that the modern city should be an immense park, a green city. But to allow this seeming luxury, I increased the density by four and — instead of extending them — shortened distances.⁷

While Le Corbusier closed his letter "very cordially," he was firm in his opposition to a

Press, 1982). On Ginzburg's most famous project, the Moscow Narkomfin Collective House, see Victor Buchli, *An Archaeology of Socialism*, Materializing Culture Series (Oxford; New York: Berg, 1999); "Moisei Ginzburg's Narkomfin Communal House in Moscow: Contesting the Social and Material World," *Journal of the Society of Architectural Historians* 57, no. 2 (1998).

⁴ Translations quoted here come from the Ross Wolfe, "Mikhail Okhitovich, Moisei Ginzburg, and Disurbanism" post on Wolfe's site 'The Charnel House: From Bauhaus to Beinhau.' Accessed 11/2018. <https://thecharnelhouse.org/2011/04/07/mikhail-okhitovich-moisei-ginzburg-and-disurbanism/>

⁵ The "elimination of difference between town and country" was a guiding, if divergently interpreted, tenet of socialist urbanism. Ginzburg, in his reply, quoted Marx that "The contradiction between town and country is the coarsest expression of the subjection of the personality to the division of labor, which transforms the individual into a limited urban animal, on the one hand, and a limited rural animal, on the other." Accessed 11/2018. <https://thecharnelhouse.org/2011/04/07/mikhail-okhitovich-moisei-ginzburg-and-disurbanism/>

⁶ The Russian word "muzhik" is related to the words for man (muzhchina) and husband (muzh). It often describes someone of a rural background, in contrast to a city-dweller. Its other, more pejorative, connotation is of a uneducated, badly brought up person, although these latter meanings are described on google translate as out-dated. According to the more colorful translation website multitrans.ru, English equivalents include "peasant; boor; man; kern; bohunk; cat; hick; and man's man." <https://translate.google.com>; <https://www.multitrans.ru>. Accessed 01/2019.

⁷ Wolfe, "Mikhail Okhitovich, Moisei Ginzburg, and Disurbanism" <https://thecharnelhouse.org/2011/04/07/mikhail-okhitovich-moisei-ginzburg-and-disurbanism/>

dispersed, low-density, Green City.

Ginzburg, in his reply, quoted Marx, Engels, and Lenin to the effect that a suitably “radical solution” to the “problem of giving man ideal physical surroundings” required the creation of “new socialist forms of population settlement based on elimination of all the disparities between town and country.”⁸ Where Le Corbusier was “the finest of the surgeons of the modern city,” seeking to cure its ills, Ginzburg declared that “we in the USSR [...] do not want to cure [the modern city]. We prefer to destroy it and intend to begin work on a new form of human settlement that will be free of internal contradictions and might be called socialist.”

The task at hand for architects was not surgery but the generation of entirely new forms of urbanism, wrote Ginzburg:

You refer to Perret’s unsuccessful attempts to take housing out of the city. But this too is quite understandable. He severed an isolated member from a complex organism. That member inevitably wasted away. We are removing from the city nothing less than the city itself, its entire system of supply and culture. In other words, we are creating a whole new organism. This is quite different from what Perret was trying to do.⁹

You write that the peasant does not love flowers and does not hear the song of the skylark. But of course he doesn’t [...] when he is exhausted with backbreaking labor. But we want our peasant to listen to the skylark.¹⁰

Ginzburg presented the reinvention of peasant nature-appreciation as total yet simple, with far-reaching consequences:

“And we know that for this it is only necessary to lighten [the peasant’s] labor and bring more culture into his life. And all this will be possible not by smoothing out the contradictions with which the modern capitalist system is riddled, but by creating new forms of human settlement more worthy of the future.”¹¹

The new socialist society required new, distinctive, forms of urbanism.

Who Listens to Skylarks?

The basic issues animating the exchange between Ginzburg and Le Corbusier remain influential within urban design theory and practice to this day. Do city-dwellers desire, require or benefit from access to nature, and in what forms? How might architects and town-planners develop or disperse modern cities in order to afford an ideal relationship to nature? These

⁸ <https://thecharnelhouse.org/2011/04/07/mikhail-okhitovich-moisei-ginzburg-and-disurbanism/> Last accessed 11/2018.

⁹ Architect August Perret was, with Le Corbusier, a founding member with Le Corbusier of the French journal *L’Architecture d’Aujourd’hui* among other accomplishments.

¹⁰ <https://thecharnelhouse.org/2011/04/07/mikhail-okhitovich-moisei-ginzburg-and-disurbanism/> Last accessed 11/2018.

¹¹ <https://thecharnelhouse.org/2011/04/07/mikhail-okhitovich-moisei-ginzburg-and-disurbanism/>

questions are rarely asked with regard to the history of architecture and planning in the USSR, however.

Within a few years of the 1930 exchange between Le Corbusier and Ginzburg, the Urbanists, Disurbanists, and other opposing factions within Soviet architecture and urban design had been summarily disbanded. A single Union of Soviet Architects dedicated to fulfilling State and Party directives replaced the complex mosaic of groups and approaches that had comprised the Soviet avant-garde. Common narratives of Soviet architecture and urbanism frame the end of these groups as a rout, with many historians concluding the arc of their interest between 1932, when the Union of Soviet Architects was founded, and 1937, when the First Congress of the Union convened. A typical characterization of what followed the First Congress comes from historian Hugh D. Hudson, Jr:

From that point on architecture in the Soviet Union continued its decline into a mere servant of engineering, with its most talented experimental architects, such as the Vesnins and Ginzburg, spending the remainder of their careers working in industrial production.¹²

Whereas the 1920s and early 1930s glimmered with utopian aspirations, the dominant consensus is that those “revolutionary dreams” were quashed and sublimated to industry and ideology.¹³ The advent of officially sanctioned and centralized design practice in the mid-1930s has since become one of two known poles of the USSR’s reputation in global histories of twentieth-century architecture and urbanism, the other being its built legacy. Most scholarship on Soviet architecture and planning gravitates to one of these two.

The second pole anchoring the received history of Soviet architecture and urbanism consists of the built legacy of Soviet socialist urbanism. As discussed in more detail below, on this pole loom the grey ghosts of utopian modernism: “grim totalitarian cities dominated by wide roads and high blocks, set far apart.”¹⁴ Navigating between the entrenched narrative poles of

¹² Hugh D. Hudson, Jr., "Terror in Soviet Architecture: The Murder of Mikhail Okhitovich," *Slavic Review* 51, no. 3 (1992): 467.

¹³ The extent, inevitability, and motivations of this quashing are a point of contention in the field. For a recent overview of the historiography on Soviet constructivism and other 1920s phenomena, see Alla G. Vronskaya, "Deconstructing Constructivism," in *Re-Framing Identities: Architecture's Turn to History, 1970-1990*, ed. Ákos Moravánszky and Torsten Lange (Basel: Birkhauser Verlag GmbH, 2016).. Arguing for continuity or resilience of the avant-garde and Constructivist tendencies into the Stalinist period in art, architecture and urbanism are Boris Groys, *The Total Art of Stalinism: Avant-Garde, Aesthetic Dictatorship, and Beyond* (Princeton, N.J.: Princeton University Press, 1992); Greg Castillo, "Stalinist Modern: Constructivism and the Soviet Company Town," in *Architectures of Russian Identities: 1500 to the Present*, ed. James Cracraft and Daniel Bruce Rowland (Ithaca, NY: Cornell University Press, 2003); Christina Lodder, "Ghost in the Machine - Modernist Architectural Utopia under Stalin," in *Utopian Reality: Reconstructing Culture in Revolutionary Russia and Beyond*, ed. Christina Lodder, Maria Kokkori, and Maria Mileeva (Leiden: Brill, 2013); Fabien Bellat, "An Uneasy Metamorphosis: The Afterlife of Constructivism in Stalinist Gardens," *Rethinking Marxism* 29, no. 1 (2017)..

¹⁴ Tom Turner, *Landscape Planning and Environmental Impact Design*, 2nd ed., The Natural and Built Environment Series (London: UCL Press, 1998), 391. Turner deploys this generality as part of a broader polemic that “planning is required—but not

utopian aspirations and ecocidal consequences, this dissertation asks us to reconsider the meaning and motivations of Soviet urban form. What kind of city-nature relations, if any, did Soviet architects and planners seek to create in their “more worthy of the future” forms of human settlement? To what extent did urban-environmentalist positions such as those associated with “listening to skylarks” or “the city in green plantations” continue to inform Soviet urbanism after the close of the avant-garde period?

One answer comes from the built environment of those “grim totalitarian cities.” Cities built and expanded under socialist regimes present a set of distinctive spatial and architectural traits, reflecting the imprint of the “shared transnational material and mental culture” of the so-called Second World.¹⁵ Part of what makes socialist town- or city-scapes so distinctive is their standardized and mass-produced building stock. Also contributing to the recognizability and reputation of socialist cities is their morphology—the arrangement of buildings and spaces within cities. Linking the grey and concrete of Soviet factories, housing, and civic ensembles was abundant urban greenspace. The ubiquity and expansivity of this greenspace was a characteristic feature of Soviet urbanism, one that endured across the political and aesthetic ruptures that otherwise transformed the Soviet built environment.

However, although urban greenspace is acknowledged to be a significant, even definitive characteristic of “the planned urban artifact that the Soviets built,” relatively scant research has been directed to understanding the objectives and constraints associated with urban greenspace

too much of it.” The United States provides the second half of the argument. There, “government planning took the form of over-investment in roads, rigid land-use zoning and under-investment in public space.” Spatial mistakes in the USSR, money and management problems in the USA. The concept of “utopia’s ghost” and the international architectural afterlife of avant-garde modernism is developed by Reinhold Martin, *Utopia’s Ghost: Architecture and Postmodernism, Again* (Minneapolis: University of Minnesota Press, 2010).. See also Susan Buck-Morss, *Dreamworld and Catastrophe: The Passing of Mass Utopia in East and West* (Cambridge, Mass.: MIT Press, 2000).

¹⁵ This phrase comes from Elidor Mëhilli. Book talk at the Woodrow R. Wilson Center, Washington D.C., 2-20-2018, on Elidor Mëhilli, *From Stalin to Mao: Albania and the Socialist World* (Ithaca: Cornell University Press, 2017).. See also “The Socialist Design: Urban Dilemmas in Postwar Europe and the Soviet Union,” *Kritika: Explorations in Russian and Eurasian History* 13, no. 3 (2012); David C. Engerman, “The Second World’s Third World,” *ibid.* 12, no. 1 (2011); Kimberly Elman Zarecor, “What Was So Socialist About the Socialist City? Second World Urbanity in Europe,” *Journal of Urban History* 44, no. 1 (2018); Jennifer Robinson, “Starting from Anywhere, Making Connections: Globalizing Urban Theory,” *Eurasian Geography and Economics* 57, no. 4-5 (2016). Two recent special issues in very different journals indicate the current interest in this ‘transnational’ rubric. First, *Rethinking Marxism: A Journal of Economics, Culture & Society*, vol 29, Issue 1 (2017) featured a “Symposium” entitled “Landscapes Of Socialism: Romantic Alternatives to Soviet Enlightenment.” Second, the *Journal of Urban History* dedicated its volume 44, Issue 1, (January 2018) to the theme of “Second World Urbanity: New Histories of the Socialist City.” Promisingly but symptomatically, these edited collections contained but one article on garden-landscape design of the 1930s, and a mostly metaphorical discussion of “infrastructure,” respectively. See Daria Bochamnikova and Steven E. Harris, “Second World Urbanity: Infrastructures of Utopia and Really Existing Socialism,” *Journal of Urban History* 44, no. 1 Second World Urbanism special issue (2018); Bellat, “An Uneasy Metamorphosis: The Afterlife of Constructivism in Stalinist Gardens.”

design and production, or the factors that shaped its theorization and reception. Too often, urban outdoor space has been treated as context rather than content in histories of socialist urbanism and daily life.¹⁶ Despite relative consensus that cities were core objects enrolled in the Soviet campaigns of industrialization, modernization, standardization, and political-ideological control, there has likewise been little work on understanding the mutual influence of those projects with respect to the design and planning of urban greenspace.¹⁷

To address the question of how Soviet urbanists’ imagined the socialist city’s relationship to nature and greenery, this dissertation considers the history of the Soviet design-planning subfield known in Russian as the “greening of cities” and “green construction” (*ozelenenie gorodov, zelenoe stroitel’stvo*). Incorporating a broad range of professional publications, archival sources, and site-specific evidence, this dissertation investigates how guiding principles and disciplinary concerns of urban greening evolved in relation to industry, ideology, and infrastructure improvements. I examine the theory and practice of greening as it evolved in space, at urban and regional scales, and over time, during the two most formative periods of Soviet built urbanism: the Stalinist period of “empire” style ensembles, 1932–1953, and the “laconic” industrially-produced modernism dominant from 1954 on.¹⁸

A primary objective of this research is to investigate the character of urban greening in the USSR as a systematic, formally framed area of practice and theory. The story of Soviet city greening begins with the 1932-33 consolidation of all pre-existing architecture-planning organizations into a single Union of Soviet Architects (SAA). While landscape design was never officially recognized in the USSR as an autonomous profession, faculties of “city greening” (*ozelenenie goroda*) and “green construction” (*zelenoe stroitel’stvo*) were established at this time

¹⁶ Examples include Christine G. Varga-Harris, "Green Is the Colour of Hope?: The Crumbling Facade of Postwar Byt through the Public Eyes of Vecherniaia Moskva," *Canadian Journal of History* 34, no. 2 (1999); Vladimir Shlapentokh, *Public and Private Life of the Soviet People: Changing Values in Post-Stalin Russia* (New York: Oxford University Press, 1989); David Crowley and Susan Emily Reid, eds., *Socialist Spaces: Sites of Everyday Life in the Eastern Bloc* (Oxford ; New York: Berg, 2002).

¹⁷ Relevant literature is discussed in more detail in the Historiography section of this Introduction. Existing works have in the main focused on the “built” aspects of this intersection, most often by looking at the Stalinization of architecture and city planning, with greenspace mentioned in passing. Less commonly scholars have looked at political-aesthetic themes as manifest in the design and construction of high-profile resort, park and garden sites. Everyday spaces, including those of industrial cities, are commonly considered from the perspective of popular reception and use.

¹⁸ The “norms” of Soviet architecture and planning were more than habits of architectural culture. The norms were a form of official regulatory standards, adopted at a republic or All-Union scale. The first set of “Construction Norms and Regulations” (SNIiPy) were adopted in 1929/30, then revised in 1958. The latter can be found at <http://ru-stroy.info/base2014/technical8/gost8353.htm>

as subfields of city-building, engineering and forestry.¹⁹ The main period of research concludes in the mid-1960s, when Khrushchev's 1964 ouster coincided with the establishment of a new, more historically-focused program of study in "*landshchafnaia arkhitektura*" or landscape architecture. Although some practitioners and students focused thereafter on the preservation and development of large parks and ex-urban recreation zones, the norms and standards of greening that were established in the late 1950s and early 1960s remained to shape Soviet city form, continuing to do so well past the 1991 dissolution of the USSR.

Individual chapters focus on the evolving concepts and praxis of greening vis-à-vis industrial territories and enterprises in the 1930s (Chapter 3), postwar civic centers and other patriotic ensembles (Chapter 4), and post-Stalinist mass housing districts or *mikroraiony* (Chapter 6). Interwoven with these "typically Soviet" phenomena is the specific history of city-nature relations as they developed in the Siberian city of Krasnoyarsk, both in the city's official image and public sites (Chapter 2) and in the back-stage positioning of local architects tasked with making the city more modern and more Soviet in the post-WWII period (Chapter 5). The final chapter of this dissertation offers a "coda" to these themes, focusing on the agency of urban trees in relation to the emergence in the USSR, between the 1960s and the 1980s, of a mass environmental movement. I root the argument of each chapter in extensive reading of primary sources, illustrated with extended quotes selected from selected representative texts.²⁰

In this dissertation, the typical relationship of figure to ground is reversed.²¹ The focus shifts from buildings and other structures usually preeminent in architectural and planning

¹⁹ Retrospective and contemporary accounts in English of the development of Soviet landscape architecture and planning include "Party-Line Architecture and Planning," *Landscape* 4, no. 3 (1955); Republished from Viennese weekly *Das Tagebuch*, "Soviet City Planning," *ibid.* 3, no. 1 (1953); Arthur R. Rice and Donald M. Roberts, "A New Era in Soviet Design: Landscape Architecture Emerges as a Discipline in Its Own Right," *Landscape Architecture* 78, no. 2 (1988); Arkady Pavlovich Vergunov, "Toward Ecological Architecture: Problems, Goals and Methods of Soviet Landscape Planning," *ibid.*; Paul Willen, "Architecture in the Soviet Union: A Report for the Use of Specialists in the Field of Architecture Planning to Visit the Soviet Union," (New York: Institute of International Education, 1963); Taisia I. Wolfrub, "The Post-Soviet Profession," *Landscape design* 212, no. 07 (1992); A. N. Antipov and Yu M. Semenov, "The Russian School of Landscape Planning," in *Environmental Security and Sustainable Land Use - with Special Reference to Central Asia*, ed. Hartmut Vogtmann and Nikolai Dobretsov (Dordrecht: Springer Netherlands, 2006).} Russian accounts include those by V.Ivanov (2001) and others cited in Footnote 43.

²⁰ cf Catherine Cooke: "In general therefore we depend on the architectural commentaries of the time for knowledge of what the requirements of the aesthetic solution were, of the criteria that were applied, of what forms were deemed to fulfill them or not, and crucially why." Catherine Cooke, "Beauty as a Route to 'the Radiant Future': Responses of Soviet Architecture," *Journal of Design History* 10, no. 2 (1997): 141.

²¹ A figure-ground diagram is a long-established representational technique within urban design and scholarship. In such diagrams, built structures are typically represented by a solid color, while outdoor spaces from parks to streets to parking lots dissolve undifferentiated into a continuous background, represented by the blank white of the page. The conceptual basis and history of the figure-ground diagram is discussed in detail by Michael Hebbert, "Figure-Ground: History and Practice of a Planning Technique," *The Town Planning Review* 87, no. 6 (2016).

histories to the exterior space(s) habitually treated as “unbuilt voids” or “open space.” This move affords new perspective and insight on aspects of Soviet urbanism that are well-known but have rarely been analytically foregrounded to the extent they deserve—particularly the distinctive urban morphology, land use patterns, and regional sense of place (or lack thereof).

This research brings the history of Soviet greening to the fore at a time when practitioners and scholars alike are reassessing the relationship of urbanism and infrastructure to a more-than-human world. Historical perspective is always needed on current issues in architecture and planning. This is all the more true today, when a global majority lives in cities—and all must re-imagine societal-environmental interactions in order to endure, much less mitigate, the effects of climate change. The history of city greening thickens the interstitial space between the study of Soviet urbanism, industrialization, and environmentalism. It offers a fresh view on the everyday built environments of Soviet socialism. Finally, it delineates the connections of Soviet and socialist urbanism to transnational landscape and planning history, and contributes to a more global comparative history of modern city-nature relations.

Ideals in Concrete and Space

As geographer and regional specialist R. Antony French observed following the 1991 dissolution of the Soviet Union, the legacy of Soviet architecture and planning had placed “an enduring stamp on housing and townscape.” With regard to urban form, French identifies standardization and mass housing districts as two characteristic “hallmarks” shared by cities throughout the USSR.²²

Although the level of urbanization varies considerably between republics, the planned urban artifact that the Soviets built was remarkably consistent everywhere. The features which give cultural individuality to towns in different areas are almost always old, pre-revolutionary in origin, occasionally with superficial modern borrowings from the past. The apartment block, normally of five storeys in smaller towns, higher in the larger centres, arranged in designated microregions [*mikroraiony*], is the hallmark of the Soviet city.²³

²² French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 204. French focuses on Soviet examples, particularly Moscow, using statistical tables and quantitative data to contextualize the general Soviet experience of planning and its legacy. His previous publications include Richard A. French and F. E. Ian Hamilton, eds., *The Socialist City: Spatial Structure and Urban Policy* (Chichester ; New York: Wiley, 1979). in which he and co-editor Hamilton explored the question “Is there a socialist city?” (Chapter 1, pp1-22).

²³ French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 204. This overview of the Soviet legacy in planning has been generally received as a neutral, comprehensive account. It was at the time without competitors in terms of balancing breadth and scope within a design and planning framework. Blair A. Ruble, "Review of Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities, by R. Antony French," in *The Russian Review* (1996); William S.

French explicitly asserts that it is the pre-Revolutionary heritage of towns, in opposition to their standardized Soviet-built structures, that bring them any sense of place—what he calls “cultural individuality.” While this assertion applies primarily to the architectural or built character of such cities, the importance of arrangement (morphology) is implied in his characterization of Soviet city’s other hallmark planning unit, the residential micro-region.

Besides the standardization of housing and residential districts, two other hallmark attributes of Soviet urbanism were the monumental civic ensembles and omnipresent industrial enterprises. The ubiquity and “iconicity” of all these elements makes them difficult to describe without collapsing into stereotype. One self-aware example, to represent the countless iterations of the trope, comes from the preface to a recent dissertation:

Malye Korely [an open-air museum of wooden architecture] is one of the lesser known products of Soviet modernity. Its natural aesthetic stands in sharp contrast to the more recognizable Soviet icons that we passed on the thirty minute drive out of Arkhangelsk: the monumental square in the city center, the standardized concrete high rises of the working class district of Sulfate, and one of Arkhangelsk’s massive pulp and paper mills.²⁴

Taken together and repeated across the vast global networks of Soviet-influenced urbanism, these built elements comprise the socialist city as a received architectural type.²⁵

The absolute prioritization of industry and production plans effected well-known material, environmental, and economic degradation, another recognized hallmark of Soviet urbanism. As captured in some recent titles, the pursuit of “ideals in concrete” culminated in the “grey landscapes” of “smokestack socialism,” “the Siberian curse,” even “eco-cide.”²⁶ Critiques of

Logan, "Review: Plans, Pragmatism & People. The Legacy of Soviet Planning for Today's Cities by R. Antony French," *Europe-Asia Studies* 48, no. 8 (1996).

²⁴ Auri C Berg, "Reform in the Time of Stalin: Nikita Khrushchev and the Fate of the Russian Peasantry" (PhD Dissertation, University of Toronto, 2012), iv. Regarding the mills, Berg notes another hallmark legacy of Soviet urbanism: environmental pollution. In the same passage he observes that the mill “continues to spew fumes, which, when the wind comes out of the southwest, engulf this northerly outpost with the smell of hydrogen sulfide.”

²⁵ Another example comes in a recent book review, where Vladimir Kulic similarly notes the enduring reputation of Soviet mass housing “which has become entrenched as a global stereotype of soulless urban monotony.” While Kulic acknowledges a recent surge in popular interest and scholarly revisionist works, all the examples he gives are focused on built elements: “...from Soviet bus stops and Yugoslav war memorials to futuristic civic structures and resorts.” Kulic, “Review of Philipp Meuser and Dimitrij Zadorin, *Towards a Typology of Soviet Mass Housing: Prefabrication in the USSR, 1955–1991*, Berlin: DOM, 2015,” in *JSAH* v76 n1 (March 2017): 117-119.

²⁶ Phrases taken from Castillo, "Stalinist Modern: Constructivism and the Soviet Company Town."; Murray Feshbach and Alfred Friendly Jr., *Ecocide in the USSR: Health and Nature under Siege* (New York, NY: Basic Books, 1992); Zsuzsa Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary* (Bloomington, IN: Indiana University Press, 2007); Fiona Hill and Clifford G. Gaddy, *The Siberian Curse: How Communist Planners Left Russia out in the Cold* (Washington, D.C.: Brookings Institution Press, 2003); Cor Wagenaar and Mieke Dings, eds., *Ideals in Concrete: Exploring Central and Eastern Europe* (New York: Distributed Art Publishers, 2004). Such associations with low-grade technogenic materials like iron, concrete, and greyness are deeply entrenched in international discourse regarding socialism and socialist built environments. Recent works that push back against this stereotype include Krisztina Fehérvári, *Politics in Color and Concrete: Socialist Materialities and the Middle Class in Hungary*, *New Anthropologies of Europe*; Variation: New

Soviet economic planning, in this vein, point to the system's insensitivity to human needs, economic inefficiencies, and environmental disregard.²⁷

Environmental critiques of the USSR have another dimension, however, related to Soviet spatial planning. Beside the industrial emissions and monotonous standardization associated with the socialist city as a type, socialist urbanism featured distinctive patterns of land use and built density. Within socialist cities, there was either too much space or too little, and for the wrong reasons (e.g. grandiose dictatorial monumentality under Stalin, followed after his death by a fetish for standardization).²⁸ Notes French:

“Grandiose streets more than a hundred meters wide were disagreeable to cross in winter blizzards, as one tracked from one empty shop to another, especially for the elderly and disabled.”²⁹

From his geographer's perspective, Soviet urbanism's spatial improprieties reflected the dominance of architects' compositional aesthetics in Soviet urban planning.³⁰ Criticism of the basic spatial tenets of Soviet urban planning was heard, according to French, only as other foundations of the Soviet system began to give way.³¹

Anthropologies of Europe. (Bloomington: Indiana University Press, 2013); Kimberly Elman Zarecor, *Manufacturing a Socialist Modernity: Housing in Czechoslovakia, 1945-1960*, Pitt Series in Russian and East European Studies (Pittsburgh, Pa.: University of Pittsburgh Press, 2011).. The diverse properties of concrete are assessed at length in Adrian Forty, *Concrete and Culture: A Material History* (London: Reaktion, 2012).

²⁷ Paul R. Josephson, "‘Projects of the Century’ in Soviet History: Large-Scale Technologies from Lenin to Gorbachev," *Technology and Culture* 36, no. 3 (1995); "Industrial Deserts: Industry, Science and the Destruction of Nature in the Soviet Union," *The Slavonic and East European Review* 85, no. 2 (2007); Feshbach and Friendly Jr., *Ecocide in the USSR: Health and Nature under Siege*; Hill and Gaddy, *The Siberian Curse: How Communist Planners Left Russia out in the Cold*..

²⁸ In looking back over foreign critiques of Soviet city planning, it is striking that the drastic changes in the spatial properties of the cities themselves, before and after the mid-1950s, did not markedly affect its reception abroad which largely focused on the differences between “Western” and “Eastern” approaches. Consider two editorial introductions in *Landscape* magazine to published selections of Soviet and East German writings on urbanism, from either side of Stalin's death. From 1953: “The emphasis on monumentality and the preference for the compact metropolitan cityscape of apartment houses, skyscrapers and imposing streets and squares is peculiar to Communist city planning theory” Editors intro to Republished from Viennese weekly *Das Tagebuch*, "Soviet City Planning.". And from 1955: “*Landscape* here presents several excerpts... They have been edited to eliminate repetition and the more violent criticism of the western world. Whatever their intellectual validity may be, they indicate that the Marxist architecture and planning theories are increasingly unlike our own, and must be analyzed on their own merits.” “Party-Line Architecture and Planning,” 11.

²⁹ French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 95.

³⁰ French cites “Stepanenko 1981: 264” in attributing indifference to users and spatial inefficiency to disciplinary differences: “Perhaps not least among the weaknesses of the Soviet planning system was its heavy reliance, mostly total reliance, on architects to compose the plan. They tended to think in terms of architectural compositions rather than efficient functioning from the point of view of the citizen.” Architectural histories, for their part, have tended to blame engineers and political intervention. One example of this, already given, comes from Hudson. (See footnote 12)

³¹ French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 95. It is worth noting the ways that here French conflates preferences in urban morphology and experience with political-economic preferences: “Only very late in the day did the planner wake up to the clearly manifest public preference for the old pre-revolutionary shopping streets, where the shops were close together and the human scale maintained. But by the time that the wishes of the urban population even began to be considered, the Soviet system was moving into its twilight.” Of all the possible examples might have illustrated dissatisfaction with typical Soviet urban spatiality, French chooses ease of consumption, specifically the layout of shopping streets.

From Context to Content: Research Approach

This dissertation contends that to disregard the contribution of urban greening in shaping the morphology and meaning of Soviet urban built environments design is to distort historical understanding of Soviet architecture and planning. More broadly, this oversight impoverishes our sense of twentieth-century city-nature relations, excluding Soviet and Soviet-inspired developments from histories of modern landscape design, ecological urbanism, and evolving attitudes toward nature. How did Soviet urbanists envision the quintessentially modern nexus between urbanity, nature, and industry?³² More specifically, what aspirations and anxieties influenced greenspace design and planning practice, and with what effects on urban form or city identity? How did these issues vary within and among Soviet cities? How did the guiding principles change or endure across well-known architectural and political ruptures, from the postwar anti-cosmopolitan campaign under Stalin to Khrushchev's rejection of architectural "excesses"? Finally, how did the pursuit, production, and reception of urban greening relate to other, better-known aspects of Soviet society-nature relations?

In framing the project, I focus on the emic category of "ozelenenie gorodov" (the greening of cities), an distinctively Soviet subfield that emerges directly from the ontological and institutional categories of Soviet city-building (*gradostroitel'stvo*) and spatial-physical planning (*planirovka, zastroika*). Soviet proponents claimed that greenery would help create cities that were "healthy, beautiful, and convenient." Greening (*ozelenenie*) was declared "the most significant link in the process of urban beautification and amenities provision (*blagoustroistvo gorodov*)," one that was efficient, cost-effective, and emotionally, aesthetically and culturally potent.³³

³² Scholars have argued that all Soviet cities were effectively 'company towns' given that the ubiquitous presence of industry and its unassailable political clout. Perhaps the best known example of this is Stephen Kotkin's use of Magnitogorsk, one of the USSR's most industrial cities, as a "microcosm" of Stalinist society. Stephen Kotkin, *Magnetic Mountain: Stalinism as a Civilization* (Berkeley: University of California Press, 1995). See also Castillo, "Stalinist Modern: Constructivism and the Soviet Company Town."; Kate Brown, "Gridded Lives: Why Kazakhstan and Montana Are Nearly the Same Place," *The American Historical Review* 106, no. 1 (2001); Alan Barenberg, *Gulag Town, Company Town: Forced Labor and Its Legacy in Vorkuta*, Yale-Hoover Series on Stalin, Stalinism, and the Cold War. (New Haven: Yale University Press, 2014); Stephen J. Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics* (Princeton N.J.: Princeton University Press, 2011).

³³ Stephen Kotkin, in his study of "speaking Bolshevik" at Magnitogorsk, noted that "Moving from the primary to the secondary sources, one is struck by the extent to which the categories and debates of contemporaries pervade subsequent 'analyses.' [...] Second, these conceptions are limited by their polarization along a single axis of repression and enthusiasm so that one can 'demonstrate' worker support by referring to official sources and worker opposition by citing emigre ones." Kotkin, *Magnetic Mountain: Stalinism as a Civilization*, 200. A similar claim could be made about the categories and debates of contemporary

In addition to these advantages associated with urban planting, Soviet design professionals and health experts promoted urban greenery and greening as means of prophylactically ameliorating the various “hazards” of modern industrial urbanism, particularly “dust, smoke, gas and noise.” City greening was also expected to counterbalance the monotony within and among cities due to architectural standardization and mass production, and mitigate the political threats posed by a disaffected, stressed, illness-prone populace. Many of these aspirations are familiar associations of flowers, trees, and greenspace generally. What distinguished the Soviet theory and practice of greenery were the institutional and ideological parameters under which its interdisciplinary specialists worked, combined with the immense scope of imagined implementation: across all areas of all cities, throughout the Soviet Union and globally, via transnational networks of circulation and exchange, through the socialist sphere of influence and as a point of reference against which “West” and “East” sought to distinguish themselves during the Cold War.

Like any profession, Soviet architecture and urbanism was shaped by the accretion over time of modes, influences and priorities, some transnational and some specifically Soviet. A goal of this research is to identify and render comprehensible the dominant design ideas, goals, anxieties, and relevant comparative baseline or precedents as articulated by practitioners and allies in each period, while remaining attentive to which aspects changed or proved durable in the transition to the next.³⁴ Across periods, urban greenspace was expected to perform a range of functions far beyond the provision of aesthetic leisure-space. Urban greening and green plantings were enrolled as agent-objects of political and popular environmentalism, from the “garden factory” ideal promoted in the Stalinist 1930s to the “green cities, garden cities” proclaimed in 1961 by Soviet leader Nikita Khrushchev as the aspirational object of building communism.

Rather than excavate new details regarding a small set of notable sites or prominent

versus later history, criticism, and theory regarding architecture and urbanism of the USSR. By understanding how its practitioners, theorists, and popularizers “spoke greening” at the time, we are better able to understand subsequent reception of the built legacy of Soviet and socialist cities.

³⁴ My interest in the imagined—in the aspects of architectural culture that were idealized and enshrined as principles and norms, rather than what was built— might be compared to Burton’s interest in underlying scientific concepts. Similarly, Emma Widdis argues that Stalinist films, whose images might be “dismissed as ‘false’”, are still worthy of study: “it is the distortion and varnishing of reality that is of interest to us as cultural historians.”(pp175-176) Rather than simple readings of such imagery as “true” or “false,” Widdis asserts that “When we look at any Stalinist film, therefore, we need to understand it as part of a complex process of ideological negotiation. [...] How was it understood in its own time?” [p179] See Widdis, “The Cinematic Pastoral of the 1930s” in Valerie A. Kivelson and Joan Neuberger, eds., *Picturing Russia: Explorations in Visual Culture* (New Haven, Conn.: Yale University Press, 2008).

individuals, I seek to understand the development over time of foundational, taken-for-granted concepts of urban greening. This approach reflects both the distinctive structure of the Soviet architecture-planning fields, with their commitment to model and standardized project development, and the influence of the ‘everyday’ as a topic of interest in Soviet and urban history alike.³⁵ To gain perspective onto urbanists’ habitual ambitions and anxieties regarding urban greenery and greenspace, this research privileges the positions expressed in the core disciplinary texts through which Soviet urbanists communicated with each other. I draw my evidence, first and foremost, from handbooks, textbooks, and other published material written by the field’s leading specialists.³⁶ Such works represent an underused kind of primary source, one that affords a valuable trans-regional perspective about how Soviet urbanists thought about both standardization and sense of place.³⁷ Such texts were accessible to on-site specialists, though not necessarily the general public, via limited access repositories such as the libraries of local and regional chapters of the Union of Architects.³⁸ Other sources, such as workplace-memoirs,

³⁵ Scholars of non-Soviet cities, architecture and planning whose work inspires this approach include Eran Ben-Josef, Sonia Hirt, Marjaana Niemi, Paul Robbins and others. With regard to Soviet, Russian, and socialist cultures of industry, nature, space and dwelling I am likewise indebted to the models afforded by Kate Brown, Catherine Cooke, Heather DeHaan, Caroline Humphrey, Zsuzsa Gille, Christopher Ely, Stephen Collier, Stephen Brain, and Katerina Clark.

³⁶ Regarding this kind of publication, Catherine Cooke comments that “the status of textbooks in Soviet education is something much more specific [than in the West]: they are the ‘authorised’ and in some cases obligatory substance of curricula.” Catherine Cooke, “Guest Editorial,” *Environment and Planning B* 7, no. 1 (1980): 2. Because Soviet architecture and town-planning were “extremely small professions in relation to the volume of construction that the country undertakes” [p3] (not to mention the expanse of territory) and given “architects’ and architect-planners’ central role as synthesist within the building team” [p4], she notes that “the current spate of course and textbook preparation has the explicit aim of “unifying curricula across the whole country.” [Here Cooke cites Belousov V.N, 1978 “Through them to continue our work (Im prodolzhat’ nashe delo)” extracts from a paper to the Sixth Plenum of the Union of Architects’ Governing Body, May 1978 *Arkhitektura* number 13 (25 June 1978), 2-3.]

³⁷ The “trans-regional” could also be described as “sub-national” circulation. Susan Smith-Peter, “Bringing the Provinces into Focus: Subnational Spaces in the Recent Historiography of Russia,” *Kritika: Explorations in Russian and Eurasian History* 12, no. 4 (2011). For the most part, recent works on circulation in Soviet urban planning have focused on international movement, frequently bilateral exchanges or their lack. See Yves Cohen, “Circulatory Localities: The Example of Stalinism in the 1930s,” *ibid.* 11, no. 1 (2010); Stephen V. Ward, “A Pioneer ‘Global Intelligence Corps’?: The Internationalisation of Planning Practice, 1890-1939,” *Town Planning Review* 76, no. 2 (2005); “Soviet Communism and the British Planning Movement: Rational Learning or Utopian Imagining?,” *Planning Perspectives* 27, no. 4 (2012); Ian R. Cook, Stephen V. Ward, and Kevin Ward, “A Springtime Journey to the Soviet Union: Postwar Planning and Policy Mobilities through the Iron Curtain,” *International Journal Of Urban And Regional Research* 38, no. 3 (2014); Eric Paul Mumford, “CIAM and the Communist Bloc, 1928-59,” *The Journal of Architecture* 14, no. 2 (2009); Robert A. Beauregard, “Writing Transnational Histories,” *Journal of Planning History* 4, no. 4 (2005).. Three recent articles by Jennifer Robinson urge dialogue between scholars of cities in Africa and post-socialist Eurasian urban scholars. See Jennifer Robinson, “Thinking Cities through Elsewhere,” *Progress in Human Geography* 40, no. 1 (2016); “Comparative Urbanism: New Geographies and Cultures of Theorizing the Urban,” *International Journal of Urban and Regional Research* 40, no. 1 (2016); “Starting from Anywhere, Making Connections: Globalizing Urban Theory.” also David Chioni Moore, “Is the Post- in Postcolonial the Post- in Post-Soviet? Toward a Global Postcolonial Critique,” *PMLA* 116, no. 1 (2001).

³⁸ This dissertation draws on the former holdings of the Krasnoyarsk chapter of the Union of Soviet Architects. Now incorporated into the library holdings of Siberian Federal University (SFU) in Krasnoyarsk. This collection of specialist literature, supplemented by the holdings of the Krasnoyarsk State Universal Scientific Library (KUNB) and the Canadian Centre for Architecture (CCA) in Montreal, acted as the main “archive” of primary texts for this research. I also worked extensively with

newspaper provocations, and propaganda posters, indicate how the professional sphere of greening theory and practice related to its official-popular reception and reproduction.

Specialist literature in particular affords insight into how normative projects and guidelines developed at central scientific research institutions then circulated within the Soviet Union. Published reference handbooks and textbooks connected the model projects and showpiece sites developed in and for Moscow and Leningrad to the everyday environments of cities Union-wide. The latter were environments that would have been broadly familiar in experience to Soviet urban residents, but less so to foreign observers who were typically restricted to European Soviet capital cities such as Leningrad, Moscow, and Kiev. Various historians of urban and regional planning have recently emphasized trans-national circulation, including the circulation or lack thereof between the USSR, West European countries, and the USA. Building on their work, my focus on sub-national circulation provides insight into the spatiality of Soviet urbanism at the trans-regional scale, specifically the relationship between “European” and “Siberian” parts of Soviet Russia.³⁹

Greening Soviet Siberia

Normative texts and handbooks by definition promote ideal versions of design practice and model projects. Such privileging of the standardized and imagined is balanced in this dissertation by consideration of local discourse and outcomes in the Siberian city of Krasnoyarsk. This choice enables the dissertation to better capture the normative character of Soviet urbanism, and trace how those norms and standards evolved and circulated across sub-national regions. Implementation of a circulated idea, norm, or model was never seamless, of course. By making use of archival and material evidence from one particular city, this study places urbanists’ model visions in relation to their site-specific realization.

In Siberia, phenomena representative of Soviet forms of urban industrialization, modernization, and politicization converged and were concentrated. Yet Siberian cities represent a lesser-studied type of Soviet cities, adding to the need to understand how centrally developed norms and practices affected their development. Consideration of how the mid-20th century

materials from the State Archive of Krasnoyarsk Krai (GAKK), which holds local and regional Party and governmental records, the Krasnoyarsk Municipal Archive (KGA), and the Krasnoyarsk Krai Regional Museum (KKKM).

³⁹ Also known as the Russian SFSR, RSFSR, or Soviet Federative Socialist Republic.

urbanization of Siberia figured in the development of Soviet greening and beautification efforts is particularly rewarding, thanks to the significant role played by Siberia in the environmental imaginary and history of Russia and the Soviet Union.⁴⁰ Krasnoyarsk shares, in concentrated form, many traits with other major Siberian cities. As such, it provides a vivid case study of how broader trends in Soviet urbanism manifested in the mid-century industrialization and urbanization of Siberia.

Founded in 1628, this former frontier-outpost on the Yenisei River became a major industrial center and regional administrative center beginning in the 1930s. As a regional administrative capital with significant prestige as a major industrial center, the city was able to use its comparative influence and resources to pursue projects of status and identity production. Due to its relatively closed status, twentieth-century Krasnoyarsk was built and interpreted largely for local and domestic consumption, in contrast to the international “showpiece” status of projects located in Leningrad, Moscow, Stalingrad, and other better-known cities in the European part of the USSR. These traits make Krasnoyarsk especially suited to serve as a case study of how the theory and practice of city greening developed in the context of the Soviet standardization and planned resource distribution.

The city of Krasnoyarsk, and its relations with the concept and place called Nature, was originally intended to serve as the primary topic of this dissertation. As proposed, the object of research was the city’s environmental relationships, framed in the manner of urban environmental histories. I wanted to understand how Soviet landscape sensibilities manifested and were architecturally reified in the city during the Cold War decades of postwar reconstruction (1940s – 1960s), when most of the currently iconic sites and buildings in Krasnoyarsk were built. I expected to write an urban environmental history of a single city, a single period. The project would ask how local architects pursued (and according to some even realized) a “harmonious” fusion between a typically Soviet factory city and a mythically severe landscape, despite the contextual imperatives of a notoriously ‘ecocidal’ system to industrialize, politicize, and standardize. It was to be an investigation of the contact zone formed by unlike things, a story of incidental, aggregative, oppositional interventions.

⁴⁰ The significant role of Siberian urbanization and industrialization with respect to economic planning and national prosperity is asserted by Hill and Gaddy, *The Siberian Curse: How Communist Planners Left Russia out in the Cold..* Gaddy and Hill argue provocatively that Siberia’s urban Soviet legacy is a burden on post-Soviet Russian prospects, but do not delve into how urban spatial planners and architects engaged with the region at the time.

Instead, a series of insights gained during early-stage fieldwork and archival research transformed my thinking, and my research parameters. As a result of these realizations, I understood that the research agenda that structures many recent urban environmental histories of North American and European cities, i.e., to document and theorize the historical interrelationship between “city” “modernity/industry” and “nature” at the city scale, did not transfer easily to the Soviet case. Similarly, there were difficulties with the models provided by histories of Moscow, Leningrad/St.Petersburg and other well-known Soviet cities (typically written by cultural, environmental and political historians rather than architecture or planning historians). I needed to approach the topic differently.

There were three main points of nonconformity. First, Soviet urbanism resisted delineation at the city scale, even in seemingly isolated, closed cities such as Krasnoyarsk. The structure of Soviet architecture-planning practice, including city greening, was such that the ideas, individuals, norms and other factors that shaped a given city frequently originated and circulated via regional, national and international networks rather than purely local agency or bilateral center-local interactions. Developments within the city made sense only in relation to the trans-regional, even international, circulation of ideas, models and people.

Second, I had been too narrow in defining the period of significance. Virtually all the structures and spaces that define Soviet Krasnoyarsk were built in the period from the early 1950s to the early 1970s. The ideas and habits of practice that shaped those definitive projects originated much earlier, however. While little was physically constructed in the 1930s and much was demolished, it was then that the Soviet architecture-planning fields developed a resilient set of characteristic norms and ambitions that continued to influence the development of Soviet cities long thereafter. Third, in contrast to Soviet economic planners’ reputed disregard for the environment, Soviet urban planners evinced persistently, pervasively positive regard for nature as a concept, and insisted on the propriety of incorporating environmental features as elements of design. Rather than hunting the archival record for mute clues and indirect influences as to why local architects embraced landscape, I found myself awash in explicit statements and regulations to that effect. The card catalogue of the Krasnoyarsk State Scientific Research Library even included a category, “The relationship of man and the environment in the province. Protection of

Nature” in which more than 200 works published since the 1960s were identified.⁴¹

Most importantly, I realized that the Soviet intersection of urbanism, industrialization and environmental attitudes, which had been the structuring focus of my original project, was not a by-product of other historical phenomena (or not only). City-nature relations was a field of architecture-planning practice and theory in its own right. The name of that field was urban greening, *ozelenenie goroda*. Russian and Soviet urbanists had been thinking about city-nature relations, writing about them, and making interventions since the 1930s at least. In order to understand the development of city-nature relations in Krasnoyarsk and other Soviet cities, I needed to understand the shared field of praxis in which Soviet architects and associated specialists operated. This meant assessing the disciplinary concepts, models and texts that guided them, as well as the socio-cultural and political factors that further influenced their ambitions, anxieties, and assumptions. What had been an object-oriented history of the environmental interventions and consequences produced by Krasnoyarsk’s postwar building boom became something more complex.

The resulting dissertation is a history of the All-Soviet architecture-planning field of urban greening and beautification. It draws deeply on published material by which Soviet urbanist discourse circulated from those who developed the norms to those expected to adapt those norms to a site. These are the books that comprised the library of the Krasnoyarsk Union of Architects, or similar regional repositories. It covers the decades of urban greening’s formative early theorization in the 1930s, its further politicization and consolidation in the late 1940s, and the continued influence of urban greening’s constituents and norms into the late 1950s and early 1960s, the era of mass housing and the *mikroraion*. In terms of geography, focus alternates between developments in the central research institutes and institutions such as the Union of Architects, and developments on the ground in Krasnoyarsk, maintaining a Siberian spatial research perspective in both cases.

After surveying the basic character of Krasnoyarsk and its city-nature relations (Chapter Two), subsequent chapters of this dissertation analyze of how dominant features and orthodoxies evolved in national or All-Union discourse (Chapters Three, Four, Six). Chapter Five returns to Krasnoyarsk, assessing how greening was incorporated in local architecture-planning practice

⁴¹ Other separate categories were “Beautification and greening” and “Greening of settlement points”

and professional culture (Chapter Five). The final chapter (Seven) examines the under-studied relationship of urban greening to the Soviet mass environmental movement, particularly as it manifested in Siberia and in Krasnoyarsk. Gardens, and garden-factories, grew differently away from the central black earth regions where they were conceived.

The city and urbanists of Krasnoyarsk are no longer central but still present, appearing intermittently to provide balance in understanding the instantiation of abstract ideals, and provide insight into the development of non-showpiece cities of the USSR. Ultimately, the significance of Siberia in Soviet environmental history is reaffirmed. The concepts and norms of Soviet urbanism encouraged, even required, the embrace of local terrain, climate, and related features. This normative sense of place did not mean, however, that the adaptation of standards to site—a formal process known in Russian planning lexicon as *priviazka*—achieved homogeneously harmonious results. The Siberian outcomes of Soviet urban greening diverged in notable ways from the standardized ideal. As this dissertation will show, when combined with other developments particular to the region, the regional consequences of greening amounted to a whole greater than the plants of its parts.

Divergence and Convergence in the Historiography of Greening

The history of Soviet city greening is a rare topic of study for English-language architecture and planning history. The greening of cities (*ozelenenie*) as practiced in the Soviet Union was shaped, in particular, by factors absent or differently present in First or Third World cities. Most importantly, in the USSR there was no private land ownership, a strong emphasis on “planning” in both the economic and spatial-compositional senses, and a centralized structure of professional institutions and standards with relatively permeable borders between city planning, green space design, and municipal services provision. Even when Soviet specialists in greening shared concerns and precedents with their counterparts abroad, the scope of work and available resources diverged.

Attempts to situate the history of greening in relation to existing scholarship encounter the challenges posed by greening’s intrinsically multi-faceted character. The practice of *ozelenenie* incorporated areas of design-planning practice that in international practice and scholarship are frequently separate professions, involving distinct historiographies. I choose to address greening in its bundled-together entirety, which included sanitary-hygienic, aesthetic-architectural, and

service-amenity aspects, rather than concentrate purely on leisure, sport, hygiene or other singular facets as other studies have done.⁴² This approach aligns the frame of inquiry more closely with the scope of greening practice. It complicates lines of scholarly lineage, however, as is discussed throughout this section.

As is often said of landscape architecture in general, Soviet urban greening was simultaneously a form of creative art, a utilitarian public service/amenity, and an environmental intervention. As such, its history contributes to three more or less distinct lines of study: Soviet culture and aesthetics, including art and architecture; Soviet urban planning and management, with its focus on the transformation and facilitation of *byt* (or everyday life); and Soviet environmental attitudes, problems, and activism. This section sketches some of the relevant themes and framing concerns dominant in these three fields, giving context to the interdisciplinary contribution of this dissertation.

In general, Russophone histories take the goals and conceptual basis of Soviet urban greening for granted.⁴³ They have primarily sought to chronicle the quantitative and qualitative achievements of the field, less frequently analyzing its significance in relation to broader social, political or professional phenomena.⁴⁴ In general, Russian scholarly research continues to use the framework of “greening” to address the public and ecological health aspects of cities. Such studies most often do so within a natural science analytic framework rather than as a topic of

⁴² My choice of the word bundle or bundling to describe the properties and values associated with urban greening draws on the work of anthropologist Webb Keane regarding material culture. According to Keane, “Objects may thus convey into the world of socially realized meanings the *indexical* traces of causal processes that remain otherwise unexpressed. [...] Without in any way *determining* their cultural significance, objects may nonetheless be important vehicles of transformative pressure on, or provide openings to new possibilities for, systems of meaning and of pragmatic action. To see this requires attention to the sheer materiality of things in two respects. First, in what I call *bundling*, material things always combine an indefinite number of physical properties and qualities, whose particular juxtapositions may be mere happenstance. In any given practical or interpretative context, only some of these properties are relevant and come into play. But other properties persist, available for promotion as circumstances change.” Italics in original. Webb Keane, “Subjects and Objects,” in *Handbook of Material Culture*, ed. Christopher Y. Tilley, et al. (London: Sage Publications, 2006), 200.

⁴³ This is true on either side of the USSR’s collapse. Examples of Russian language histories of Russian and Soviet landscape architecture, broadly defined, include A.P. Vergunov and V.A. Gorokhov, *Russkie Sady I Parki (Russian Gardens and Parks)* (Moscow: Nauka, 1988); A. P. Vergunov and V. A. Gorokhov, *Vertograd: Sadovo-Parkovoe Iskusstvo Rossii, Ot Istokov Do Nachala Xx Veka* (Moscow: Kultura, 1996); S. S. Ozhegov, *Istoriia Landshaftnoi Arkhitektury: Kratkii Ocherk* (Moscow: Stroizdat, 1993); *Istoriia Landshaftnoi Arkhitektury, Seriia Arkhitektura* (Moscow: Arkhitektura-S, 2004).. See also <http://www.gardener.ru/gap/person/cat61.php>; <http://www.russiskusstvo.ru/authors/146/a71/>;

⁴⁴ One exception is the recent *kandidatskaya* thesis by Alexei Kitaev, on parks and gardens in St. Petersburg-Leningrad between 1900 and 1950, which does consider the political and cultural context. More typical of Russophone studies is Kitaev’s focus, in an earlier article, on documenting the history in Leningrad of named sites, hectares, dates, and costs. See Kitaev, Alexei Vasil’evich. “History of Sankt Peterburg - Petrograd - Leningrad. Open spaces: gardens and parks (1900–1950). Dissertation, Russian State Pedagogical University im. Herzen, 2010 and Alexei Kitaev, “Red Parks: Green Space in Leningrad, 1917-1990,” in *The European City and Green Space: London, Stockholm, Helsinki and St. Petersburg, 1850-2000*, ed. Peter Clark, Historical Urban Studies (Burlington, VT: Ashgate, 2006).

historiographic inquiry within the humanities or social sciences.⁴⁵ Works on the parks, gardens and urban history of specific cities also draw on the Russian and Soviet tradition of local or regional studies (*kraevedenie*).⁴⁶

In terms of popular reception, residents of the cities of the (former) Soviet Union demonstrate strong affective connections to urban greenspace.⁴⁷ These sites are loved enough that residents demonstrate in their defense, even in a context in which immense sums change hands for urban development opportunities. Parks and other urban and near-urban greenspace feature frequently in past and present films as sites of friendship, romantic courtship, and community cohesion.⁴⁸

The widespread emotional attachment with Soviet-built urban greenspace is not shared, however, by outside commentators in architecture, landscape design, planning and associated fields. As a topic of international disciplinary interest, the practice and theory of Soviet urban greening has been obscured by the lack of a direct English-language professional equivalent and other external constraints.⁴⁹ Accounts by foreign professionals and critics often dismiss or diminish the significant theorization and design intent embodied by the between-building space in Soviet and post-Soviet cities. Examples include assertions that “nature” is traditionally

⁴⁵ One representative example of the many available online: a March 2018 article by a scholar at the Yerevan State Medical University, Department of Hygiene and Ecology, Kristina Vardanyan: “Greening as a significant sanitary-psychological factor in the optimization of urban environs” [In Russian] Available on www.researchgate.net with 184 reads as of 10/2018.

⁴⁶ For general discussion of the history of *kraevedenie* and its relation to regional history in the West, see Emily D. Johnson, *How St. Petersburg Learned to Study Itself: The Russian Idea of Kraevedenie*, Studies of the Harriman Institute (University Park: Pennsylvania State University Press, 2006); Susan Smith-Peter, “How to Write a Region - Local and Regional Historiography,” *Kritika- Explorations in Russian and Eurasian History* 5, no. 3 (2004); and Smith-Peter, “Bringing the Provinces into Focus: Subnational Spaces in the Recent Historiography of Russia.” *Kritika: Explorations in Russian and Eurasian History* 12, no. 4 (2011): 835-48.

⁴⁷ Examples of residents’ love for these everyday areas of greenery can be found in David L. Ransel, “‘They Are Taking That Air from Us’: The Sale of Commonly Enjoyed Properties to Private Developers,” in *Everyday Life in Russia: Past and Present*, ed. Choi Chatterjee, David L. Ransel, and Mary Cavender (Bloomington, IN: Indiana University Press, 2015). and Boris Ananich and Alexander Kobak, “St. Petersburg and Green Space, 1850-2000 : An Introduction,” in *The European City and Green Space: London, Stockholm, Helsinki and St. Petersburg, 1850-2000*, ed. Peter Clark, Historical Urban Studies (Burlington, VT: Ashgate, 2006). on the post-Soviet period, and in Varga-Harris, “Green Is the Colour of Hope?: The Crumbling Facade of Postwar Byt through the Public Eyes of Vecherniaia Moskva.” on the 1945-53 postwar period. Similarly, in surveys of recent attitudes toward apartment courtyards in Moscow, Peter Sigris has found that the majority of those surveyed (75%) were satisfied with the overall impression of territory near their residences, though many would prefer better maintenance. Peter Christian Sigris, “Governing the Commons around Urban Homes an Ecological Study of the Design, Management and Use of Moscow Yards” (Ph.D. Dissertation, Cornell University, 2015). Particularly Chapter 6, “Resident Perspectives” pp236-249.

⁴⁸ The same can be said of street spaces, part of the Russian practice of socializing while strolling (especially useful in settings which lacked domestic privacy or affordable and accessible “third place” locations.)

⁴⁹ Political, linguistic, and logistical challenges limited the number and type of direct site visits at the time, while historians of the region have largely concentrated on other topics in the years since. These issues are common to the historiography of Soviet and socialist cities more generally, as noted by Zarecor, “What Was So Socialist About the Socialist City? Second World Urbanity in Europe.” 2018.

“outside of the city and something ‘other’” to Russian cities, as was recently stated by an American landscape architect involved in Moscow’s new Zaryadye Park.⁵⁰ Elsewhere we read that landscape architects were absent or criminally indifferent in the development of typically “modernist” Soviet and East European cityscapes.⁵¹

More drastically, the characteristic traits of socialist built environments are explained in relation to the political-ideological pathologies of the regimes under which they were built, effacing the agency, or autonomous disciplinary concerns, of Soviet architects.⁵² The dominant image of Soviet built environments remains largely negative, tied to totalitarian interpretations of Soviet society that have since been complicated and revised by multiple waves of histories.⁵³ Even in works that complicate such simplistic narratives with respect to the Soviet or socialist built environment, discussion of buildings and built spaces continues to crowd out consideration of city’s “open” or “unbuilt” planted areas.⁵⁴ For example, *Landscapes of Communism: A History*

⁵⁰ On the supposedly traditional opposition of city and nature in Russia, see Roslyn Sulcas, “In Moscow’s Newest Park, All of Russia Comes Together” *New York Times*, Aug. 10, 2018. Accessed online on 8/28/2018 at <https://www.nytimes.com/2018/08/10/arts/design/zaryadye-park-moscow.html>. The article focuses on Zaryadye Park, “Moscow’s first new green space in 50 years,” emphasizing its novelty and, at the same time, its ambitions to simultaneously “describe the Russian soul” and represent “Russia’s varied regional landscapes: tundra, the steppe, the wetlands, birch forests.” The park is designed by the American architects Diller Scofidio & Renfro, with help from Citymakers, a Moscow-based urban planning team. Sulcas writes that “The central principle of the design, which Charles Renfro described as ‘urbanity gives up to nature,’ was an unusual one for Russia. ‘When you look at landscape in Russian fairy tales and literature, you see that nature is outside of the city and something ‘other,’ ‘ said Mary Margaret Jones, a senior principal at Hargreaves Associates.”

⁵¹ Rob Aben, “Where Were Landscape Architects When the Residential Edens Were Being Built? Outdoor Spaces in Modernist Residential Districts,” in *Ideals in Concrete: Exploring Central and Eastern Europe*, ed. Cor Wagenaar and Mieke Dings (Amsterdam: NAi Publishers, 2004). Aben opens his discussion of Hoyerswerda, an East German new town founded in 1957, by stating that the “The tabula rasa concept was pursued at the expense of local features. [...] Fine moments occur precisely at those points where the landscape resists and the planning ‘machinery’ falters or shows respect for local conditions. What is more, the uniform disposition of the self-same houses in a featureless landscape violates basic human needs like orientation.” As evidence of the consequences, Aben references the popular 1970s Soviet film “S Legkim Parom” in which the male protagonist confuses his apartment in Moscow for a near-identical apartment, building, and housing district in Leningrad. (p154)

⁵² e.g. Dak Kopec and Natalie Lord, “Scares of Communism: Architectural and Design Remnants of an Ideology,” *Space and Culture* 13, no. 4 (2010); Herman van der Wusten, “Dictators and Their Capital Cities: Moscow and Berlin in the 1930s,” *GeoJournal* 52, no. 4 (2000). Assertions that Soviet architectural production was primarily a political act filters into course design, as in this gloss on the mid-1930s planned transformation of Moscow: “Boris Iofan helped Joseph Stalin remake Moscow in the dictator’s own image.” From course description: ARCH 505 2018W Term 1: “1935: One year, many modernisms” <https://sala.ubc.ca/academics/courses/arch-505>This widespread assumption positions Soviet architects as midwives in the building(s) of socialism, effacing any opportunities or desire they may have had to intervene, enhance, or resist ideological and political initiatives.

⁵³ For entry into Revisionism in Soviet history, see N. G. O. Pereira, “Revisiting the Revisionists and Their Critics,” *Historian* 72, no. 1 (2010); Sheila Fitzpatrick, “Revisionism in Retrospect: A Personal View,” *Slavic Review* 67, no. 3 (2008). For examples of recent, more nuanced, studies of Soviet architecture, urbanism, and environmental history, see footnotes 77, 79, and 81.

⁵⁴ Recent comprehensive accounts have focused on architecture Richard Anderson, *Russia, Modern Architectures in History* (London: Reaktion Books, 2015). or, among those written by historians specializing in the region, on planning in a particular city or period e.g. Timothy J. Colton, *Moscow: Governing the Socialist Metropolis*, Russian Research Center Studies (Cambridge, Mass.: Belknap Press of Harvard University Press, 1995); Heather D. DeHaan, *Stalinist City Planning: Professionals, Performance, and Power* (Toronto: University of Toronto Press, 2013); Barenberg, *Gulag Town, Company Town: Forced Labor and Its Legacy in Vorkuta*; Karl D. Qualls, *From Ruins to Reconstruction: Urban Identity in Soviet Sevastopol after World War II*

Through Buildings by British writer and architectural critic Owen Hatherley contains much discussion of architectural objects but little on designed landscapes. Beginning with the subtitle, the history of actual landscapes of communism is obscured by that of buildings.⁵⁵

Discussions of the Soviet built environment that feature absent or abstracted landscape “space” are common, a pattern reinforced by the Soviet Union’s widely held reputation for environmental disregard. Tropes of buildings adrift and landscapes overlooked is associated with the mass housing era in particular, when Stalinist aesthetic excesses and monumentality gave way to the aesthetic and infrastructural shortages of “Khrushchevki.”⁵⁶ Between the late 1950s and the 1980s, as noted on the Polis Blog, socialist lived reality failed to catch and overtake the promised provision of public transportation, greenery and other “walkable urban amenities.”⁵⁷ In the new microdistricts that characterized Soviet residential environments from the late 1950s on, “Often transportation infrastructure proved slow in coming, amenities [were] inconveniently dispersed, and green space [was] poorly maintained or overwhelmingly vast.”⁵⁸

(Ithaca: Cornell University Press, 2009); Paul Stronski, *Tashkent: Forging a Soviet City, 1930-1966*, Pitt Series in Russian and East European Studies (Pittsburgh: University of Pittsburgh Press, 2010).. Other, edited, volumes have operated within thematic and cultural framings, rather than on architecture-planning as a professional or disciplinary practice e.g. William Craft Brumfield, ed. *Reshaping Russian Architecture: Western Technology, Utopian Dreams*, Woodrow Wilson Center Series (Cambridge [England]: Cambridge University Press, 1990); William Craft Brumfield and Blair A. Ruble, eds., *Russian Housing in the Modern Age: Design and Social History* (Cambridge, UK: 1993); Michael F. Hamm, ed. *The City in Russian History* (Lexington: University Press of Kentucky, 1976); *The City in Late Imperial Russia*, Indiana-Michigan Series in Russian and East European Studies. (Bloomington: Indiana University Press, 1986); Pavel Lysakov and Stephen M. Norris, eds., *The City in Russian Culture*, Routledge Contemporary Russia and Eastern Europe Series (New York: Routledge, 2018). or on the post-Soviet experience Kiril Stanilov, ed. *The Post-Socialist City: Urban Form and Space Transformations in Central and Eastern Europe after Socialism*, Geojournal Library (Dordrecht, The Netherlands: Springer Verlag, 2007). An exception is certain books by geographers, who do focus on city and regional planning usually as a contemporaneous practice rather than as history. B. Michael Frolic, *Soviet Urban and Regional Planning and Administration: An Annotated Bibliography from Western Language Sources. Compiled During a Seminar on Soviet Urban and Regional Planning, Dept. Of City and Regional Planning, College of Architecture, Cornell University, under the Supervision of Jack C. Fisher* (Ithaca, NY: Center for Housing and Environmental Studies, Division of Urban Studies, Cornell University, 1963); Judith Pallot and Denis J. B. Shaw, *Planning in the Soviet Union* (Athens: University of Georgia Press, 1981); Paul M. White, *Soviet Urban and Regional Planning: A Bibliography with Abstracts* (New York: St. Martin's Press, 1980); Chauncy D. Harris, *Cities of the Soviet Union; Studies in Their Functions, Size, Density, and Growth*, Monograph Series of the Association of American Geographers (Chicago: Rand McNally, 1970).

⁵⁵ Owen Hatherley, *The Landscapes of Communism: A History through Buildings* (New York: The New Press, 2015). Hatherley does discuss urban features other than buildings, such as the metro and boulevards of Moscow, but parks and greenspace are left at the margins of the main discussion (and left out of the subject index). A similar figurative use of “landscape” to connote scene or phenomena but not actual place can be found in the otherwise laudable edited volume *The Landscape of Stalinism*, which includes chapters focused on many aspects of Stalinist spatial culture and political place-aesthetics, but none on physical place. Evgeny A. Dobrenko and Eric Naiman, eds., *The Landscape of Stalinism: The Art and Ideology of Soviet Space*, Studies in Modernity and National Identity (Seattle: University of Washington Press, 2003).

⁵⁶ Blair A. Ruble, "From Khrushcheby to Korobki," in *Russian Housing in the Modern Age: Design and Social History*, ed. William Craft Brumfield and Blair A. Ruble, Woodrow Wilson Center Series (Cambridge: Cambridge University Press, 1993).

⁵⁷ “Boundaries of Power” posted Saturday, April 03, 2010 to the Polis Blog by Peter Sigrist. <https://www.thepolisblog.org/2010/04/boundaries-of-power.html>

⁵⁸ Sigrist was then a doctoral student in City and Regional Planning at Cornell University. He describes this post as a “brief visual overview of the period between the end of Stalin's rule in 1953 and the ascension of Gorbachev in 1985.” The post, fifth in a

Even among Soviet commentators, the post-Stalinist built environment was criticized for its “free-floating” relationship to site:

The minimal number of types of flats and apartment houses was adopted . . . The density of the construction was not high and the houses ‘floated’ freely in space, without organizing that space. All these circumstances taken together generated a drab monotony of the residential environment.⁵⁹

In readings such as these, the ample proportion of “open” space in Soviet cities—i.e., urban territory not occupied by buildings—represents the absence, ambivalence, or outright antipathy of Soviet landscape designers toward nature, efficiency, and human-scale comfort.

This line of criticism, linked specifically to the architectural standardization and irregular arrangement of post-Stalinist housing, expands in the hands of others to a blanket critique of Soviet environmental design of all periods and land use types. The aggregate material and spatial qualities of Soviet built environments is taken by some critics as proof of, or perhaps even a contributing factor to, the socio-political qualities generically associated with life in the USSR. In these accounts, the alternatively excessively ornate or excessively spare built environments of the USSR index its categorization as a changing, but always totalitarian, society.⁶⁰

A robust but narrow canon of established topics defines most studies of Russian and Soviet landscape design. Disciplinary and popular histories of the regions’ artistic-architectural traditions of garden and park design, whether written by domestic- or foreign-born authors, have

series of six on Moscow parks, “focuses on urban development under Khrushchev and Brezhnev, with emphasis on public green space.” Polis “is a collective blog about cities worldwide. As a volunteer effort in support of public dialog, ... [they] welcome submissions from experts and enthusiasts alike.” <https://www.thepolisblog.org/2010/04/boundaries-of-power.html>. Sigrist’s dissertation, “Governing the commons around urban homes an ecological study of the design, management and use of Moscow yards” (Cornell University, 2015) focuses on issues of governance, maintenance, and public reception in a “social science” approach, using structured interviews and a questionnaire survey conducted from March 2012 through July 2013, among other sources.

⁵⁹ Quoted in Javier Monclús & Carmen Díez Medina (2016) “Modernist housing estates in European cities of the Western and Eastern Blocs”, *Planning Perspectives*, 31:4, on p547-48. The quote comes from André Ikonnikov, *Russian Architecture of the Soviet Period*. Moscow: Radugacop, 1998. p282. Note that, whereas Ikonnikov criticized post-Stalinist housing for its lack of shaping the space around it, his judgement admitted exceptions for some civic buildings. For instance, some years earlier, Ikonnikov praised the 1967 Central Stadium in Krasnoyarsk for its site-appropriate forms. See Chapter Two of this dissertation for more on that stadium’s contrasting reception in domestic and international discourse.

⁶⁰ The association of Soviet urbanism with authoritarian or “high modernist” monumentality enters planning literature most prominently in Peter Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*, 3rd ed. (Oxford, UK; Malden, MA: Blackwell Publishers, 2002). particularly Chapter 6: “The City of Monuments / The City Beautiful Movement: Chicago New Delhi, Berlin, Moscow, 1900-1945” pp174-202. A prime example of conflation between the political and the architectural, overlooking significant shifts in the latter, is Kopec and Lord, “Scares of Communism: Architectural and Design Remnants of an Ideology.” but see also Dmitri Sidorov, “National Monumentalization and the Politics of Scale: The Resurrections of the Cathedral of Christ the Savior in Moscow,” *Annals of the Association of American Geographers* 90, no. 3 (2000); Steven Maddox, “These Monuments Must Be Protected! The Stalinist Turn to the Past and Historic Preservation During the Blockade of Leningrad,” *Russian Review* 70, no. 4 (2011); Bruce Grant, “New Moscow Monuments, or, States of Innocence,” *American Ethnologist* 28, no. 2 (2001); John Adams, “Monumentality in Urban Design: The Case of Russia,” *Eurasian Geography and Economics* 49, no. 3 (2008); van der Wusten, “Dictators and Their Capital Cities: Moscow and Berlin in the 1930s.”

long directed international attention to the grand gardens and landscape parks of the tsarist period such as Peterhof, the so-called Russian Versailles.⁶¹ Historians have also examined the phenomenon of garden and park development in Russian Crimea, particularly with regard to Catherine the Great and British architects, including Charles Cameron.⁶² A relatively small number of urban parks, such as St. Petersburg's Summer Gardens and the Moscow "Gorky" Central Park of Culture and Rest, enjoy similar name recognition, thanks in part to the recent reconstruction of the latter.⁶³ Among comparative histories of gardens, parks, and urban greenspace, when the Soviet period is included, it is typically represented by Parks of Culture and Leisure, and less commonly, by other "showpiece" projects such as Victory Parks and landscape memorials.⁶⁴ As with other aspects of Soviet architecture and design history, the period before the mid-1930s continues to attract the bulk of attention in Soviet park and garden

⁶¹ Peter Hayden, *Russian Parks and Gardens* (London: Frances Lincoln, 2005); "Gardens of the Tsars: A Study of the Aesthetics, Semantics and Uses of Late 18th-Century Russian Gardens [by] Margrethe Floryan [Book Review]," in *Garden History* (1997); "The Russian Stowe: Benton Seeley's Guidebooks as a Source of Catherine the Great's Park at Tsarskoe Selo," *Garden History* 19, no. 1 (1991); Margrethe Floryan, *Gardens of the Tsars: A Study of the Aesthetics, Semantics and Uses of Late 18th Century Russian Gardens* (Aarhus, Denmark: Aarhus University Press, 1996); Vergunov and Gorokhov, *Vertograd: Sadovo-Parkovoe Iskustvo Rossii, Ot Istokov Do Nachala Xx Veka*; G. K. Lukomskii and Nicholas De Gren, *Charles Cameron (1740-1812) an Illustrated Monograph on His Life and Work in Russia, Particularly at Tsarskoe Selo and Pavlovsk*, in *Architecture, Interior Decoration, Furniture Design and Landscape Gardening* (London: Nicholson & Watson, 1943); Susan Jellicoe, "Gardens of the Tsars," *Landscape design*, no. 103 (1973).; on the domestic side, Albert J. Schmidt, "Westernization as Consumption: Estate Building in the Moscow Region During the Eighteenth Century," *Proceedings of the American Philosophical Society* 139, no. 4 (1995); Priscilla R. Roosevelt, *Life on the Russian Country Estate: A Social and Cultural History* (New Haven: Yale University Press, 1995); Olga Elina, "Private Botanical Gardens in Russia: Between Noble Culture and Scientific Professionalization, 1760s-1917," *Studies in the history of gardens & designed landscapes* 28, no. 3-4 (2008); Christine Ruane, "Eighteenth-Century Botanical Literature and the Origins of an Elite Russian Gardening Community," in *Word and Image in Russian History: Essays in Honor of Gary Marker*, ed. Maria Di Salvo, Daniel H. Kaiser, and Valerie A. Kivelson (Brighton, MA: Academic Studies Press, 2015).

⁶² Anthony Cross, "The English Garden in Catherine the Great's Russia," *Journal of Garden History* 13, no. 3 (1993); "Russian Gardens, British Gardeners," *Garden History* 19, no. 1 (1991); Andreas Schönle, *The Ruler in the Garden: Politics and Landscape Design in Imperial Russia*, Russian Transformations: Literature through Culture (New York: Peter Lang, 2007); "Garden of the Empire: Catherine's Appropriation of the Crimea," *Slavic Review* 60, no. 1 (2001); Dmitri Olegovich Shvidkovsky, *The Empress & the Architect: British Architecture and Gardens at the Court of Catherine the Great*, trans. C. Cooke and others (New Haven, CT: Yale University Press, 1996).

⁶³ Claire Shaw, "A Fairground for "Building the New Man": Gorky Park as a Site of Soviet Acculturation," *Urban History* 38, no. 02 (2011). On early design proposals for the park, see also Alla G. Vronskaya, "The Utopia of Personality: Moisei Ginzburg's Project for the Moscow Park of Culture and Leisure," *Quaestio Rossica*, no. 4 (2015).. Unfortunately, this article came to my attention too late to be incorporated into discussion.

⁶⁴ The vast majority of such rare inclusions focus on St. Petersburg and Moscow, as in chapters by Boris Anan'ich, Alexander Kobak, Konstantin Semenov, and Alexei Kitaev in Peter Clark, ed. *The European City and Green Space: London, Stockholm, Helsinki and St. Petersburg, 1850-2000*, Historical Urban Studies (Burlington, VT: Ashgate, 2006).. An exception is work on Sochi and its built environments of health and leisure by environmental historian Johanna Conterio, "Inventing the Subtropics: An Environmental History of Sochi, 1929-36," *Kritika: Explorations in Russian and Eurasian History* 16, no. 1 (2015); Johanna Conterio Geisler, "The Soviet Sanatorium: Medicine, Nature and Mass Culture in Sochi, 1917-1991" (PhD Dissertation, Harvard University, 2014).

studies.⁶⁵

These studies convey valuable interpretations and information about high-profile and elite sites; much work remains to understand the ways greenery functioned in other areas of Russian and Soviet society, culture, and aesthetics.⁶⁶ Scholars in geography, art, and literary history have convincingly established landscape painting and landscape science, particularly of riparian and forest sites, as important arenas of Russian and Soviet cultural-political expression.⁶⁷ In cultural history and literature studies, a rich scholarly conversation has coalesced around the history of Russian, Soviet and Socialist “landscapes” and “space(s)” — terms that encompasses landscape as concept, as identity and, to a lesser extent, as a unit of place. Similar cultural histories embrace landscape and space as key elements in Soviet painting, film, writing, even in ethnopolitics, but rarely include on landscape design as an applied field of practice *and* theory.⁶⁸

⁶⁵ Representative examples include Alla G. Vronskaya, "Urbanist Landscape: Militsa Prokhorova, Liubov' Zalesskaia, and the Emergence of Soviet Landscape Architecture " in *Women, Modernity, and Landscape Architecture*, ed. Sonja Dümpelmann and John Beardsley (New York: Routledge, 2015); Stephen V. Bittner, "Green Cities and Orderly Streets: Space and Culture in Moscow, 1928-1933," *Journal of Urban History* 25, no. 1 (1998); Boris Brodsky, "The Psychology of Urban Design in the 1920s and 1930s," *The Journal of Decorative and Propaganda Arts* 5 Russian/Soviet Theme Issue (1987).

⁶⁶ Promising directions are suggested by the work of Jennifer Keating, on greening in relation to Russian imperial settlement/colonialism in Central Asia. Jennifer Keating, "'There Are Few Plants, but They Are Growing, and Quickly': Foliage and the Aesthetics of Landscape in Russian Central Asia, 1854–1914," *Studies in the History of Gardens & Designed Landscapes* 37, no. 2 (2016). and forthcoming work on “The Natural History of Russian Gardens” from a literary studies perspective by Alyson Tapp.

⁶⁷ e.g. works by Mark Bassin, Christopher Ely, Jane Costlow, Denis J.B. Shaw and Jonathan Oldfield Mark Bassin, "I Object to Rain That Is Cheerless': Landscape Art and the Stalinist Aesthetic Imagination," *Ecumene* 7, no. 3 (2000); "Turner, Solov'ev, and the 'Frontier Hypothesis': The Nationalist Signification of Open Spaces," *The Journal of Modern History* 65, no. 3 (1993); "Inventing Siberia: Visions of the Russian East in the Early Nineteenth Century," *The American Historical Review* 96, no. 3 (1991); Mark Sokolsky, "Between Predation and Protection: Forests and Forestry in Late Tsarist Primor'e," *Sibirica* 13, no. 2 (2014); Katrina Z. S. Schwartz, "Nature, Development and National Identity: The Battle over Sustainable Forestry in Latvia," *Environmental Politics* 8, no. 3 (1999); Matthias Schmidt and Andrei Doerre, "Changing Meanings of Kyrgyzstan's Nut Forests from Colonial to Post-Soviet Times," *Area* 43, no. 3 (2011); Dominique Moran, "Exile and Exclusion: The Legacy of Soviet Forestry for Villages in the North of Perm Oblast," *GeoJournal* 55, no. 2 (2001); Jane T. Costlow, *Heart-Pine Russia: Walking and Writing the Nineteenth-Century Forest* (Ithaca: Cornell University Press, 2012); Jane Costlow, "Imaginations of Destruction: The 'Forest Question' in Nineteenth-Century Russian Culture," *The Russian Review* 62, no. 1 (2003); Denis J. B. Shaw and Jonathan D. Oldfield, "Landscape Science: A Russian Geographical Tradition," *Annals of the Association of American Geographers* 97, no. 1 (2007); Antipov and Semenov, "The Russian School of Landscape Planning." Additional works by environmental historians on these topics are discussed below.

⁶⁸ Dobrenko and Naiman, *The Landscape of Stalinism: The Art and Ideology of Soviet Space*; Cordula Gdaniec, ed. *Cultural Diversity in Russian Cities: The Urban Landscape in the Post-Soviet Era* (New York: Berghahn Books, 2010); Christopher Ely, *This Meager Nature: Landscape and National Identity in Imperial Russia* (DeKalb: Northern Illinois University Press, 2002); Mark Bassin, "Landscape and Identity in Russian and Soviet Art: An Introduction," *Ecumene* 7, no. 3 (2000); Nick Baron, "New Spatial Histories of Twentieth Century Russia and the Soviet Union: Surveying the Landscape," *Jahrbücher für Geschichte Osteuropas* 55, no. 3 (2007). Donald J. Raleigh, ed. *Provincial Landscapes: Local Dimensions of Soviet Power, 1917-1953*, Pitt Series in Russian and East European Studies (Pittsburgh: University of Pittsburgh Press, 2001); J. Baberowski, "The Archival Landscape - Historiography During the Post-Soviet Era - Introduction," *Jahrbücher für Geschichte Osteuropas* 51, no. 1 (2003); Emma Widdis, "Russia as Space," in *National Identity in Russian Culture: An Introduction*, ed. Simon Franklin and Emma Widdis (Cambridge: Cambridge University Press, 2004); Jeremy Smith, ed. *Beyond the Limits: The Concept of Space in Russian History and Culture*, *Studia Historica*, (Helsinki: SHS, 1999); Kimitaka Matsuzato, "The Concept of 'Space' in Russian History—Regionalization from the Late Imperial Period to the Present," in *Empire and Society: New Approaches to Russian History*, ed. Teruyuki Hara and Kimitaka Matsuzato (Sapporo, Japan: Slavic Research Center, Hokkaido University, 1997);

On the occasions when Anglophone geographers and other urban or planning scholars have turned their attention to Soviet urban greenspace, their relatively narrow focus on parks, sites of recreation, and other leisure-oriented spaces has privileged the aspects of Soviet praxis that map most directly onto Western municipal equivalents.⁶⁹ These works leave untouched the disciplinary system of concepts and norms in which *ozelenenie gorodov* operated, conceptualized as the holistic and multi-scalar making-verdant or greening of cities, in contrast to a “parks and recreation” system of public urban land management in Western, capitalist cities. As a consequence of seeking to compare similar objects, these works evaluate the built outcomes but overlook the builders’ intentions, missing the ways in which greening influenced the form, reception, and politicization of other aspects of the Soviet built environment, especially its iconic industrial, civic, and residential buildings.

With respect to the Anglophone historiography of post-1932 Soviet urban planning and public services, greenery and greenspace in its utilitarian and ‘public works’ aspect is often acknowledged in passing but rarely given center stage.⁷⁰ Mentions of “poorly maintained or overwhelmingly vast” green space are typical. Given the commonality of such habitual dismissals in depictions of Soviet cityscapes, it is worth considering geographer R.A. French’s treatment of greening in detail, as it represents a dominant consensus that is only beginning to be

Katharina Hansen Löve, *The Evolution of Space in Russian Literature: A Spatial Reading of 19th and 20th Century Narrative Literature*, Studies in Slavic Literature and Poetics (Amsterdam: Rodopi, 1994); Mark Bassin, Christopher David Ely, and Melissa Kirschke Stockdale, eds., *Space, Place, and Power in Modern Russia: Essays in the New Spatial History* (DeKalb: Northern Illinois University Press, 2010).

⁶⁹ See for instance Denis J. B. Shaw, "Achievements and Problems in Soviet Recreational Planning," in *Home, School, and Leisure in the Soviet Union*, ed. Jenny J. Brine, Maureen Perrie, and Andrew Sutton (Boston: Allen & Unwin, 1980); "Recreation and the Soviet City," in *The Socialist City: Spatial Structure and Urban Policy*, ed. R. Anthony French and F. E. Ian Hamilton (New York: Wiley, 1979).. Physical culture and sport, frequently located outdoors, was an admittedly meaningful expression of Soviet political culture. On sport and its facilities, see Henry W. Morton, *Soviet Sport: Mirror of Soviet Society* (New York: Collier Books, 1963); Alexandra Köhring, "Sporting Moscow': Stadia Buildings and the Challenging of Public Space in the Post-War Soviet Union," *Urban History* 37, no. 2 (2010). One exception to the “metropolitan” or aggregate focus of works on Soviet spatial planning is Barbara Engel. (2006) 'Public space in the Blue Cities in Russia', *Progress in Planning*, 66(3), pp. 147-239. Engel takes a systemic look at urban public space with Siberian case studies, but does so within a social science framework. Her focus is on greenspace as a form of public space, more than its material forms or other expected functions.

⁷⁰ Other fundamental works on Soviet urban and regional planning include Denis J. B. Shaw, "Spatial Dimensions in Soviet Central Planning," *Transactions of the Institute of British Geographers* 10, no. 4 (1985); Pallot and Shaw, *Planning in the Soviet Union*. See also White, *Soviet Urban and Regional Planning: A Bibliography with Abstracts*; Stanilov, *The Post-Socialist City: Urban Form and Space Transformations in Central and Eastern Europe after Socialism*; Maurice Frank Parkins, *City Planning in Soviet Russia, with an Interpretative Bibliography* (Chicago: University of Chicago Press, 1953); B. Michael Frolic, "The Soviet Study of Soviet Cities," *The Journal of Politics* 32, no. 3 (1970); "The Soviet City," *The Town Planning Review* 34, no. 4 (1964); *An Annotated Bibliography on Soviet Urban and Regional Planning and Administration (Western Language Sources)*, Council of Planning Librarians. Exchange Bibliography. [Eastern European Series]; E-1; Variation: Council of Planning Librarians.; Exchange Bibliography. Eastern European Series ([Oakland: Calif] Council of Planning Librarians, 1963); French and Hamilton, *The Socialist City: Spatial Structure and Urban Policy*.

pried apart by more recent studies.⁷¹ Of the characteristic over-abundance of urban unbuilt or open space, as urban greenspace is often termed, he notes:

If population densities in the Soviet city are characteristically high, there has been throughout the planning era a compensatory factor in the emphasis given to providing green space and greenery in general. This process began in the 1920s and continued even in the desperate times of the Stalin era.⁷²

Throughout his book, subtitled “the legacy of Soviet planning for today’s cities,” French acknowledges that “the ‘greening’ of towns was a basic belief of the planners.”⁷³ Yet despite the seeming importance of such a fundamental, durable, commitment, French tends to dismiss the Soviet efforts as derivative and incompletely implemented.

As with the principle that “a city must be planned and planned as a whole,” French attributes the Soviet emphasis on urban green space to the inspiration of British author and urban-reform theorist Ebenezer Howard and the Garden City movement.

Equally derivative and again largely from Howard, but equally universally and continually accepted, was the principle of creating an aesthetic environment for the physical and mental health of the city dwellers, with an emphasis on greenery and green space. At the time, this reached its peak of expression in the competition for “Green City.”⁷⁴

French notes that the results of Soviet urbanists’ engagement with urban greening have influenced built environments throughout the former Soviet Union, creating an enduring physical and spatial legacy. “To this day,” he writes, “no township in the former Soviet Union is so small that it does not have its Park of Culture and Rest. Of all basic tenets, the greening of towns is probably the one that has been most widely and successfully implemented.”⁷⁵

What French does not do, however, is dig deeper into why “of all basic tenets” the greening of towns should be so “universally and continually accepted.” Why should this aspect of early Soviet urbanism have enjoyed such resilience, relatively successful implementation, and legacy of popular affective connection, when other principles and techniques proposed in the 1920s fell in and out of favor? The temporal scope of this dissertation affords a chance to test such assertions of unchanging and derivative Soviet interest in urban greening and the garden-

⁷¹ The new generation of scholarship on Soviet (built) environments, landscape, and greenspace is discussed at the conclusion of this section.

⁷² French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 86. This quote comes in French’s discussion in his Chapter 4 of what he terms the “third phase” of Soviet urban development, dating from 1957 under Khrushchev to 1985 under Gorbachev.

⁷³ *Ibid.*, 63.

⁷⁴ *Ibid.*, 47.

⁷⁵ *Ibid.*

city model. In contrast to French's generalized dismissal of change over time, I find instead that greening's durability and resilience were thanks to an adaptive process of contingent yet meaningful shifts in the form and values associated with urban greenery.

Since French wrote his overview of Soviet planning and its legacies in the early 1990s, the fields of urban and regional planning history have covered much ground, participating in and responding to some of the same cultural, environmental, and theoretical "turns" as the field of history per se.⁷⁶ A recent surge in architectural and urban studies has given detail and depth to the historiography of Soviet-era built environments, with increasing coverage of the distinctive experience of specific cities and regions, as well as the complex motivations driving production of civil and residential structures.⁷⁷ Similarly, the terrain appears to be shifting in terms of environmental histories of the region, following a series of literature review essays identifying gaps and thin places in Russian and Soviet spatial and environmental history, including coverage of everyday urban developments, distinctive experiences in Siberia, Central Asia and other regions, and natural agency.⁷⁸ Recent histories of provincial sites, cities and regions have deepened understanding of how distinctive Soviet phenomena like the Gulag, special settlements, planned industrial production, and even permafrost science intersected with sites, landscapes, and sense of place.⁷⁹

⁷⁶ For an overview of these turns, and potential future directions, see Carola Hein, ed. *The Routledge Handbook of Planning History* (New York: Routledge, 2017).

⁷⁷ With regard to the USSR, recent works include Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics*; Christina E. Crawford, "From Tractors to Territory: Socialist Urbanization through Standardization," *Journal of Urban History* 44, no. 1 (2018); DeHaan, *Stalinist City Planning: Professionals, Performance, and Power*; Steven E. Harris, *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin* (Washington, D.C.: Woodrow Wilson Center Press; Johns Hopkins University Press, 2013); Mark B. Smith, *Property of Communists: The Urban Housing Program from Stalin to Khrushchev* (DeKalb: Northern Illinois University Press, 2010); Stronski, *Tashkent: Forging a Soviet City, 1930-1966*; Christine Varga-Harris, *Stories of House and Home: Soviet Apartment Life During the Khrushchev Years* (Ithaca: Cornell University Press, 2015).

⁷⁸ Stephen Brain, "Stalin's Environmentalism," *The Russian Review* 69, no. 1 (2010).. Brain asserts that environmentalism was in fact a significant influence on Stalinist forestry, expanding on Douglas Weiner's field-shaping discussion of Soviet ecological-scientific environmentalism. However, Brain's definition of "environmentalism" as concern for the preservation of a 'natural' environment or natural resources in opposition to 'developed' areas reinforces a pre-Anthropocene opposition of "human" and "natural" spheres. The need for deeper study of Eurasian spatial and environmental history is asserted in Baron, "New Spatial Histories of Twentieth Century Russia and the Soviet Union: Surveying the Landscape."; "New Spatial Histories of 20th-Century Russia and the Soviet Union: Exploring the Terrain," in *Kritika: Explorations in Russian and Eurasian History* (BLOOMINGTON: SLAVICA PUBLISHERS, 2008); Zsuzsa Gille, "From Nature as Proxy to Nature as Actor," *Slavic Review* 68, no. 1 (2009).

⁷⁹ Lynne Viola, *The Unknown Gulag: The Lost World of Stalin's Special Settlements* (New York: Oxford University Press, 2007); Pey-Yi Chu, "Mapping Permafrost Country: Creating an Environmental Object in the Soviet Union, 1920s-1940s," *Environmental History* 20, no. 3 (2015); Barenberg, *Gulag Town, Company Town: Forced Labor and Its Legacy in Vorkuta*; Kate Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters* (Oxford: Oxford University Press, 2013); Alla Bolotova, "Loving and Conquering Nature: Shifting Perceptions of the Environment in the

This brings us to the third facet of urban greening, namely its role as an aspect of Soviet environmental engagement, if not environmentalism. On either side of the millenium, state socialism was associated with a more or less uniform disregard for nature, with industrial production and resource extraction prioritized above environmentalist concerns.⁸⁰ This “existing consensus” has been complicated and challenged by a new generation of environmental historians. They document a broader range of Soviet environmentalist attitudes and commitments than previously recognized, looking beyond dissident scientific and artistic circles at instances of environmental engagement that were more actual than the long-acknowledged “paper activism” of strict but rarely enforced legislation.⁸¹

Within this new generation of scholarship, however, considerably less attention is being given to understanding socialist environmentalism in relation to that most common of socialist landscapes: the city.⁸² The standard position in Soviet environmental history has been, until recently, that the movement for urban greening was at root a purely “cosmetic” i.e., superficial, intervention in urban environmental quality. Community organizations dedicated to the protection and promotion of urban and ex-urban trees—“our green friends” as they were called—are dismissed by one of the field’s preeminent scholars, Douglas Weiner, as “curious footnotes to the great sweep of Russian and Soviet conservation history,” important only insofar as their “patriotic and trivial veneer” afforded camouflage for the true scientist-subversives.⁸³ Just as

Industrialised Russian North," *Europe-Asia Studies* 64, no. 4 (2012); Wilson T. Bell, "Was the Gulag an Archipelago? De-Convoyed Prisoners and Porous Borders in the Camps of Western Siberia," *The Russian Review* 72, no. 1 (2013).

⁸⁰ A position exemplified in Hill and Gaddy, *The Siberian Curse: How Communist Planners Left Russia out in the Cold*. Paul Josephson also asserts the “technophilia” and Promethean impulses of Soviet development and resource use, but does so alongside acknowledgement of similar environmental pollution and resource misuse in the West.

⁸¹ Recent works in socialist environmental history include Bolotova, "Loving and Conquering Nature: Shifting Perceptions of the Environment in the Industrialised Russian North."; Stephen Brain, *Song of the Forest: Russian Forestry and Stalinist Environmentalism, 1905-1953*, Pitt Series in Russian and East European Studies (Pittsburgh, Pa.: University of Pittsburgh Press, 2011); Andy Bruno, *The Nature of Soviet Power: An Arctic Environmental History*, Studies in Environment and History (New York: Cambridge University Press, 2016). Eventual works by Pey-Yi Chu and Alan Roe are likely to follow the lines of their dissertations, which focus respectively on permafrost and national parks, respectively.

⁸² This issue is not specific to Soviet environmental history. The sparse, but growing, body of urban environmental scholarship on sites beyond North America (particularly Second and Third World sites) is noted by Stéphane Frioux, "At a Green Crossroads: Recent Theses in Urban Environmental History in Europe and North America," *Urban History* 39, no. 3 (2012).

⁸³ Douglas R. Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev* (Berkeley: University of California Press, 1999), 79-80. Weiner acknowledges that societies such as DOSOM (the Voluntary Society for the Greening of the City of Moscow, formed in 1948) and the All-Russian Society for the Promotion and Protection of Urban Green Plantings (VOSSOGZN, also 1948) contributed to the broader nature preservation and conservation movement, but is generally contemptuous, perhaps channeling the attitudes of his scientist interlocutors. In his words, these societies “would be curious footnotes to the great sweep of Russian and Soviet conservation history were it not for just those qualities that made them seem platitudinous and banal. When the heavy hand of state repression once again was raised against VOOP [the All-Union Nature

existing planning histories do not probe deeply into why and how urban greening proved so resilient, environmental historians have not adequately investigated how mass patriotism in the USSR came to be associated with *urban* green plantings, distinct from yet related to the national identification with the Russian forest, with its well-established historiography and ties to the iconography of the Russian Motherland. Although most environmental histories of the USSR have focused on more traditionally ex-urban topics of nature protection/conservation, natural resource (mis)management and attitudes toward “nature” as a place or realm apart from the urban, contemporary rhetoric and politics located urban greening and greenspace production as an “endeavor tied to place” and realm of environmental engagement. This status positions urban greening as inalienable from better-known environmental histories of the USSR. Put another way, the forest of trees planted in densely populated cities rewards historiographic consideration as much as the forests and fields of remote locations.

At present, the most compelling and substantial works on Soviet greenspace and greenery and its Russian antecedents are articles and unpublished dissertations.⁸⁴ There are as yet no monographs. In contrast, the field of Russian and Soviet studies has seen a recent surge of environmental histories on (non-urban) forestry, trees, and resort or recreation spaces.⁸⁵ Despite differences in methodology, periodization, and case selection, these works share an insistence that urban planted areas were meaningful and influential phenomena in Soviet cultural, environmental, and political history. Together with this dissertation, these studies contribute to an emergent subfield where many fundamental questions remain about the interrelationship of Soviet urbanism, industrialization, nature-cultures, and ideology.

It is widely agreed that heritage preservation, nature protection, and other “endeavors tied to place” contributed to “the transition from authoritarian to post-authoritarian regimes” that transformed the late 20th-century political landscape in Central and Eastern Europe and the Soviet Union. As asserted by political and urban historians Blair Ruble and John Czaplicka,

Protection Society], Makarov's strategy of protective coloration called for a merger with those conformist societies: the subversive VOOP core would be shielded and disguised by the patriotic and trivial veneer of urban greening.”

⁸⁴ Recent dissertations that focus on urban greenspace include those by environmental historian Johanna Conterio Geissler (2014) on Sochi, urban planning scholar Peter Sigrist (2015) on Moscow, Russian historian Alexei Kitaev (2010, in Russian) on Leningrad, and art historian Alla Vronskaya (2014) on Soviet architectural theory from 1919-1935, including a chapter on the design of the Moscow Central Park of Culture and Rest. For complete titles, see the bibliography.

⁸⁵ e.g. Brain, Bonhomme, Bruno, Bolotova and soon, presumably, Conterio, Roe. See bibliography

Local history, historic and environmental preservation—endeavors tied to place—were among the few points of social mobilization considered legitimate by Communist regimes throughout Central and Eastern Europe and the Soviet Union. [...] The archeology of the local prompted by an interest in local history as well as in the micro-, built and natural environments provided a spark that ... helped to ignite the transition from authoritarian to post-authoritarian regimes.⁸⁶

Protests and other mass actions dedicated to environmental issues were widespread in the last years of these regimes, creating rare venues in which popular dissatisfaction could be legitimately and publicly expressed. “Soviet people,” writes Weiner,

knew that historically, unlike political, religious, ethnonationalist, labor or even cultural dissidents, environmental protesters were not greeted by billy clubs, water cannons, imprisonment, deportation or exile. A host of compelling problems angered Soviet people in the early days of *glasnost*. Any one of those could have served as the focal point of their initial public protests. People almost universally chose *environmental* issues, however, because they were aware of the low risk historically associated with speaking out in that area.⁸⁷

Weiner’s guiding research question concerned the agency and attitudes of scientists involved in nature protection, for whom applied environmental issues such as urban greenspace quality comprised a form of protective camouflage. In this dissertation, I shift the question to why that protective camouflage was successful- why was urban greening associated so strongly and resiliently with Soviet patriotism, ideology, and public welfare, that it was able to provide a “trivial veneer” for scientists? And what did it provide urbanists?

Throughout the Soviet period, this dissertation reveals, there was a durable pattern of institutional and conceptual contact between Soviet urban environmental design and Soviet environmentalism in its nature protection and conservation aspects. Institutional and other high-level interaction between the realm of urban greening and both popular and scientific-artistic currents within Soviet environmentalism was particularly pronounced from the late 1940s to the mid-1960s, a period that was intensely formative for the Soviet cityscape as material environment and ideological symbol.⁸⁸

⁸⁶ John Czaplicka, Blair A. Ruble, and Lauren Crabtree, eds., *Composing Urban History and the Constitution of Civic Identities* (Washington, D.C.: Woodrow Wilson Center Press, 2003), 4.

⁸⁷ Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, p21.

⁸⁸ Instances of contact, convergence and exchange between art, science, and utility aspects of greenery are noted throughout the dissertation. These included the involvement of author Leonid Leonov in the “Green Friends” Society for the Protection and Promotion of Urban Green Plantings, the dedication of a pavilion at the All-Union Agricultural Exhibit to “Flower Cultivation and Greening” in 1955, the training of engineer-specialists in “green construction” within Moscow and Leningrad Forestry Institutes, and the merger in 1954 of the All-Union Society for the Protection of Nature (VOOP) with the Green Plantings Society.

Chronology and Chapter Overview

This dissertation spans the two most formative periods for Soviet architectural and urban design-planning: under Stalin and under Khrushchev. Its time-frame begins with the consolidation of the built environment professions into the Union of Architects during the mid-1930s and closes with the 1964 ouster of Khrushchev. Any notions of strict periodization must be tempered, however, by acknowledgement that individual design projects and publications begun in one period were often completed and altered in another.⁸⁹

The dissertation chapters are instead structured around a series of intersections: city and nature, factory and garden, pragmatics and patriotism, the domestic and the communal. Each chapter considers how greening and greenery evolved in relation to an iconic building types of Soviet urbanism: the factories of Stalin's interwar industrialization campaign, the postwar civic ensembles and other spaces of national reconstruction, the central city streets and 'areas of general use' intended to provide the battered populace with cultured living environs, and the neo-Modernist superblocs and mikroraion housing districts that redefined socialist urbanism after Stalin's death in 1953. Each chapter concentrates on the formative period for that iconic element, but there are occasional overlaps.

In all chapters, I investigate the ideals, assumptions and constraints that determined how green plantings and green space figured in the Soviet urban imaginary and implementation of self-consciously "socialist" urbanism. My approach might be termed neither urban history strictly "from below" or "from above" but "from outside," meaning from the out-of-doors, akin to cultural historian and theorist Svetlana Boym's coinage of the "off-modern."⁹⁰ This conceptual repositioning foregrounds the environmental agenda and attitudes of Soviet architects and urbanists, without which the landscape of communism remains a collection of buildings, floating adrift and ungrounded.

Like its parent field of city-building, greening was thoroughly interdisciplinary in present-day terms. The sustained participation of individuals from a variety of disciplinary

⁸⁹ My approach to such texts combines close comparative reading with consideration of their properties as physical objects, which indicate how publishers and authors imagined their use, audience, and circulation. This is similar to the approach taken by Brian Kassof, "A Book of Socialism: Stalinist Culture and the First Edition of the Bolshaia Sovetskaia Entsiklopediia," *Kritika: Explorations in Russian and Eurasian History* 6, no. 1 (2005).. On analyzing the material object of a book, see Simon Franklin, "Dirty Old Books" pp12-16 in Kivelson and Neuberger, *Picturing Russia: Explorations in Visual Culture*, 2008.

⁹⁰ <http://sites.harvard.edu/~boym/offmodern.html> See also Svetlana Boym, *The Future of Nostalgia* (New York: Basic Books, 2001); *Architecture of the Off-Modern*, vol. 2, Forum Project (New York: Temple Hoyne Buell Center for the Study of American Architecture; Princeton Architectural Press, 2008).

backgrounds—in design, science, public health, and cultural work—indicates the ubiquity of greening in the Soviet institutional ecology of expertise and authority. Urban greening was a literal meeting ground for Soviet design-planning specialists, ideologues, populace, and industries. It was both crossroads and construction site for building Soviet society.

Many of the better-known individuals involved in garden-park and greenspace design after the mid-1930s were former students of Rationalist theoretician, architect, and Vhutemas teacher A.Ladovskii, or members of the group ASNOVA that he founded, reflecting a direct line to the Soviet avant-garde.⁹¹ Other architects with an avant-garde pedigree involved in urban greening included Ivan Nikolaev, former OSA-member and architect of the Communal House of the Textile Institute (1929-1931). Along with colleagues, Nikolaev became involved in greening thanks to his post-1932 position in the Academy of Architecture's Industrial Buildings sector.⁹²

As a subfield of Soviet city-building and spatial planning (*gradostroitel'stvo*, *planirovka*), from the 1930s through the 1950s, urban greening fell under the supervision of Vladimir Nikolaevich Semenov (1874-1960). Semenov was an engineer-planner with a direct connection to the British Garden City movement, oversight of the 1935 reconstruction of Moscow efforts, and significant presence in the historiography of Soviet architecture and urbanism.⁹³ Other specialists in urban greening such as L.B. Lunts and L.O. Mashinskii, both of whom frequently co-authored texts and projects with these better-known figures, remain relatively obscure despite their extensive publications. Both Lunts and Mashinskii circulated between greening and the field of municipal hygiene and sanitation. Their works were as likely to be published by MedGiz

⁹¹ e.g. L.S. Zalesskaia, M.I. Prokhorova, M.P. Korzhev, V.I. Dolganov, and O.A. Ivanova. See Vronskaya, "Urbanist Landscape: Militsa Prokhorova, Liubov' Zalesskaia, and the Emergence of Soviet Landscape Architecture"; Bellat, "An Uneasy Metamorphosis: The Afterlife of Constructivism in Stalinist Gardens." On the generational cohort nature of early Soviet architecture and planning, see Catherine Cooke, "Professional Diversity and Its Origins," *Architectural Design* 61, no. 9-10 (1991). On Russian cohort thinking in the late 19th century, see Stephen Lovell, "From Genealogy to Generation: The Birth of Cohort Thinking in Russia," *Kritika: Explorations in Russian and Eurasian History* 9, no. 3 (2008).

⁹² S. O. Khan-Magomedov, *Ivan Nikolaev, Tvortsy Avangarda* (Moscow: Russkii avangard, 2008). In contrast to Hugh Hudson's dismissal of post-1937 Soviet architecture as the "servent of engineering," Khan-Magomedov asserts that the best and brightest students went into industrial, rather than residential or civic, structure design because it was the most challenging and afforded the greatest opportunities for innovation.

⁹³ Occasionally transliterated Semyonov or Semionov. V.N.Semenov was one of the USSR's most influential city planners until his death in 1960. His career, including connections to the British Garden City movement, is discussed in S. Frederick Starr, "The Revival and Schism of Urban Planning in Twentieth-Century Russia," in *The City in Russian History*, ed. Michael F. Hamm (Lexington: University Press of Kentucky, 1976); Catherine Cooke, "Russian Responses to the Garden City," *Architectural Review* 163, no. 976 On the 75th Anniversary of Letchworth Garden City (1978); Eric L. Richard, "The Garden City in Russian Urbanism, 1904–1933" (Senior Thesis, Princeton University, 1972); V.N. Belousov and O.V. Smirnova, *V.N. Semenov, Mastera Arkhitektury* (Moscow: Stroiizdat, 1980); Mervyn Miller, "Garden Cities and Suburbs: At Home and Abroad," *Journal of Planning History* 1, no. 1 (2002).

(the State Publishing House for Medical Literature) or the Academy of Municipal Economy (Kommunal'noe Khoziastvo) as by one of the architecture and construction publishers.⁹⁴

The history of Soviet environmental design reveals neither absolute stasis nor ruptures in orientation and personnel. Instead, I find considerable resilience in terms of official and professional support for greenery in cities, even as the specific forms of greenspace and the rationales for it shifted. Soviet urbanists variously prioritized the different functions associated with urban greening, amplifying whichever one was most advantageous at the moment. The same basic bundle of values persisted—hygiene, aesthetics and functional convenience—but the order in which they were rhetorically and ideologically ranked changed over time.⁹⁵ Doing so seems to have provided a degree of protection from political pressures for the most prominent architects and engineers specializing in greening, whose careers appear to have been comparatively durable.

The leading practitioners in the 1920s and early 1930s were, age allowing, still the leading voices in the field in the early 1960s.⁹⁶ This was a feat of political and demographic resilience, to endure, maintain prominence, and continue to publish across waves of repression, war, famine, political and aesthetic change.⁹⁷ In several cases, the same authors continued to shape the field well into the 1970s and 1980s, thanks to the publication of additional editions of core textbooks.

The first main chapter of this dissertation (Chapter Two) explores Soviet city-nature relations in the Siberian city of Krasnoyarsk during the long arc of its 20th-century development.

⁹⁴ See bibliography. I have been unsuccessful in finding additional biographical information on Lunts or Mashinskii.

⁹⁵ See footnote 42 for context for 'bundle' in this sense.

⁹⁶ Semenov, for instance, was a prominent voice for urban reform using greenery in the early twentieth century, authoring both a foundational text on the improvement [*blagoustroistvo*] of cities in 1912 and a shorter advocacy piece on greenery in cities in 1924. See V.Semenov, "Zelen' v Gorode" *Krasnaia Niva*, no.19 (May 11, 1924): 446-462; V.N. Semenov, *Blagoustroistvo Gorodov* (1912), reprinted in 1993. In these years Siberia was itself a center of garden city activity. See Petrov, A.I., "Mr. Howard's Ideals in Siberia" *Garden Cities and Town-Planning*. v.15, no.4 (April, 1925): 94; Ivan V. Nevzgodine, "The Impact of the Trans-Siberian Railway on the Architecture and Urban Planning of Siberian Cities," in *The City and the Railway in Europe*, ed. Ralf Roth and Marie-Noëlle Polino, Historical Urban Studies (Aldershot, Hants, England; Burlington, VT: Ashgate, 2003).

⁹⁷ The impact of the Stalinist purges on the architectural community, and the degree of architectural participation overall is a debated topic. To give two examples: Hudson emphasizes violence and contestation in *Blueprints and Blood*, while S. Frederick Starr asserts that the field was characterized by "stability, at least until 1949. [...] Indeed, the purges were relatively kind to architecture as a profession. To be sure, numerous architects were caught in the sweep of several million enemies of the State in 1937–38. But no major architect was ever brought to trial and the two who suffered most dearly, Ivan Leonidov and Konstantin Melnikov, could thank their professional colleagues for their misery rather than Stalin directly." Starr summarizes the Stalinist architectural establishment as a "bureaucratized oligarchy, with a small and stable group of leaders." S. Frederick Starr, "The Social Character of Stalinist Architecture," *Architectural Association Quarterly* 12, no. 2 (1979): 51.

I examine the “contact zone” between Krasnoyarsk, an industrial and regional administrative center, and the adjacent natural landscape or environment, in particular the Yenisei River.⁹⁸ The city’s visual and verbal portraits give evidence of the evolving engagement of local architect-planners with the natural landscape, even in times of intensive industrialization, centralization, and standardization. This pattern of intentional city-nature engagement contradicts notions of the socialist built environment and its production as anti-place or without place. This chapter sets the stage for closer examination of how architecture and urban design professionals sought to achieve “harmony” and “fusion” between urban realm and natural landscape during the Soviet period in cities in and outside of Siberia. Thereafter the dissertation traces a more detailed history of greening as it figured in Soviet architecture-planning practice at the All-Union level of centralized theory and norm-production.

Chapter Three begins where most studies of Soviet architectural theory end, in the early 1930s.⁹⁹ Within a few years of Le Corbusier’s exchange with Ginzburg, a number of developments seemed to prove the former correct in his skeptical reading of Soviet architecture’s utopian aspirations, environmental and otherwise. The “great debates” of Soviet urbanism were brought to an abrupt close in June 1931 when, at the June Plenum of the Central Committee, Lazar Kaganovich declared that existing cities were inherently socialist. “Our cities became socialist from the very moment of the October Revolution, when we expropriated the bourgeoisie and socialized the means of production,” he asserted.¹⁰⁰ No new urban form needed creating. Existing cities, including Moscow, should be remade and improved, not replaced as both Urbanists and Disurbanists had proposed. In 1933, innovative entries to the Palace of Soviets competition by Le Corbusier, Ginzburg, Ladovskii and other well-known avant-garde architects were infamously rejected in favor of a neo-Classical “wedding cake” designed by Boris Iofan,

⁹⁸ The concept of a frontier “contact zone” comes from Mary Louise Pratt, *Imperial Eyes: Travel Writing and Transculturation* (New York: Routledge, 2008). specifically her Chapter 1 “Introduction: Criticism in the Contact Zone” pp1-36

⁹⁹ Reasons for the overwhelming balance of international attention directed at the early or avant-garde period of Soviet architecture and planning are laid out in Vronskaya, “Deconstructing Constructivism.”. For complementary historiographic accounts of the Soviet rediscovery of this period in the 1960s, see Stephen V. Bittner, “Remembering the Avant-Garde: Moscow Architects and the ‘Rehabilitation’ of Constructivism, 1961-64,” *Kritika: Explorations in Russian and Eurasian History* 2, no. 3 (2001); S. Frederick Starr, “Writings from the 1960s on the Modern Movement in Russia,” *Journal of the Society of Architectural Historians* 30, no. 2 (1971).

¹⁰⁰ Quoted by French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 42. Kaganovich was one of Stalin’s chief henchmen and, with Nikita Khrushchev, the driving authority behind the construction of the Moscow Metro. Kaganovich became the international voice of Soviet urban planning thanks to such publications as L. M. Kaganovich, *The Socialist Reconstruction of Moscow and Other Cities in the U.S.S.R* (New York: International Publishers, 1931); *The Construction of the Subway and the Plan of the City of Moscow* (Moscow, Leningrad: Co-operative Publishing Society of Foreign Workers in the U.S.S.R., 1934).

topped with a monumental statue of Lenin, *sans* bride.¹⁰¹ International luminaries such as Le Corbusier exited the Soviet stage at this point, although some engineers and planners involved in the design and construction of factories and factory-towns such as the Albert Kahn firm, Ernst May and Hannes Meyer remained in the USSR until 1936.¹⁰²

The break-neck tempos and neck-breaking violence of the 1930s' industrialization and collectivization campaigns seemed to leave little room in the USSR for "listening to skylarks" and other forms of nature appreciation among workers, peasants, or architect-planners. As peasants fleeing famine and collectivization in the countryside streamed into the cities, specialists at GosPlan (the State Economic Planning agency) and the Soviet *po delam Kommunal'nogo Khoziastva* (Council of Communal or Municipal Economy) investigated how to reconstruct, plan, and (re)build those cities.¹⁰³ Concurrently, the architectural community and affiliates sought to identify and consolidate new "socialist realist" standards and principles of practice. Throughout, at conferences and in publications from before and after the 1935 plan for the reconstruction of Moscow, architects, urbanists, and communal hygiene specialists asserted that the greening of factories and industrial districts in particular was a necessary and desirable element of Soviet design-planning practice.¹⁰⁴

¹⁰¹ The competition and its significance is discussed in detail by Sona Stephan Hoisington, "'Ever Higher': The Evolution of the Project for the Palace of Soviets," *Slavic Review* 62, no. 1 (2003).. The competition was announced initially in *Izvestiia* in July 1931; multiple rounds of design submissions and selection continued throughout 1933.

¹⁰² On the transnational circulation of architecture and planning specialists to the Soviet Union, see Koos Bosma, "New Socialist Cities: Foreign Architects in the USSR, 1920-1940," *Planning Perspectives* 29, no. 3 (2014); Ward, "Soviet Communism and the British Planning Movement: Rational Learning or Utopian Imagining?."; Cohen, "Circulatory Localities: The Example of Stalinism in the 1930s."; Margarita Shtiglits and Anna (translator) Vallye, "Erich Mendelsohn's Red Banner Factory and Saint Petersburg's Industrial Architecture," *Future Anterior* 5, no. 1 (2008); Dmitrii Chmel'nickij, "The Struggle for Soviet Architecture: Foreign Architects in the USSR During the Stalin Era," [Der Kampf um die sowjetische Architektur Ausländische Architekten in der UdSSR der Stalin-Ära.] *Osteuropa* 55, no. 9 (2005); William Richardson, "Hannes Meyer and the General Plan for the Reconstruction of Moscow, 1931-5," *Planning Perspectives* 6, no. 2 (1991); Kurt S. Schultz, "Building the 'Soviet Detroit': The Construction of the Nizhnii-Novgorod Automobile Factory, 1927-1932," *Slavic Review* 49, no. 2 (1990); Anatole Kopp, "Foreign Architects in the Soviet Union During the First Two Five-Year Plans," in *Reshaping Russian Architecture: Western Technology, Utopian Dreams*, ed. William Craft Brumfield, Woodrow Wilson Center Series (Cambridge: Cambridge University Press, 1990); Milka Bliznakov, "The Realization of Utopia: Western Technology and Soviet Avant-Garde Architecture," *ibid.* (Cambridge, UK); William Richardson, "Architecture, Urban Planning and Housing During the First Five Year Plans: Hannes Meyer in the USSR, 1930-1936," *Urban Studies* 26, no. 1 (1989); Andrea Graziosi, "'Visitors from Other Times': Foreign Workers in the Prewar 'Piatiletki'," *Cahiers du Monde russe et soviétique* 29, no. 2 (1988); Donald Leslie Johnson, "Frank Lloyd Wright in Moscow: June 1937," *Journal of the Society of Architectural Historians* 46, no. 1 (1987).

¹⁰³ See Sheila Fitzpatrick, *Stalin's Peasants: Resistance and Survival in the Russian Village after Collectivization*. New York: Oxford University Press, 1994; Lynne Viola, *Peasant Rebels under Stalin: Collectivization and the Culture of Peasant Resistance*. New York: Oxford University Press, 1996 and David Hoffmann, *Peasant Metropolis: Social Identities in Moscow, 1929-1941*. Studies of the Harriman Institute. Ithaca: Cornell University Press, 1994. On city-village relations in the tsarist period, see also Joseph Bradley, *Muzhik and Muscovite: Urbanization in Late Imperial Russia* (Berkeley: University of California Press, 1985).

¹⁰⁴ On the 1935 General Plan for Moscow, see Richardson, "Hannes Meyer and the General Plan for the Reconstruction of Moscow, 1931-5."; Katerina Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture*,

These events and publications served as opportunities to consolidate the guiding norms that would shape distinctively Soviet built environments. The theory and practice of factory greening, encapsulated in the imagined model of a “Garden-Factory,” developed in tandem with the institutionalization and formalization of self-consciously distinctively socialist norms of practice. One such set of consolidating events and publications occurred in 1933-34, at the start of the Second Five Year Plan. A second set of professional gatherings took place in 1937 and 1938, at the height of the arrests and executions known as the “Great Purge” or Stalin’s Terror. Amidst this bloodily repressive backdrop, the architectural community gathered in Moscow at the First All-Union Congress of the Union of Architects, which was eventually held on July 18-26, 1937. A year later, the leadership met again at the 3rd Plenum of the Leadership of the Union of Architects, held July 7-11, 1938. The latter focused specifically on the design and construction of cities (*planirovka i stroitel’stvo gorodov*). Through such Moscow-based events, attended by specialists coming from across the Soviet Union and from abroad, urban greening became institutionally and culturally integrated into Soviet urbanism, intended for application at sites throughout the USSR.

Chapter Three examines efforts by architect-planners and other urban authorities in the 1930s to provide “beautification and greenery” [*blagoustroistvo i ozelenenie*] at and around industrial enterprises, a project crystallized in the concept of the “Garden-Factory.” The bundling of professional responsibility was accompanied by a bundling of programmatic goals: the greening of factories, like city greening more generally, was expected to produce “hygienic, cultured, and convenient places for work and workers.”¹⁰⁵ Protective green plantings and fountains, in particular, were envisioned by urban experts as able to ameliorate the hazards associated with urban industrial environments. These hazards ranged from environmental threats like dust, smoke, noise, and gas, to less tangible biopolitical issues like lack of worker discipline and psychological strain.¹⁰⁶ This chapter gives close consideration to an early model project of factory greening: the Moscow “Kalibr” Instrumentation Factory. But the intended distribution of the Garden-Factory model ranged far afield from Moscow. Early articulations of greening design principles were also applied to factories in other cities, including Cheliabinsk, Stalingrad [then

1931-1941 (Cambridge, Mass.: Harvard University Press, 2011).

¹⁰⁵ *Bolshaia Sovetskaia Entsiklopediia [Great Soviet Encyclopedia]*, 1st edition, 1939, tome 42, entry on “Ozelenenie”

¹⁰⁶ Tricia Starks, *The Body Soviet: Propaganda, Hygiene, and the Revolutionary State* (Madison: University of Wisconsin Press, 2008).

Volgograd], and Tashkent.

Implementation of the norms and models developed in the mid-1930s was interrupted by the 1941 onset of the “Great Patriotic War” (as WWII is known in Soviet and Russian discourse). The basic institutional and conceptual approaches were set, however, continuing until a later realignment in 1948–54. During the war years, cities and towns throughout the Western edge of the USSR (the “eastern front” of European warfare) were laid waste and populations decimated. Other cities in the hinterland were neglected, their resources overstretched and populations decimated.¹⁰⁷ At the same time, the wartime resettlement of factories and people rapidly swelled certain cities of Central Asia and Western Siberia, including Krasnoyarsk. During the war, architectural institutions and individuals from Moscow, Leningrad, Kiev, and other centers threatened by fighting were evacuated to Tashkent, Chymkent and other sites in Central Asia. Many texts published in the immediate postwar period focused on cities and architecture of that region, including their greening.¹⁰⁸ Urbanists were left to play catch-up in the aftermath of victory.

Chapters Four and Five focus on the postwar period of “high Stalinism,” 1945-1954, in postwar Moscow and Krasnoyarsk, respectively. In post-war Moscow (Chapter Four), a convergence of campaigns served to endow greening with increased political and cultural significance, centralizing and nationalizing it as a patriotic project. Greening became a truly interdisciplinary undertaking, inalienable from national identity production, enrolling artists, activists, and agricultural scientists in addition to architects, planners and public health specialists. The greening of central city districts and other sites of national-political representation became a primary signifier of urbanists’ commitment to “socialist realist” precepts. Greenery’s new public prominence was to contribute symbolically and materially to the glory of the central Party and State authorities.

Soviet architectural culture and institutions were, in these years, caught in a dilemma.

¹⁰⁷ Amir Weiner, *Making Sense of War: The Second World War and the Fate of the Bolshevik Revolution* (Princeton: Princeton University Press, 2001).

¹⁰⁸ Limited sources and time precluded coverage of this period in this dissertation. Works indicating the effect of this Central Asian sojourn on Soviet planning and greening include Zaleskaia L.S. *Ozelenenie gorodov Srednei Azii* Moscow: izdat. Akademii Arkhitektury SSSR, 1949; and I.T. Remishevich, *Ozelenenie Goroda Tashkenta*. Tashkent: Gos. izd-vo Uzbeksko’i SSR, 1955. On Central Asia in this context see also Keating, “‘There Are Few Plants, but They Are Growing, and Quickly’: Foliage and the Aesthetics of Landscape in Russian Central Asia, 1854–1914.”; Rebecca Manley, *To the Tashkent Station: Evacuation and Survival in the Soviet Union at War* (Ithaca: Cornell University Press, 2009); Stronski, *Tashkent: Forging a Soviet City, 1930-1966*.

Their status was potentially high, a result of the high-profile, urgent need for urban reconstruction and restoration. This elevated status exposed them, however, as potential targets of the anti-Western and “anti-Cosmopolitan” campaigns. Against a surge of “anti-cosmopolitan” fervor from on high, Soviet architects and urbanists sought to reinforce their populist credentials. Beyond the architectural community, the role and status of urban greenery was also contested. Activists like writer Leonid Leonov sought to stir popular sentiment and participatory labor in urban maintenance by linking the plight of neglected urban trees to the plight of wounded soldiers or orphaned youth.¹⁰⁹ Symbolic associations dating back to the tsarist period were revived, asserting a connection between the well-being of Russian forests, including urban forests, and the well-being and character of “the Russian people.” Between 1948-50, the native Russian landscape was suddenly and newly acceptable in official art as it had not been previously.¹¹⁰ Finally, the 1948 ascent of “Michurinist biology” under Trofim Lysenko meant that all plants were theoretically available to be planted in any location.¹¹¹

The perhaps purest manifestation of urban greenery’s new political clout and inter-disciplinarity was the official establishment in 1948 of the All-Russian Society for the Promotion and Protection of Urban Green Plantings (VOSSiGZN), known also as the Green Friends Society. Writer Leonid Leonov, then at work on his novel *The Russian Forest* (*Russkii Les*) served as organizer and vice-president. Then in 1953, the society of “Green Friends” merged with the All-Union Society for the Protection of Nature (VOOP), the culmination of years of attempts. This merger has been dismissed as an act of “protective coloration” on the part of the biologists and other natural scientists of VOOP, for whom the cause of urban greening served as a “patriotic, trivial veneer.”¹¹² Such dismissal does not answer the question, however, of why a purely “cosmetic” veneer promised effective camouflage against the threat of Stalinist repression. Chapters Four and Five present a counter-argument to such dismissals. The politically vulnerable natural scientists were eager to cloak themselves in urban greenery

¹⁰⁹ Leonid Leonov “Let’s care for greenery” [Pozabotimsia o zeleni], *Vecherniaia Moskva*, 24 March 1945 ; and Leonov, “In defense of a friend” “V zashchitu druga” *Izvestiia*, Dec.28, 1947 (re-published in *Sobranie Sochinenii Tome 10: Publitsistika*, pp185–195. Moscow: izdat. Khudozhestvennaia Literatura, 1972)

¹¹⁰ Discussed in more detail in Chapter Four, but see Bassin, “I Object to Rain That Is Cheerless!: Landscape Art and the Stalinist Aesthetic Imagination.”; Maria Silina, “The Struggle against Naturalism: Soviet Art from the 1920s to the 1950s,” *RACAR : Revue d’art canadienne* 41, no. 2 (2016).

¹¹¹ Douglas R. Weiner, “The Roots of ‘Michurinism’: Transformist Biology and Acclimatization as Currents in the Russian Life Sciences,” *Annals of Science* 42, no. 3 (1985).

¹¹² *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 79-80.

precisely because of its officially patriotic associations. The project of greening socialist cities was far from trivial, however. Postwar urban greening was a thick, interdisciplinary and potent expression of societal and spatial redefinition, tangled as it was with the urgent questions of postwar state amenities provision, national representation, and the quest for Stalinist normalcy.

Chapter Five focuses on postwar Krasnoyarsk, showing how local architects and urbanists reacted to the same developments as the architects in Moscow, but with distinctively provincial constraints and opportunities. The archival record suggests that architects “in the field” turned to greening in the postwar period and amplified its status within city beautification efforts in reaction to the pragmatic and political challenges of the times. Whereas Chapter Two discussed changes in Krasnoyarsk’s civic spaces and identity as expressed in public visual iconography and verbal rhetoric, this chapter uses City and Party archival material to reveal the perspective of the design community and municipal authorities as expressed in City Council meetings and other “closed door” discourse. Architects in Krasnoyarsk, feeling precarious in the face of central demands for rapid applied results and authentic socialist realist content, turned to greening as a means of achieving quick results and demonstrating their connection to the increasingly Russian-nationalist masses. During this postwar period of urban reconstruction and national identity consolidation, the greening and beautification of central squares and streets intervened at the urban hinge point between public environment and public identity. The greening of cities’ central ensembles represented an attempt to balance official ideological and political pressures demands with the immediate needs of communities still reeling from the impact of the Second World War.

Chapter Six turns from civic centers to residential districts, evaluating greening in relation to Khrushchev’s campaigns of de-Stalinization and construction industrialization. Following the death of Stalin in March 1953, Nikita Khrushchev denounced Stalinist excesses in architecture and politics at, respectively, the 1954 Congress of Building Professionals and the 1956 Communist Party Congress. Under Khrushchev’s direction, the basic morphology of socialist urbanism was transformed, with the ongoing mass housing campaign organized after 1958 into mikroraiony or microdistrict planning units. Soviet urbanism continued to follow the norms and models set during the Khrushchev era through the 1980s.¹¹³ Indeed, the unadorned

¹¹³ Zalesskaia, V. L. "Gorod i priroda" *Arkhitektura SSSR*, (1967:06): 52-53. R.A. French, for instance, identifies 1957–1985 as the Third Phase of Soviet urban development. French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*. See also White, *Soviet Urban and Regional Planning: A Bibliography with Abstracts*. Some limited changes in housing

concrete-panel slabs and towers of Khrushchev's mass housing campaign comprise the iconic "landscapes" of Communism to which all Soviet and modernist environmental design is often reduced.

This chapter examines how city greening and greenspace influenced and was influenced by the advent of Khrushchev's neo-modernist urbanism, specifically in relation to the Agrogorod or Agri-town concept, the "free-plan" city block, and the mikroraion unit of urban development. Social, cultural and architectural histories of this period have focused primarily on the campaign to provide a "separate apartment" for the woefully under-housed Soviet population.¹¹⁴ In order to understand the cumulative experience of those new apartment buildings—their spatial, material, and professional ramifications—it is necessary to consider Soviet architect-planners' postwar agenda for the "expanded apartment" which included between-building spaces as an inalienable element of ideal socialist living conditions. The new direction in Soviet urbanism meant that the scope of urban greening increased quantitatively (the newly open block layout of the mikroraion housing estates) and increased qualitatively in significance, as "green city, garden city" urbanism became a reference point in Cold War competition with the West to provide better, more modern living conditions.

Architect-planners at the height of the so-called Thaw envisioned a distinctively state socialist form of society-nature relations in which cities were "immersed" and "dissolved" in vegetation. I find that urban greenspace in the post-Stalinist open-layout city, rather than being treated as "open," passive, or interstitial by its theorist-practitioners, was over-determined, even overly full with expected functions. These green spaces were intended, *inter alia*, as infrastructure for new, more truly communist, forms of daily life that were distributed and collective, in proclaimed contrast to the Western model of household isolation, object-based

types and reception are noted in Ruble, "From Khrushcheby to Korobki."

¹¹⁴ Go-to examples on this topic include Lynne Attwood, *Gender and Housing in Soviet Russia: Private Life in a Public Space, Gender in History* (Manchester: Manchester University Press, 2010); Harris, *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin*; Deborah A. Field, *Private Life and Communist Morality in Khrushchev's Russia* (New York: Peter Lang, 2007); Smith, *Property of Communists: The Urban Housing Program from Stalin to Khrushchev*; Varga-Harris, *Stories of House and Home: Soviet Apartment Life During the Khrushchev Years*. Earlier studies of Soviet housing include Timothy Sosnovy, *The Housing Problem in the Soviet Union*, ed. David I. Goldstein, Studies on the U.S.S.R.; No.8 (New York: Research Program on the U.S.S.R., 1954); Alfred John DiMaio, *Soviet Urban Housing: Problems and Policies*, Praeger Special Studies in International Economics and Development (New York: Praeger, 1974); Jack A. Underhill, *Soviet New Towns: Housing and National Urban Growth Policy* (Washington, D.C.: U.S. Dept. of Housing and Urban Development, Office of International Affairs, 1976); Henry W. Morton, "Soviet Law and Housing Law: A Historical and Comparative Study," (Association for Slavic, East European, and Eurasian Studies, 1980); Gregory D. Andrusz, *Housing and Urban Development in the USSR* (Albany: State University of New York Press, 1984); John Sillince, ed. *Housing Policies in Eastern Europe and the Soviet Union* (London ; New York: Routledge, 1990); Brumfield and Ruble, *Russian Housing in the Modern Age: Design and Social History*.

consumption, and single-family residential development. Industrial production continued to increase from the 1960s, meanwhile, turning if anything more chemical as part of the Scientific-Technological Revolution.¹¹⁵ Smokestacks in Soviet cities continued to be viewed as immutable, akin to natural features.¹¹⁶ Even after emission filters were officially required, they were but rarely and haltingly installed by resistant enterprise bosses.¹¹⁷

The concluding chapter explores the relationship of urban greening to late Soviet industrial-environmental conflicts, including some unexpected outcomes. This chapter is framed as a coda or epilogue to the other chapters' focus on the 1930s to 1960s. In it, the rise of the mass environmental movement in the USSR is placed in relation to the rising awareness among urban greening and affiliated specialists of mass mortality of urban trees and other green plantings. While the trees planted or preserved in Soviet cities had also died or failed to thrive in earlier periods, by the 1960s the familiar questions of “who to blame” (*kto vinovat?*) and “what to do” (*chto delat?*) elicited new answers.

The Soviet system of city greening placed trees in proximity to urban industrial production in hopes of protecting human residents of cities from those same harms. Given the prevailing, persistent, shortages of material and labor, this system of phyto-mitigation through planted “sanitary-protective zones” relied on popular affective connections to motivate city residents, leveraging varied “cues to care” in support of urban greening.¹¹⁸ Trees, the “green friends” and Russian soul-double of patriotic propaganda, were sacralized and sacrificed for the greater good

¹¹⁵ Contemporary Soviet perspectives on this period and its changes, known as the Scientific-Technological Revolution or STR, are analyzed in E.P. Hoffmann, "Contemporary Soviet Theories of Scientific, Technological and Social Change." *Social Studies of Science* 9, no. 1 (1979): 101-13. The significant shifts and consequences between metallic and chemical forms of industrial production is asserted by Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*.

¹¹⁶ A.S. Vaintsvaig, ed. *Planirovka Promyshlennykh Raionov*. Moskva: NKTP SSSR: ONTI Gosstroizdat, 1934. In listing the guiding precepts of this then-emergent field, Vaintsvaig states that regional planning is likely to succeed only in cases of total inclusion of all region-forming elements e.g. industry, transport, settlement places, etc. In other cases, “as is currently the case in the spatial planning of cities, one must account for already-chosen sites of industry as for other immutable external factors ... such as the direction of winds, the presence in subsoils of useful deposits and so forth.” (p10) Soviet urbanists could no more change the location of an existing industrial facility than they could the direction of prevailing winds; instead, they attempted to use the winds to ameliorate the harmful emissions of the former.

¹¹⁷ For general insight into how industrial emissions were perceived as available resources to be recouped, rather than as wastes, see Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*.

¹¹⁸ The idea of “cues to care” leveraged in support of ecosystem services and sites that would otherwise go unremarked or be perceived as unaesthetically uncared-for comes from the work of Joan Iverson Nassauer. See, for instance, Joan Iverson Nassauer, "The Appearance of Ecological Systems as a Matter of Policy," *Landscape Ecology* 6, no. 4 (1992); Joan I. Nassauer, *Messy Ecosystems, Orderly Frames*, (1995), <http://hdl.handle.net/2027.42/49351>. application pdf; Joan Iverson Nassauer, Zhifang Wang, and Erik Dayrell, "What Will the Neighbors Think? Cultural Norms and Ecological Design," *Landscape and Urban Planning* 92, no. 3-4 (2009).

of Socialist urbanism.

In the last decades of the USSR, continued tree mortality led Russian urbanists to double-down on the spatial and affective/patriotic dimensions of urban tree culture. Particularly as a second wave of urban industrialization played out in the new towns of Siberia during the Khrushchev era, Soviet urbanists theorized that increasingly large clumps or *massifs* of trees, preferably local species arranged as naturalistically as possible, would be better able to survive and mitigate urban industrial hazards. In view of the entwined, even symbiotic, character of Soviet urbanism, industrialization, and greening, the Soviet city's iconic spatiality is best understood as a product of urban planners' over-estimation of urban nature's benefits and agency, rather than as the result of planners' desire to master nature or fetishize gigantic inter-building spaces for the sake of monumental symbolism as is frequently asserted.

On the ground, actual existing greenspace rarely fulfilled the densely bundled aspirations associated with it. Pollution proliferated, trees died, and the public noticed. Whereas authorities in earlier Soviet periods had placed blame for the failures of socialism's green dream on individual, popular, or official neglect and inattention, by the mid-1960s professional texts made clear that urban tree mortality was caused by industrial urban conditions. Urban green plantings were victims of the very modern industrial urbanism that they had originally been expected to ameliorate. Particularly in Siberia, where new towns, intensive industrialism, and marginal growing conditions converged, writers and other officially sanctioned defenders of urban greenery began to protest State developmentalism. Eventually, the moral, personal and political connection to nature and "green friends" that the authorities had worked so hard to inculcate in the population became a platform for mass political mobilization.¹¹⁹

The question of why such mass environmental and historic preservation movements were considered legitimate by these regimes remains poorly understood. This research contributes an overlooked urban piece to this puzzle. Information regarding human health remained tightly controlled until the advent in the late 1980s of Gorbachev's glasnost policies of increased transparency. There was by then a long official tradition of encouraging concern and activism on behalf of urban tree health. Given the Soviet state's prior emphasis on mass participation in

¹¹⁹ Czaplicka, Ruble, and Crabtree, *Composing Urban History and the Constitution of Civic Identities*, 4. The association of Siberian environmental activism with Soviet destabilization in the perestroika era is also discussed in David Gillespie, "A Paradise Lost? Siberia and Its Writers, 1960 to 1990," in *Between Heaven and Hell: The Myth of Siberia in Russian Culture*, ed. Galya Diment and Yuri Slezkine (New York, NY: St. Martin's Press, 1993); Paul R. Josephson, *An Environmental History of Russia*, Studies in Environment and History (Cambridge: Cambridge University Press, 2013).

greening and on the Russian cultural identification with trees, the health of urban forests represented a highly visible referendum on both public health and national-patriotic morality. Mortality of the sanitary-protective barriers meant to shelter urban residential areas from factory outputs created an opening for a participatory/public reaction.

Despite a context of information control in which human health costs could not be publicly or antagonistically discussed, ordinary citizens and experts alike could and did express opposition to industrial emissions for the sake of the trees.¹²⁰ I contend that the investiture of Soviet trees with cultural agency and their instillation in highly visible urban locations thus created some unexpected tinder for the spark of tree death, especially when combined with the direct and contextual cues directing Soviet citizens to care for and defend their “green friends.” After working so hard to bundle together urban plants, politics, and participation, there was so little that the authorities could do to unbundle their creation—even when the environmental movement of citizen tree defenders threatened the stability of the regime.

Conclusions

Soviet urban greenspace was more than an absence of buildings. Like streets, greenspace was a type of public infrastructure and multi-purpose outdoor civic space. I assert that greenery was like streets in another way; as one of the most visible and public element of urban amenities-provision (beautification, *blagoustroistvo*, aka public works and services), greening was a form of infrastructure. And as infrastructure, it proved subject to all the poetics, politics, and pragmatism afforded other technogenic forms of infrastructure. Greening was inalienable from the larger project of building demonstrably socialist cities. It became a primary mechanism by which Soviet urbanists sought to realize consummately modern, hygienic, and comfortable cities—and visibly distinguish their praxis from Western architecture-planning. Whereas Karl

¹²⁰ As discussed in the final chapter. The centrality of tree death and other harms to non-human biota in public critiques of Soviet industries can be seen in John Massey Stewart, "Air and Water Problems Beyond the Urals," in *The Soviet Environment: Problems, Policies, and Politics*, ed. John Massey Stewart (New York: Cambridge University Press, 1992); Marshall I. Goldman, *The Spoils of Progress: Environmental Pollution in the Soviet Union* (Cambridge, Mass.: M.I.T. Press, 1972).. See Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters*. on the Soviet practice of information control regarding human health impacts of nuclear exposure. The pre-perestroika lack of a public realm in which to debate environmental hazards and risks is asserted by Christopher Burton, "Destalinization as Detoxification?: The Expert Debate on Industrial Toxins under Khrushchev," in *Soviet Medicine: Culture, Practice, and Science*, ed. Frances Lee Bernstein, Christopher Burton, and Dan Healey (DeKalb: Northern Illinois University Press, 2010).. Burton argues that Siberia and specialist publications both provided more scholarly freedom or open space in which to debate these issues, at least during the initial phase of de-Stalinization.

Marx had defined modernity as when “all that is solid melts into air,” Soviet urbanists for their part envisioned a future of cities “awash in greenery,” dissolving into landscape.¹²¹

Like other, more familiarly technogenic forms of infrastructure, the aspirations of urban greening proved consequential for the imagined “good life” of socialism. Across all the periods considered here, Soviet architect-planners used spatial and vegetal interventions to react to urban problems. Specifically, Soviet urbanists conceived the windswept vastness of Soviet inter-building greenspaces in direct and conscious response to urban industrial particulate emissions, noise, and psychological stresses. Lacking effective political or technological agency to constrain industrial emissions directly, urbanists returned to plantings and spatial buffers to reduce harms. In doing so, they attributed multiple functions to green plantings and to greening as a practice.

Ultimately, what was reaped of Soviet urbanists' green city vision depended as much on the agency of non-human biotic and abiotic actors—the trees, shrubs, rivers, prevailing winds, temperature regimes, and topography enrolled by architect-planners in their greening plans—as on the better-known anthropogenic and technocratic aspects of the Soviet system. Because *ozelenenie* was plant-based rather than built from inert substances (steel, concrete, asphalt, stone etc), the living plants used in “green construction” (*zelenoe stroitel'stvo*) afforded an additional set of qualities and consequences that influenced the course of Soviet amenities provision and State-society relationships more broadly. The Soviet pursuit of this plant-based infrastructure influenced the historical development of modern socialist urbanism, urban morphology, and the politics of daily life in ways that stemmed specifically from its biotic agency, its living qualities—and potential mortality.

The history of urban greening thus indicates a need, first, to re-theorize the definition and meaning of modern urban infrastructure(s) in relation to the Soviet project of building socialism. Soviet urbanists treated urban greening as a ‘first among equals’ form of city improvement thanks to its strongly public and participatory character. The normative pursuit of urban greenery significantly influenced the form and experience of Soviet urbanism. Urban greening/greenery is not, however, usually included in discussions of modern urban and large-scale infrastructures as either global or specifically socialist phenomena. This oversight reflects certain assumptions

¹²¹ This phrase is a minor theme in Marx but is used prominently in more recent work on architectural modernization and modernity. See Marshall Berman, *All that is Solid Melts into Air: the Experience of Modernity*. New York: Simon and Schuster, 1982.

regarding the defining material qualities of modern urbanism on the one hand and the motivating concerns of Soviet urbanists on the other. It also distorts comprehension of how Soviet urbanists envisioned socialist urban modernity.¹²²

The production and maintenance of urban green plantings relied heavily on authorities' capacity to mobilize the "voluntary" labor of the urban population. Such mobilization campaigns were tied rhetorically to the State's concern for living conditions on the one hand and citizens' "love of homeland" on the other. Urban landscapes and their upkeep were thus made integral parts of highly public urban displays of ideological and national self-representation. The Soviet population was expected to care for their green friends (trees, the Russian forest) because it was the moral, patriotic, socialist, and Russian thing to do. While the specific terms of suasion changed over time, the reliance on a rhetoric of higher purpose to mobilize popular participatory labor remained consistent. Finally, the development of green construction as a form of applied science—the lovechild of decorative gardening and sanitary engineering—was cast as indicative of Soviet progress, innovation, and modernity. Urban greenery was the glue that linked all of these cues to the project of socialism, and to each other. To care for urban forests was simultaneously to care for self, for community, for country, and for communism.

Within the realm of professional expertise, a similar bundling of cues to care occurred; to engage in city greening was simultaneously good art, good politics, good economics, and good science. As a result, urban greening maintained its status as a marker of socialist modernity across the rupture between Stalinist neo-classical and Khrushchevian functionalist aesthetics. The mediating capacity of urban greening served to fuse populist, professional, and political aspirations, just as the best elements of city and nature were supposed to fuse under socialism. Nevertheless, the tangled linkages among functions and patrons associated with urban greening created unanticipated pathways for mutual influence and exchange among the various contributing elements. The overall project of building socialism was bolstered when urban

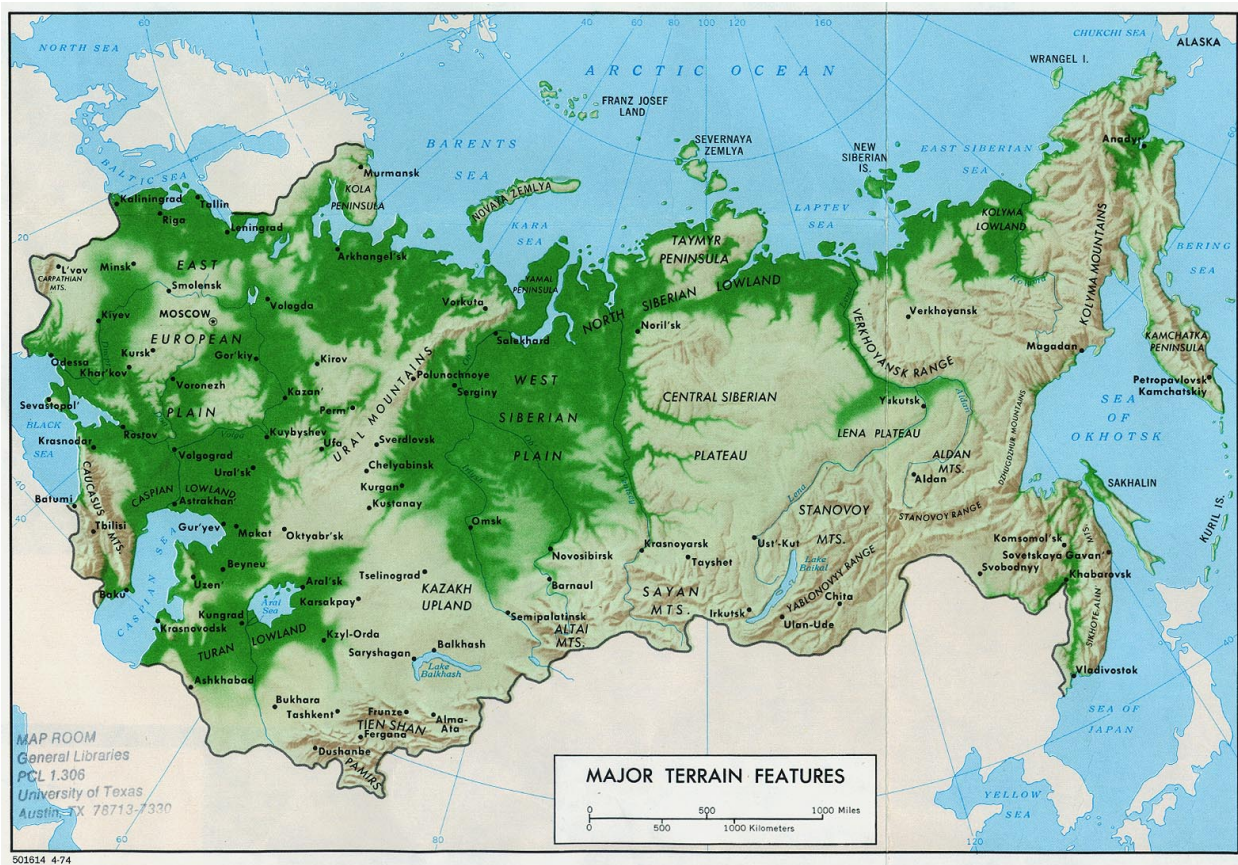
¹²²Scholars of Soviet urban infrastructure and environments such as Klaus Gestwa, Caroline Humphrey, Stephen Collier, Donald Filtzer and Tijana Vujosevic have already established the value of studying the distinctive aspects of Soviet service and utility provisions (see bibliography). An overview of transnational interest in the 'politics and poetics' of infrastructure systems can be found in Brian Larkin, "The Politics and Poetics of Infrastructure," *Annual Review of Anthropology* 42, no. 1 (2013)., although I find his definition of "modern" infrastructure systems and materials overly restricted to things that move or afford circulation, and technogenic substances. The Soviet conceptualization of greenery as a multi-purpose urban and regional utility, expected to fulfill much more than "parks and recreation" functions alone, deserves fuller recognition.

greening was successful, but undercut when the aspirations diverged from experienced reality.¹²³

The project of “building socialism” meant, for architect-planners and associated professionals, designing, building, and promulgating distinctively socialist built environments, that were visibly and spatially marked as such by their spatial morphology and land use decisions. Notwithstanding Lazar Kaganovich’s early 1930s declaration that existing cities were de facto socialist by virtue of their location in the land of the October Revolution, Soviet urbanists continued to seek ways to discursively and materially demonstrate the superiority and difference of Soviet urban environments over the urban environments they associated with Pre-Revolutionary backwardness or “capitalistic” inequality. The abundance of urban greenery, even in the harshest climatic or industrial site conditions, might not have been sufficient in itself to construct socialism, but it was a necessary element of the modern Soviet city.

¹²³ This point has also been made by Kitaev, "Red Parks," 305.. Kitaev asserts the primacy of ideology, as manifested in showpiece projects: “For its creators (town planners, party bosses and city authorities) a socialist city meant, first and foremost, a collective space in which one could share labour, property and recreation. As a result, the history of Soviet cities and landscape architecture offers striking examples of gigantic Parks of Culture and Rest and extensive Victory Parks. However, eventually these Soviet practices of green space construction became the symbol of unfulfilled promises, abortive plans and failed ideas of the state." This dissertation, in contrast, asserts both the agency of the trees in determining the symbolic and actual consequences of Soviet practices of green space construction, and the importance of public health concerns as a motivating factor for Soviet urbanists.

Images



Map 1.1 Major Terrain Feature of the Soviet Union, 1974.¹²⁴

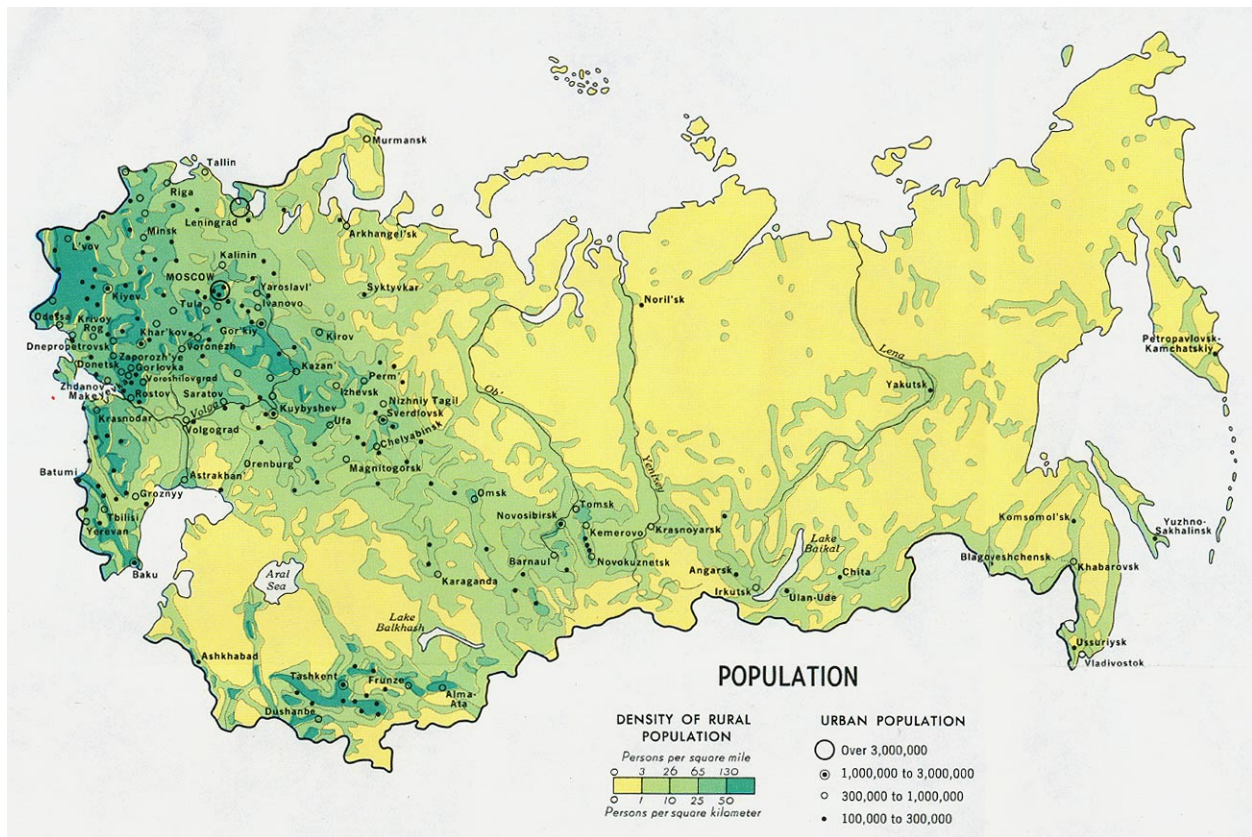
¹²⁴ Courtesy of the University of Texas Libraries, The University of Texas at Austin. Perry-Castañeda Library Map Collection. Accessed 1/2019 at <https://legacy.lib.utexas.edu/maps/commonwealth.html>

Permafrost Regions in the Soviet Union



Map 1.2 Permafrost Regions in the Soviet Union, 1984.¹²⁵

¹²⁵ Courtesy of the University of Texas Libraries, The University of Texas at Austin. Perry-Castañeda Library Map Collection. Accessed 1/2019 at <https://legacy.lib.utexas.edu/maps/commonwealth.html>



Map 1.3 Population of the Soviet Union, 1974.¹²⁶

¹²⁶ Courtesy of the University of Texas Libraries, The University of Texas at Austin. Perry-Castañeda Library Map Collection. Accessed 1/2019 at <https://legacy.lib.utexas.edu/maps/commonwealth.html>



Figure 1.1 Soviet Poster, 1917-21: "Chimney Smoke is the breath of Soviet Russia"¹²⁷



Рис. 30. Пейзаж индустриального района города.

Figure 1.2 Illustration of a "Paysage [*peizazh*] of an Urban Industrial District" from *Architecture and Beautification of Industrial Enterprises*, 1953¹²⁸

¹²⁷ Accessible at Slavic and East European Collections, The New York Public Library. "Dym trub. Dykhan'e Sovetskoi Rossii." New York Public Library Digital Collections. Accessed January 25, 2019. <http://digitalcollections.nysl.org/items/510d47de-83b4-a3d9-e040-e00a18064a99> Artist and date unknown.

¹²⁸ A.Ia Khorkhot, A. Ia. *Arkhitektura i Blagoustroistvo Promyshlennykh Predpriatii*. Kiev: Izd-vo Akademii arkhitektury Ukr SSR, 1953. p50



Figure 1.3 Soviet poster, 1958. "Got drunk, got rowdy, broke a sapling. Now he's ashamed to look folks in the face. SHAMEFUL!"¹²⁹

¹²⁹ Poster by N.A. Velezheva, N. Kuzovkin, 1958. Widely reproduced since by Kontakt-Kultura, Moscow, Russia, 2008-2010

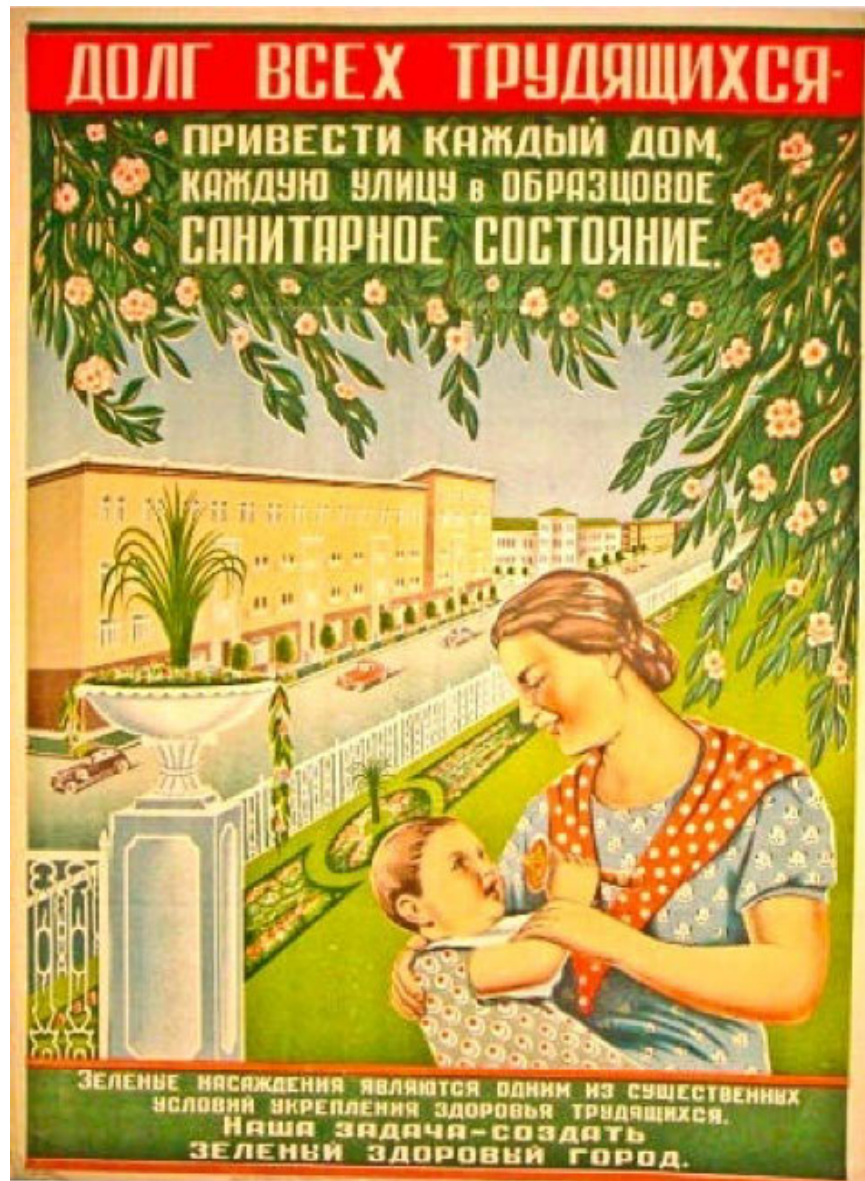


Figure 1.4 Soviet agitational poster by I.B. Boim, 1930s: “The Duty of All Workers... to create a Green, Healthy City.”¹³⁰

Full poster text:

“THE DUTY OF ALL WORKERS
is to bring every building,
every street into a exemplary
SANITARY STATE.

Green plantings are one of the substantial
means of strengthening the health of laborers.
Our task is to create
A GREEN, HEALTHY CITY.”

¹³⁰ Published in Lafont, Masha. *Soviet Posters: The Sergo Grigorian Collection*. Munich: Prestel, 2007. Artist attribution from Getty Images. Fabric patterns are those created in the Ivanovo Textile Works.

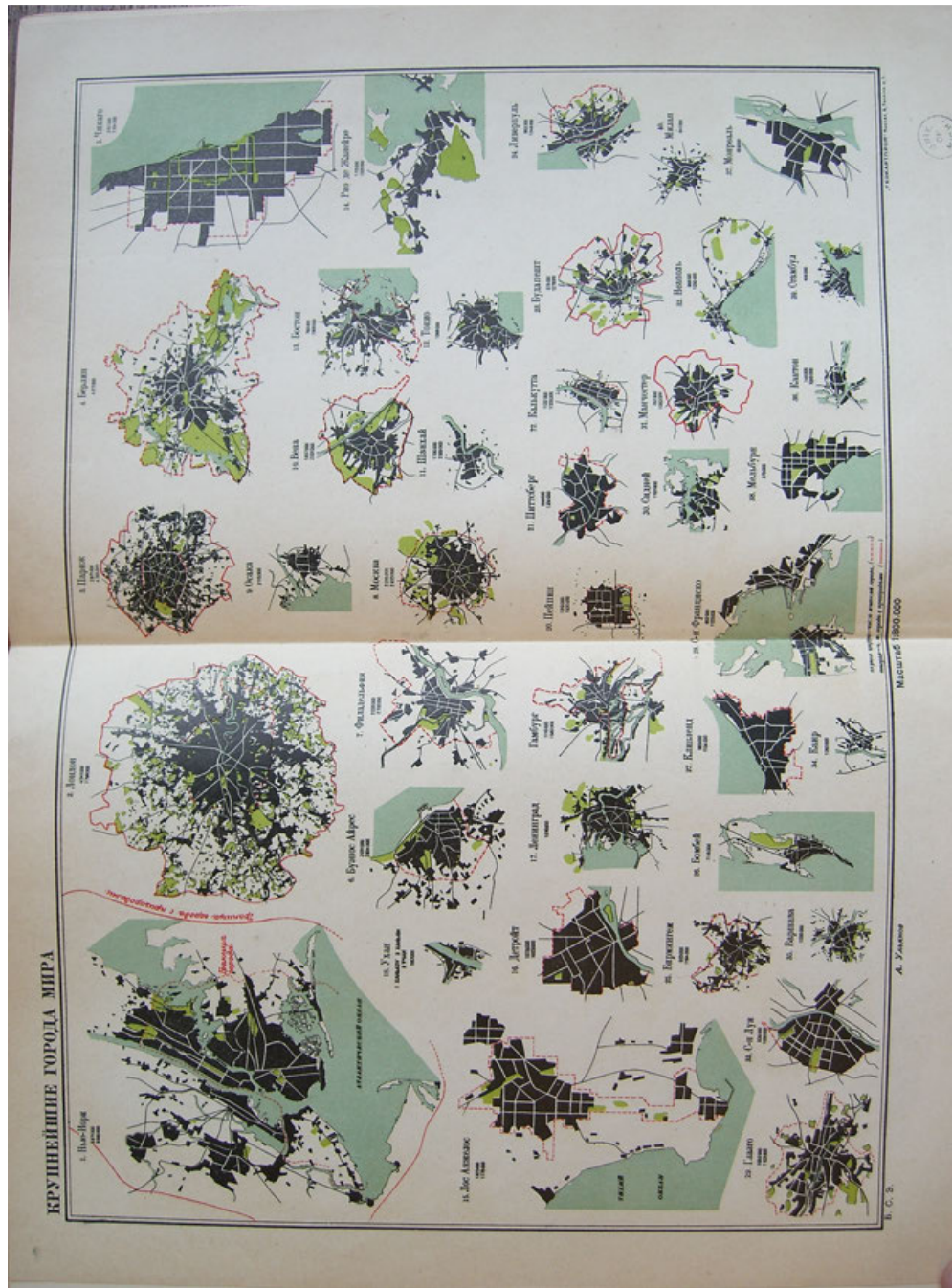


Figure 1.5 Figure-ground diagrams of "The World's Largest Cities" and their parks from Great Soviet Encyclopedia, 1930¹³¹

Cities are, in numbered order: New York, London, Paris, Berlin, Chicago, Buenos Aires, Philadelphia, Moscow, Vienna, Boston, Shanghai, Tokyo, Rio di Janeiro, Los Angeles, Detroit, Leningrad, Ukhan [?], Leningrad, Hamburg, Peiking, Pittsburgh, Calcutta, Budapest, Liverpool, Birmingham, Bombay, Cleveland, San Francisco, Sidney, Manchester, Naples, St. Louis, Cairo, Warsaw, Canton, Montreal, Melbourne, Istanbul, Milan.

Each shows parks and other greenspace, with the city limits shown in red.

¹³¹ *Bolshaiia Sovetskaia Entsiklopediia* [Great Soviet Encyclopedia], 1st edition, edited by O.Iu.Shmidt. tom 18, Moscow, 1930. Columns 17–159 on “Gorod” (various authors)

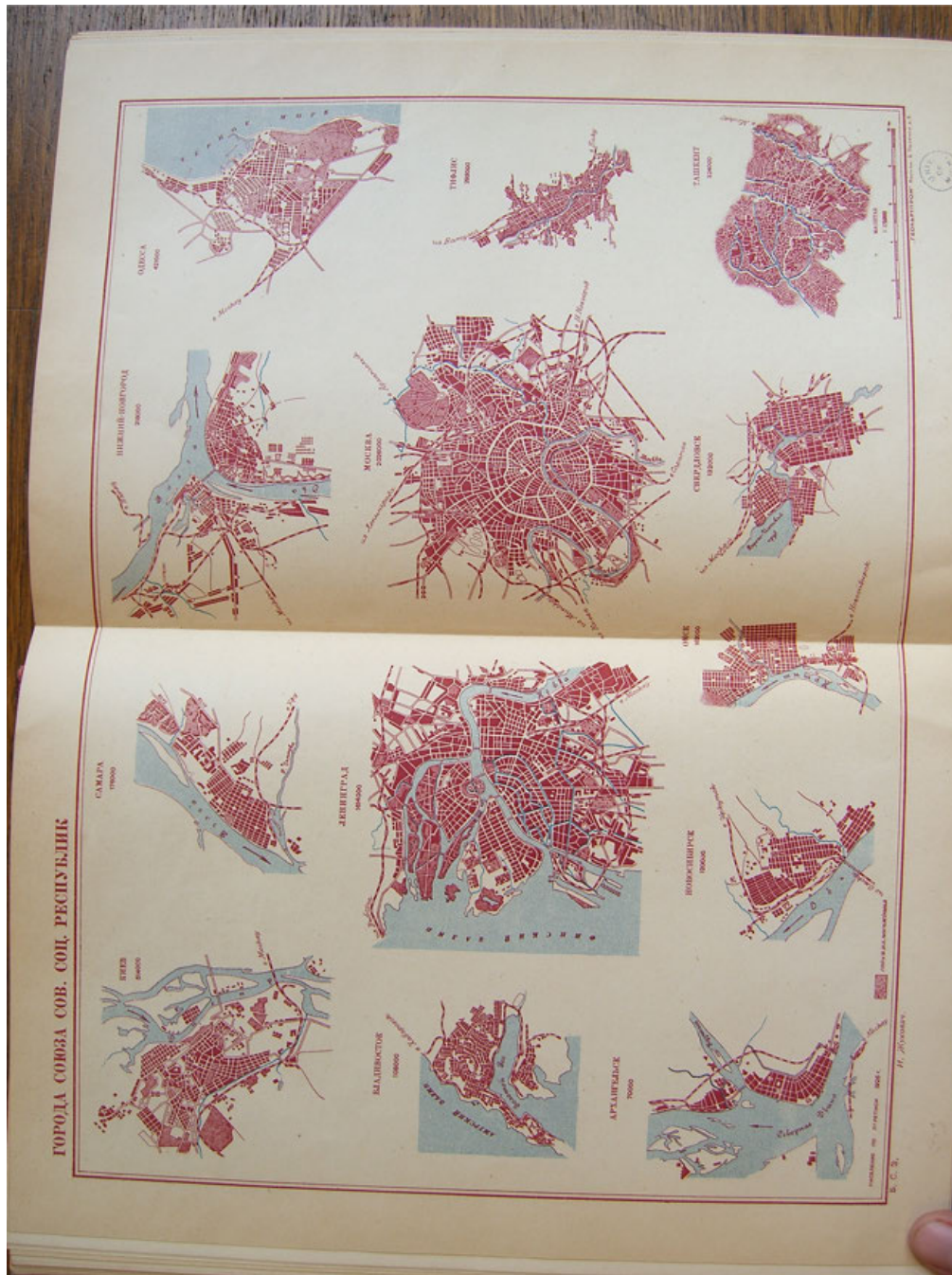


Figure 1.6 Figure-ground diagrams of Cities of the USSR and their waterbodies, from Great Soviet Encyclopedia, 1930¹³²

“Cities of the Union of Soviet Socialist Republics” with key noting “gardens and green plantings”, population per 1926 census. Top row: Kiev, Samara, Nizhnyi Novgorod, Odessa. Middle: Vladivostok, Leningrad, Moscow, Tiflis (Tbilisi). Bottom Row: Arkhangel’sk, Novosibirsk, Omsk, Sverdlovsk (Ekaterinburg), Tashkent.

Note that the difference here between built space (saturated red) and unbuilt or green space (light red) is much less vivid than the three-color printing representation used for world cities. Here rivers dominate.

¹³² *Bolshaiia Sovetskaia Entsiklopediia* [Great Soviet Encyclopedia], 1st edition, edited by O.Iu.Shmidt. tom 18, Moscow, 1930. Columns 17–159 on “Gorod” (various authors).

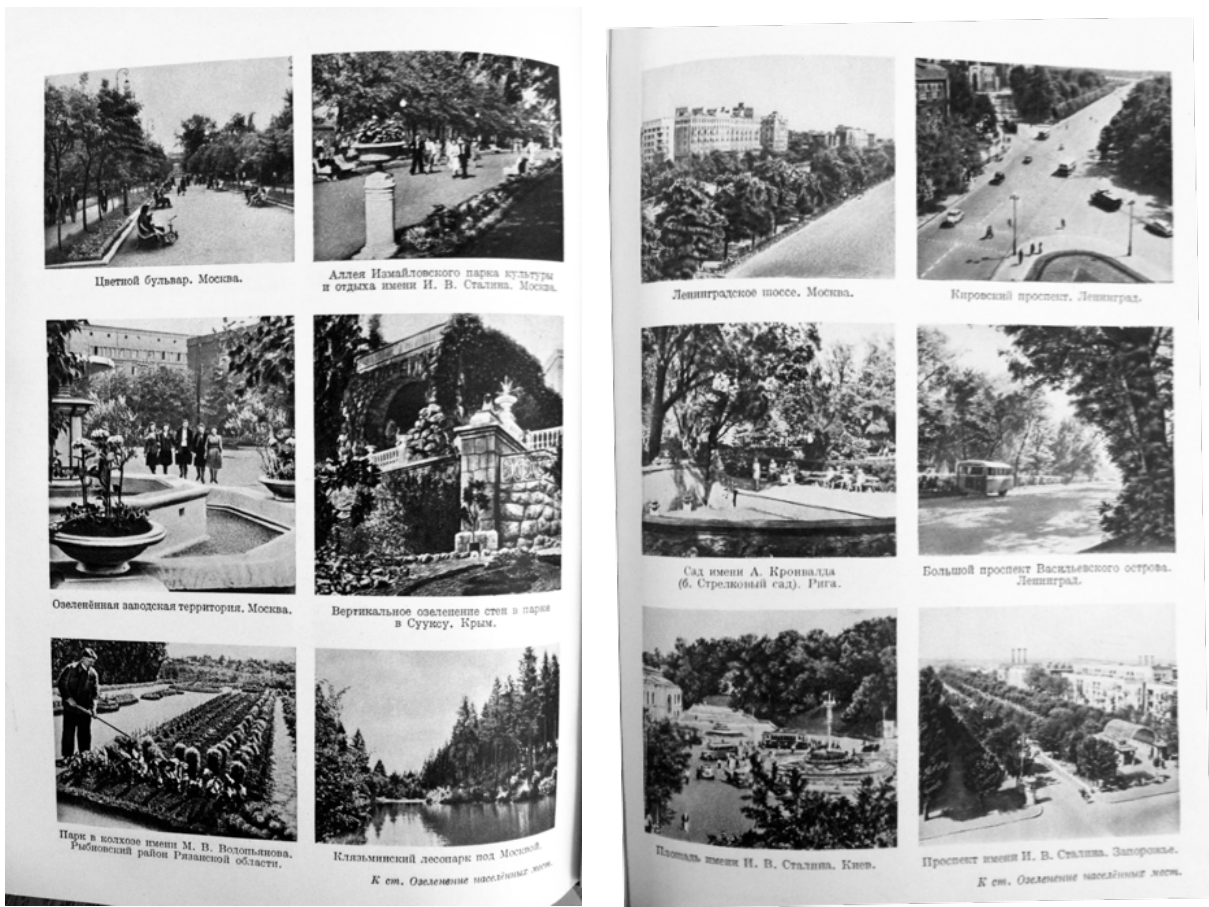


Figure 1.8 Pages from Great Soviet Encyclopedia, 1954 Entry on "Greening of Settlements"¹³⁴

¹³⁴ *Bolshaia Sovetskaia Entsiklopediia* [Great Soviet Encyclopedia], 2nd edition, edited by B.A.Vvedenskii. tom 30, Moscow, 1954. Columns 556-559 on "Greening of Settlement Points" (*ozelenenie naselennykh mest*).

Chapter 2.

“The Most Beautiful City in Siberia”: Landscape and Identity in a Soviet Factory Town

“The stadium is built on the Isle of Rest.” So begins a 1970 profile of the Central Stadium of the Siberian city of Krasnoyarsk in the French journal *L’Architecture d’Aujourd’hui*.¹ This renowned architectural journal, founded in 1930 by André Bloc, devoted the full issue to architecture of the Soviet Union and its constituent republics.² The issue was part of a surge in international interest in Soviet architecture, urbanism, and utopian aspirations.³ A few years previously, Anatole Kopp’s field-defining book on Soviet urbanism, *Ville et Revolution: Architecture et urbanisme soviétiques dans les années vingt*, had been published in Paris, part of a surge in interest in Soviet urbanism and utopian thought.⁴ In contrast to Kopp and others who focused on the 1920s and 1930s, the focus of *L’Architecture d’Aujourd’hui* (*L’AA*) was unusual in its prioritization of recent works of Soviet architecture and construction.

Yet even as international observers across disciplines turned to consider the history and contemporary state of the Soviet built environment, attention remained unevenly spread in spatial terms. The stadium in Krasnoyarsk was one of only three Siberian projects pictured in the

¹ *L’Architecture D’Aujourd’hui*, 1970:147. Issue on “L’Architecture Soviétique”. Krasnoyarsk is featured on pages 22-25. In French, “island of rest” is given as “l’île de repos.” The original Russian term, *otdykh*, can also be translated as leisure, as in a “park of culture and leisure” [*park kultura i otdykha*].

² The journal’s website proclaims it to be “the oldest French architectural journal.” André Bloc remained the editor until his death in 1966; other prominent individuals involved with the journal included Le Corbusier, Robert Mallet-Stevens, and Auguste Perret. <http://www.larchitectureaujourd'hui.fr/aas-history/?lang=en> Accessed 1-31-2018.

³ The main current of interest flowed toward the avant-garde developments of the early Soviet period, roughly 1928–1932. This retrospective recovery is deftly placed in the context of Cold War politics by Vronskaya, “Deconstructing Constructivism.” For more on the domestic, or Soviet, recovery in the early 1960s of Constructivism and its contemporary movements, see also Bittner, “Remembering the Avant-Garde: Moscow Architects and the ‘Rehabilitation’ of Constructivism, 1961-64.”; Starr, “Writings from the 1960s on the Modern Movement in Russia.”

⁴ Kopp, *Town and Revolution: Soviet Architecture and City Planning, 1917-1935; Ville Et Révolution: Architecture Et Urbanisme Soviétiques Des Années Vingt*. (Paris: Éditions Anthropos, 1967).. Kopp’s focus extends to 1935. The year 1967 marked 50 years since the Russian February and October Revolutions. Other French publications from the time include Basile Kerblay, “La ville soviétique entre le possible et l’imaginaire” *Annales. Histoire, Sciences Sociales*, 25e Année, No. 4, Histoire et Urbanisation (Jul.- Aug., 1970), pp. 897-911

journal's survey, from a total of 48. Predictably, most of those featured in the issue were located in Moscow (11), Leningrad (6), and other Soviet republic capital cities such as Tashkent, Tallin, and Tiflis a.k.a Tbilisi (12 projects total). The other two Siberian projects included were the Bratsk hydroelectric station and dam, and a housing ensemble in remote Yakutia.⁵ The inclusion of Krasnoyarsk and its Central Stadium in this line-up indicated the Soviet architectural community's regard for the recently completed project.⁶

Floating like a leaf or a small boat on the *ostrov Otdikha* (Island of Rest or Leisure) amidst the broad Yenisei River, the Krasnoyarsk Central Stadium for 30,000 Viewers marked a new direction in Soviet public architecture, a new integration with landscape and expressivity of form.⁷ The architect responsible for the stadium, Vitaly Orekhov, had earned a first-order prize for the design at the 1968 All-Union Review of Young Architectural Work.⁸ In its presentation in *L'Architecture d'aujourd'hui*, the stadium's functional qualities as a building fused with its location. The text noted the appropriately efficient use of space under its stands "in the rigorous climatic conditions of Siberia," as well as a preference in the interior for "natural materials" like marble, natural stone, and wood. The accompanying photographs and site plan of the entire sports complex situated the Stadium in its urban, riparian, and climatic context, the last captured in a wintertime photograph of the structure covered with snow.

Soviet architectural critics, in their treatment of the Stadium in the years since its completion in 1967, have also often focused on the concrete building's orientation toward organic form

⁵ The locations featured in the 1970 issue on "L'Architecture Sovietique" were, in alphabetical order: Alma-Ata; Baku; Bratsk Dam, Siberia; Crimea; Erivan x 2; Estonia x4 total; Kalinin Prospekt; Kiev; Kirov; Krasnoyarsk; Leningrad x6; Lougansk; Moscow x11; ; Novoi, Uzbekistan; Samarkand, Tallin, Tashkent x4; Togliatti; Tschevchenko, Kazakhstan; Turgeniev Square? ; Ulianovsk; Vilnius x2; Yakutia; Yalta; Zelenograd. Selection of these sites seems to have been a collaborative endeavor—the editors thank the USSR's Union of Architects and Anatole Kopp "for their assistance in selecting projects and offering other counsel." [p2]

⁶ The Stadium remains an architectural landmark to this day, from having been declared a work of cultural heritage in 1986 to being included in early 2013 in a Tumblr on the architectural style of Brutalism. Added 1 February 2013 to "Fuck Yeah Brutalism" Listed as Stadium, Krasnoyarsk, Russia, 1968, (Vitaly V. Orekhov). <https://tumblr.co/ZJ3PXydA74LM>. This is usually treated as an exemplar of Soviet modernism, an architectural style comparable to Western variants but with divergent periodization. For instance, a photograph of the Stadium was chosen by author and curator Vladimir Belogolovsky, founder of the New York-based Intercontinental Curatorial Project, to headline his international lecture series "The Empire's Last Style/ Soviet Modernism: 1955-1985" (March 21 to April 8, 2011). <http://curatorialproject.com/goingpublic/sovietmodernismtour.html> Last accessed 7/30/2018.

⁷ Anderson, *Russia*, 234.

⁸ A. V. Slabukha, *Arkhitektory Prieniseiskoi Sibiri: Konets XIX-Nachalo XXI Veka : Illiustrirovanniy Biograficheskii Slovar*, 540 *Imen* (Moscow: Progress-Traditsiia, 2004), 244-46. Orekhov continued on to a long career as an architect of multiple building types, primarily in Krasnoyarsk. He died in November 2014 but was kind enough to grant me an interview early that spring.

and its site sensitivity. In 1975, historian and critic Andrei Ikonnikov noted the Stadium's "clear-cut, resilient, forceful lines" and its "fully exposed, strictly functional ferro-concrete construction." He then praised Orekhov for having made

skillful use of the natural surroundings—the magnificent scenery along the banks of the full-flowing Yenisei... The character of the terrain determined the composition of the sprawling grandstands with far-spreading ramps.⁹

Other well-known Soviet civic buildings of the 1960s, such as the Pioneer Palace in Moscow (1962), also celebrated a visual and aesthetic connection to their environment.¹⁰ Whereas the Palace established this connection via its expansive glazing (windows, to non-architects), the Stadium offered its 30,000-40,000 viewers an open-air experience, much larger scale, and direct morphological evocation of the curving lines of adjacent Yenisei river and hilly local terrain.

The landscape connection between the Stadium and its site is missing, however, in present-day international architectural commentary. In his ambitiously encompassing survey history of Russian and Soviet architecture, Richard Anderson writes of the "freshness" of the Krasnoyarsk Central Stadium, describing it as a "true breakthrough" in Soviet stadium design. This is no small praise. Stadiums in the USSR were high profile and highly symbolic sites of international competition, physical culture, and mass participation. The gold standard in Soviet stadium design prior to Orekhov's Krasnoyarsk masterwork was set by the more neo-Classical monumentality of Lenin Central Stadium in Moscow (now the Luzhniki Stadium, by Aleksandr Vlasov and others, 1954-6), and Nikolai Baranov's Lenin Stadium in Leningrad (1957–1961).¹¹

Opposite a dramatic close-in photograph of the Krasnoyarsk Stadium seen from below, Anderson writes:

Constructed of roughcast reinforced concrete, the tribunes of the stadium are supported by inclined pylons. Elevated ramps allow rapid access to the upper levels of the stands. In Orekhov's stadium, monumentality cedes to a new interest in the sculptural qualities of architectural form and an ex-

⁹ Andrei Vladimirovich Ikonnikov, B. Fabritskii, and I.P. Shmelev, *Soviet Architecture of Today: 1960s - Early 1970s* (Leningrad: Aurora Art Publishers, 1975), 17. A Russian-language version of this book was published at the same time. Ikonnikov pairs the Central Stadium in Krasnoyarsk with a similar-era stadium in Yerevan, both cast as responses to the "increase of leisure time" in the Soviet Union "which has increased the importance of vigorous recreation and rest involving sports and tourism."

¹⁰ Susan Emily Reid, "Khrushchev's Children's Paradise: The Pioneer Palace in Moscow's Lenin Hills, 1962," (United States: 2002). Reid describes the Pioneer Palace as a modest "anti-Monument," "picturesquely integrated with its natural surroundings."

¹¹ Anderson, *Russia*, 234. Another significant stadium, and 1951 winner of the Stalin Prize in Architecture was the Kirov Stadium in Leningrad, by N. Kolli, profiled in *Arkhitektura SSSR*, 1951 no01 (November). The importance of Stadiums to Soviet civic life, sense of self, and the urban de-Stalinization of Moscow, see Köhring, "'Sporting Moscow': Stadia Buildings and the Challenging of Public Space in the Post-War Soviet Union."

pressive use of material.¹²

There is no mention of terrain, climate, or island site. The black-and-white photograph Anderson uses is the same as one used by Ikonnikov in 1970, when it appeared in color and uncropped. The same building, even the same view, that earlier elicited expansive awareness of terrain and site character in relation to the building, here produces a narrowly-focused consideration of the sculptural qualities of the building-as-object. Such contrast between characterizations of Soviet architecture and built environments presents a puzzle. The seemingly well-documented original intentions of the architect—to connect Stadium and ‘natural’ setting— are flattened in English-language historiography into a more purely technological and tectonic engagement with form and material.

A City Distinguished

A similar discrepancy is seen at the urban scale with respect to Krasnoyarsk. To this day, local discourse emphasizes an architecture-nature connection in the Stadium and other landmark public buildings of Krasnoyarsk, such as the cliff-like massing of the Krasnoyarsk Museum Center.¹³ The objective of this chapter is to investigate this discrepancy, by considering the basis, origins, and generalizeability of local claims regarding city-nature relations. Assertions that the built environment of Krasnoyarsk is distinguished by “harmonious” relations to the natural setting are starkly at odds with the international reputation of the city, and of (post)Soviet urbanism more generally. A few recent examples from local discourse suffice to establish the contrast with popular and scholarly English-language depictions of the city.

In general, Krasnoyarsk is agreed to be a city at a crossroads. The crossroads are physical, i.e. the Yenisei River and the Trans-Siberian Railway, and also metaphoric, in that Krasnoyarsk—like other mid-level cities in the former Soviet Union—seeks to create a new narrative for itself. The formerly closed-to-foreigners city is now “open” for international tourism and in-

¹² Anderson, *Russia*, 234-5.

¹³ Founded in 1987 as the Krasnoyarsk branch of the Central Museum of V.I. Lenin, reimagined in 1991 as the Krasnoyarsk Cultural-Historical Museum Center or KITs. Slabukha, *Arkhitektory Prieniseiskoi Sibiri*. It currently houses a contemporary art complex, established as one of the city’s main attractions and a nationally-recognized center of culture and art. <https://www.erarta.com/ru/calendar/exhibitions/detail/f2dc3a1d-d5b6-11e3-ad2e-8920284aa333/> See also M.C. Taylor, *Local Landscapes, Local Views: Nature, Ecology, and Urban Design in Krasnoyarsk, Russia*. MLA thesis, University of Washington, 2009.

vestment alike.¹⁴ According to the city’s official biography, as put out by the city administration,

“Krasnoyarsk is the largest business, industrial and cultural center of Eastern Siberia [...] A city distinguished by its unique landscapes, mountainous natural scenery, majestic Siberian forest and well-known ‘Stolby’ Nature Preserve [...] Today, Krasnoyarsk is a modern industrial city with unique architecture ... one of the most beautiful cities of the country.”¹⁵

This most basic example of self-promotion includes multiple potential anchors for its identity, but avoids detailed discussion of how the city’s modern industrialism, unique architecture, and unique landscapes interrelate.¹⁶

As might be expected, architects in Krasnoyarsk are quick to foreground architectural and spatial aspects of the city’s identity; they are also more explicit in linking the city’s architecture to the landscape. In 2007, at a time of a rapid transformation for the increasingly affluent city and region, the architects and urban authorities of Krasnoyarsk filled periodicals such as *Sibirskii Dom* (Siberian House or Building) and *Krasivii Bereg [Beautiful Shores]* with their dreams and debates.¹⁷ The possibilities seemed limitless; the economic crash of 2008, Russian invasion of Crimea, and associated international sanctions were as yet unanticipated. Questions of what to keep from the city’s existing built environment intermingled with grand visions of what might be transformed.

This discourse promoted a sense of urban place-identity that was strongly inflected with environmental referents. In one representative article, in which the city’s architectural heritage was compared to a “bridge between past and future,” Krasnoyarsk was said to be distinguished from other major cities by its “lack of conflict between the urban landscape and the natural land-

¹⁴ Brochure circa 2007, author’s collection

¹⁵ From the first three paragraphs of the “our city” page of the Krasnoyarsk City Administration website. <http://www.admkrsk.ru/city/Pages/default.aspx>. Accessed most recently 1-31-2018 Note that the regional environment [*landshaft*] and regional scenery [*peisazh*] are listed separately as notable attributes and sources of distinction. In English, these two terms are conflated in the word “landscape.” In translations for this chapter I have tried, where reasonable, to preserve the difference in connotation that inheres to the original Russian.

¹⁶ The English-language Wikipedia page for Krasnoyarsk follows the cues set by the City Administration: First paragraph notes industrial and infrastructural traits: “Krasnoyarsk is an important junction of the Trans-Siberian Railway and one of Russia’s largest producers of aluminum.” The second paragraph offers a seemingly opposite source of identity: “The city is notable for its nature landscapes; author Anton Chekhov judged Krasnoyarsk to be the most beautiful city in Siberia.” <https://en.wikipedia.org/wiki/Krasnoyarsk>. Accessed 1-31-2018. The full quote is given in A. J. Haywood, *Siberia: A Cultural History, Landscapes of the Imagination* (Oxford: New York, 2010), 209. Krasnoyarsk is “the best and most beautiful of all Siberian cities, with smoke-colored and dreamy mountains that reminded me of the Caucasus.” (From the diary of Chekhov’s 1890 travels to Sakhalin.) On Krasnoyarsk in Haywood, see p206-218.

¹⁷ For more on architectural discourse regarding environmental issues as found in these journals circa 2007—i.e. their ambitions “to take the particulars of the landscape into consideration” and otherwise incorporate “nature” into urban design and architecture— see Taylor, “Local Landscapes, Local Views” MLA Thesis, 2009.

scape.”¹⁸ The author asserted architects’ historical intentionality and skill in maintaining that lack of conflict. To wit:

Krasnoyarsk is inexpressibly fortunate in its natural setting, and architects of past times ably and masterfully inserted their handcrafted beautiful works into the natural scenery of rolling hills, and forested cliffs. It is these buildings in particular, constructed harmoniously and with love for one’s native city, that are the ‘calling cards’ and landmarks of contemporary Krasnoyarsk.¹⁹

The environmentally-minded architectural feats “of past times” extended, moreover, to the present day, when the “most important foundational charm of Krasnoyarsk remains its ensembles and harmonious interaction with the natural surroundings.” It was, however, a legacy at risk. The author warned that this characteristic charm “needs to be preserved no matter what,” even at the cost of individual expression. “Thus instead of a chaotic cacophony you’ll get a real architectural symphony. Sounding through the centuries and uniting past and future...”²⁰

Local claims to an urban inheritance of harmonious, or at least conscientious, relations between city and nature include the Soviet period. According to Tatiana Lisienko, the head of Krasnoyarsk’s preeminent urban and regional design-planning bureau, as quoted in an article on “Ecologically Harmless Architecture” by the same journalist,

The first question that stands before *proektirovshchiki* [designers] is that of safety, asserts Tatiana Lisienko. Furthermore, the ecology of cities in Russia was seriously considered already in the ’20s of last century. “In designing a city, we evaluate how the natural factors will influence its residents, and from the other side, what influence the city will have on the surrounding natural environment.”²¹

While Lisienko acknowledged the problems inherited generally by cities throughout the former

¹⁸ The lack of conflict was, in this case, the combined result of the street grid and terrain, which together created a desirable quality of spaciousness. Rybachenko, “Most Mezhdru Proshlym I Budushchim.” (Bridge between past and future) *Sibirskii Dom*, October 2007, 20. (see footnote 96 for full quote.) The regularity and open-ended vistas of streets in central Krasnoyarsk were the result of plans completed in tsarist St. Petersburg, a city in which “images of space” were especially prized within the urban scene. Gregori Z. Kaganov and Sidney Monas, *Images of Space: St. Petersburg in the Visual and Verbal Arts* (Palo Alto, CA: Stanford University Press, 1997). The Russian preference for “airy expanses” [*prostora*] and against closed or bounded spaces [*zamknutyi prostranstvo*] is explored by Richard Stites in Smith, *Beyond the Limits: The Concept of Space in Russian History and Culture*.

¹⁹ Rybachenko. “Most Mezhdru Proshlym I Budushchim” 2007, 16. Rybachenko uses the words “*vizitnaia kartochka*,” which can also mean “business card,” and “*dostoprimechatelnosti*” which denotes both a city’s signature sights and sites, i.e., the places and buildings a tourist might visit, or where a wedding party might take photos of themselves *en situ* in the Soviet manner.

²⁰ *Ibid.*, 21

²¹ Rybachenko, “Ekologicheski Bezvrednaia Arkhitektura.” (Ecologically Harmless Architecture) *Sibirskii Dom*, October 2007, p27. Lisienko was director of the urban design and planning studio KrasnoyarskGrazhdanProekt [Krasnoyarsk Civil Design]. This organization is a non-governmental planning bureau in the present-day, but was a quasi-governmental agency during the Soviet period. Lisienko uses the term *proektirovshchiki*, meaning persons involved in urban spatial or layout design-planning, rather than the other available designations of *arkhitektor* (architect), *gradostroitel’* (city designer, urban planner), or *planirovshchik* (economic planner). *Proektirovshchik* is sometimes used in distinction from *obemshchik* (volumist) to indicate specialization in the spatial and functional relationships among buildings, rather than the volumetric or spatial design of individual buildings.

USSR and Krasnoyarsk Krai [Territory], she asserted that architects' intentions were ecologically-oriented, as their professional duty.²² The agency of architects and other design professionals was admittedly limited to a set range of spatial and regulatory interventions.²³ Past shortcomings were attributed by Lisienko to failures of implementation, rather than failures of principle or a lack of concern.²⁴

Unfortunately, planning discipline has not always been observed... Layout-design plans in Russia were always worked out on a sufficiently high level. However in the next phase, design construction, the initial line was rarely implemented successfully.²⁵

These claims present a surprising scenario. Considered together, they suggest that Soviet architect-planners' aspirations for Russian built environments, although not always fully realized, were scientifically sound and extensively developed, and that they were motivated by health and safety concerns shared by present-day urbanists. Most surprisingly, such claims suggest that architect-planners' interest in the natural environment, rather than being a new or superficial intervention, was a central tenet of the Soviet period.

Portrayals of Krasnoyarsk that posit a past architectural embrace of landscape reinforce the well-established association of "Siberia" with dramatic terrain and expansive landscapes, but contradict the reputation of Soviet industrial development for scarring that landscape heritage.²⁶ In UNESCO's listings for the country, to give one example, where the "cultural heritage" of European Russia is generally seen to manifest in architecture and other technogenic interventions, the "heritage" of the Asian or Siberian regions of Russia is nature-based.²⁷ With respect to Krasnoyarsk, English-language promotional accounts and travelogues reaffirm that the regional landscape is one of the city's main attractions. They are also unsparing in their descriptions of the

²² "As concerns existing urban areas, all our cities are sick organisms and the task that stands before designers (*proektirovshiki*) is to ease, or at least not worsen, the unfortunate ecological situation in them" Rybachenko, "Ekologicheskii-Bezvrednaia Arkhitektura" 2007, p27.

²³ Ibid. The task of architects and *proektirovshchiki* included tasks variously assigned in American professional practice to architects, planners, engineers and landscape architects. "In her words [Lisienko's], the *proektirovshik* must work with a limited palette of tools: they can calculate the density of buildings and how much greenery there must be, foresee major streets with high traffic capacity and maximally simple interchanges, which permit minimization of the risk of traffic piling up and forming slow-downs, [and] study the wind-rose before siting industrial enterprises."

²⁴ Ibid.

²⁵ [*proekty planirovki vs proekty zastroiki*] Ibid.

²⁶ The collective imaginary of Siberia is frequently associated with extremes of Nature, religious visions and other spectacle. See chapters in Galya Diment and Yuri Slezkine, eds., *Between Heaven and Hell: The Myth of Siberia in Russian Culture* (St. Martin's Press, 1993).

²⁷ See footnote 67 for details on UNESCO sites in Russia.

city's domination by concrete buildings and industrial emissions. These accounts present the city's Soviet legacy as fundamentally opposed to that natural heritage, rather than mutually interactive or "harmonious" as do local accounts.

English-language popular and scholarly accounts of Krasnoyarsk associate the city and its Soviet legacy with less desirable qualities.²⁸ The city and its administrative region (Krasnoyarsk Krai), with their aluminum and nickel riches, approached the new millennium associated with the murky processes of post-Soviet economic and political transition, wracked by corruption and political in-fighting.²⁹ The city's international reputation might be summed up in the following title of a 2011 travel portrait by renowned architectural historian and photographer William Brumfield: "Krasnoyarsk: Frontier Outpost to Industrial Center."³⁰ Lonely Planet juxtaposes the Stolby Nature Preserve "located within city limits" with the Krasnoyarsk Aluminum Plant "causing terrible air pollution." Their list of eight top sites in Krasnoyarsk includes only one Soviet-era site (the central Revolution Square ensemble described as generically Soviet and Stalinist), and the adjacent Central Park of Culture and Rest, "another compulsory element of any Soviet city."³¹ International scholarly accounts often identify Krasnoyarsk as one of the USSR's most industrial and most polluted cities. Other attributes and sites most commonly associated

²⁸ Examples include Sidney Sheldon's crime novel, *The Sky is Falling*, New York: William Morrow, 2001 in which "...Sasha promises to tell Dana why the Winthrops were killed, but she must first get him out of Russia, as someone is attempting to kill him. Dana accepts, and Sasha leads her to Krasnoyarsk-26, a closed town in Krasnoyarsk Krai. After disguising Dana as a prostitute and going in with her, Sasha explains that Krasnoyarsk-26 exists for the sole purpose of creating plutonium, the key ingredient in nuclear weapons. One hundred thousand scientists and technicians work there, and must sever all ties with the outside world before working there. It is impossible to shut down the plant as it warms the city above it, and without it the city's population would freeze to death. Taylor Winthrop was killed by his business associate after he got too greedy and decided to take all the plutonium." ([https://en.wikipedia.org/wiki/The_Sky_Is_Falling_\(Sheldon_novel\)](https://en.wikipedia.org/wiki/The_Sky_Is_Falling_(Sheldon_novel))). See also, less dramatically, Richard H. Rowland, "Russia's Secret Cities," *Post-Soviet Geography and Economics* 37, no. 7 (1996); Oleg Bukharin, "The Future of Russia's Plutonium Cities," *International Security* 21, no. 4 (1997). and Michael Gordon, "The Hidden City: A Special Report; Hard Times for Russia's Nuclear Centers" *The New York Times*, November 18, 1998. The topic of closed and secret cities (two separate but overlapping categories) was brought to architectural audiences in the US thanks to an exhibit at the at the Harriman Institute of Columbia University in Spring 2012. <http://grahamfoundation.org/grantees/5019-zato-soviet-secret-cities-of-the-cold-war>; <https://harriman.columbia.edu/event/exhibit-opening-zato>. Accessed 01/2019.

²⁹ Bernard Black, Reinier Kraakman, and Anna Tarassova, "Russian Privatization and Corporate Governance: What Went Wrong?," *Stanford Law Review* 50, no. 6 (2000). The Krasnoyarsk Aluminum Zavod, in particular, is a global industrial giant. <https://gulfbusiness.com/top-10-largest-aluminium-smelters-in-the-world/> For historical context see Matthew Evenden, "Aluminum, Commodity Chains, and the Environmental History of the Second World War," *Environmental History* 16, no. 1 (2011).

³⁰ William Brumfield, "Krasnoyarsk: Frontier outpost to industrial center" *Russia Beyond* Travel section, Nov. 11, 2011 https://www.rbth.com/articles/2011/11/11/krasnoyarsk_frontier_outpost_to_industrial_center_13743.html Accessed 01/2019.

³¹ The basic description of the city is an array of contrasting elements: "Orderly and affluent, Krasnoyarsk reflects in the blueish-grey surface of the mind-bogglingly wide Yenisey River, which marks the border between the swampy west and the mountainous east of Siberia. Uniquely, the million-strong city boasts a hugely popular national park located within city boundaries. The other prominent urban feature is unfortunately a giant aluminium plant, which contributes to some serious air pollution in the centre." <https://www.lonelyplanet.com/russia/siberia/krasnoyarsk>, Last accessed 01/2019

with Soviet Krasnoyarsk in English-language profiles include its importance in military-industrial production, particularly its radar and nuclear defense programs and the two “secret” closed cities of Krasnoyarsk-26 (Zelenogorsk) and Krasnoyarsk-45 (Zheleznogorsk).³²

More broadly, claims that Krasnoyarsk enjoys an especially harmonious relationship to nature contradict familiar tropes of architectural and urban planning histories of the USSR as a whole. Soviet “planners” are infamous for their indifference to qualities of place and environment, particularly with regard to Siberia.³³ In general, Siberia is treated as similarly “scarred” by antagonism between Soviet society and nature, a region in which attempts at ecological conservation or sustainability were the province of dissidents and indigenes.³⁴ Analytic studies of “everyday” modern urbanism in Siberia are relatively rare; the region is much more likely to be associated with its more extreme forms of settlement, such as Gulag camps, secret cities, ex novo New Towns, or the anomalous Jewish Autonomous Region of Birobidzhan.³⁵ As architecture and planning historians attempt to weave a broader swath of sites and design traditions into global and “transnational” histories of the built environment, such drastically different patterns of reception snag the narrative fabric.³⁶

Environmental histories of the USSR and Siberia have likewise avoided the question of

³² In addition to sources cited in footnote 28, see also Revich, Boris A. "Public health and ambient air pollution in Arctic and Subarctic cities of Russia" *The Science of the Total Environment*, 160/161 (1995) 585-592; Hiromitsu Kitagawa, "The Environmental Effects of Development in the Angaro-Yenisei Region" pp119-130 in *Economic Development and the Environment on the Sakhalin Offshore Oil and Gas Fields II*, SRC Occasional Papers No.71, Slavic Research Center of Hokkaido, Japan. <http://src-h.slav.hokudai.ac.jp/sakhalin/eng/71/contents.html>; and David L. Hoffmann, "Wastes of War: Radioactivity Threatens a Mighty River," *Washington Post* 1998. Accessed 8/30/2012 at <http://www.washingtonpost.com/wp-srv/inatl/longterm/coldwar/siberiaa.htm>;

³³ Hill and Gaddy, *The Siberian Curse: How Communist Planners Left Russia out in the Cold*; Viola, *The Unknown Gulag: The Lost World of Stalin's Special Settlements*; Josephson, "Projects of the Century' in Soviet History: Large-Scale Technologies from Lenin to Gorbachev."; Paul Josephson, "War on Nature as Part of the Cold War: The Strategic and Ideological Roots of Environmental Degradation in the USSR," in *Environmental Histories of the Cold War*, ed. John Robert McNeill and Corinna R. Unger (Cambridge: Cambridge University Press, 2010); Josephson, "Industrial Deserts: Industry, Science and the Destruction of Nature in the Soviet Union.". Note that in English, “planner” and “planning” includes both economic and spatial planning. In Russian, these were separate areas of practice: *planirovanie* and *planirovka*.

³⁴ A discourse of “scarring” can be found in W. Bruce Lincoln, *The Conquest of a Continent: Siberia and the Russians* (New York: Random House, 1994); Violet Conolly, *Siberia Today and Tomorrow: A Study of Economic Resources, Problems, and Achievements* (London: Collins, 1975); Andy Bruno, "Industrial Life in a Limiting Landscape: An Environmental Interpretation of Stalinist Social Conditions in the Far North," *International Review of Social History* 55, no. S18 (2010)..

³⁵ Masha Gessen, *Where the Jews Aren't: The Sad and Absurd Story of Birobidzhan, Russia's Jewish Autonomous Region*, First edition. ed., Jewish Encounters (2016). touches on some of the same themes, but follows her protagonists as they circulate between Moscow, cities abroad, and the distant settlement of Birobidzhan.

³⁶ Hein, *The Routledge Handbook of Planning History*; Beauregard, "Writing Transnational Histories."; Clément Orillard, "The Transnational Building of Urban Design: Interplay between Genres of Discourse in the Anglophone World," *Planning Perspectives* 29, no. 2 (2014); Ward, "A Pioneer 'Global Intelligence Corps'?: The Internationalisation of Planning Practice, 1890-1939."

urban environmentalism. City-nature relations, if discussed, are analyzed in terms of human movement and a division between cities and “rural” or “village” life. Amidst the mining, logging, smoke, ice, and dead fish of modern Siberian environmental history, the vision of a city supposedly infused with environmental harmony confuses the eye like a mirage in a blizzard.³⁷ How to reconcile this consensus with the skillful insertion, concern for safety, and love of nature attributed to architects in Krasnoyarsk?

A brief review of existing scholarship on Russian and Soviet cultures of nature provides some possible explanations, none conclusive with respect to Krasnoyarsk. The intentions, aesthetics, and concepts associated with Soviet and Russian attitudes toward city-nature relations are all possible influences on local architectural discourse. The first hypothesis is that official portrayals in present-day Krasnoyarsk are intentional and self-conscious examples in “greenwashing.”³⁸ By “shrubbing up” the obviously severe, and generally negative, environmental legacy inherited from the Soviet period, city boosters might hope to encourage tourism, investment, and in-migration. These were, after all, relatively new phenomena for post-Soviet Krasnoyarsk and the city would have needed a fresh resumé of attractions.³⁹

Regardless of the degree of sincere commitment, architects’ rhetoric of city-nature harmony would lack traction in public discourse without shared aspirations on which to pull. This suggests that the shared perception that Krasnoyarsk aspires to harmonious interaction with nature was as important as the realization. Multiple scholars have commented along these lines on the aspirational symbolism of Soviet political culture, and the value in studying its qualities.⁴⁰

³⁷ Recent environmental histories of Siberia and the Far North include Andy Richard Bruno, “Making Nature Modern: Economic Transformation and the Environment in the Soviet North” (PhD Dissertation, University of Illinois Urbana-Champaign, 2011); Chu, “Mapping Permafrost Country: Creating an Environmental Object in the Soviet Union, 1920s-1940s.”; Jessica Kathryn Graybill, “Contested Space in the Periphery: Perceptions of Environment and Resources on Sakhalin Island” (PhD Dissertation, University of Washington, 2006); Bolotova, “Loving and Conquering Nature: Shifting Perceptions of the Environment in the Industrialised Russian North.”; Paul Josephson, “Technology and the Conquest of the Soviet Arctic,” *The Russian Review* 70, no. 3 (2011).

³⁸ This interpretation, regarding postwar efforts in the residential greening and beautification of Moscow, can be found in Varga-Harris, “Green Is the Colour of Hope?: The Crumbling Facade of Postwar Byt through the Public Eyes of Vecherniaia Moskva.”

³⁹ This post-Soviet search for local identity, was paralleled by the search for a “national idea.” Local efforts to identify a useable past included the re-publication in the 1990s of pre-Soviet and early Soviet imagery of the city, such as a 1910 set of postcards sponsored by the Regional History Museum (KKKM), author’s collection.

⁴⁰ Orlando Figes and B. I. Kolonitskii, *Interpreting the Russian Revolution: The Language and Symbols of 1917* (New Haven, CT: Yale University Press, 1999).; See also Burton, “Destalinization as Detoxification?: The Expert Debate on Industrial Toxins under Khrushchev.” on value of studying the ideals and concepts underlying “hygiene” separate from their implementation or consequences.

With respect to industry and urbanism, in a planned society the fact of having a plan or intention was valued highly, in contrast to the reputed “chaos” of capitalist, unplanned societies. Architecture, meanwhile, frequently operated in terms of aspired-to projects, for instance by circulating design drawings and photographs of models in lieu of actual post-construction representations.⁴¹

Another possible explanation links present-day interest in the “natural” beauty of a city to earlier patterns of “proto-environmentalism” and “turning to nature for health” seen among Soviet urbanists of the 1930s, expressed in their interest in abundant flowerbeds, green boulevards, parks, and Black Sea sanatoria.⁴² While urban beautification campaigns are usually dismissed as more or less cosmetic in character, and popular in origin, parks and gardens were regularly featured as one urban element among equals in photograph albums and other compilations on Soviet architecture-planning practice, marking urban green plantings as an expected area of professional expertise for architects and planners.⁴³ (This is, of course, the central concern of this dissertation—to investigate how urban greenery and greenspace design developed as an area of Soviet urbanism and architectural practice.) The typical birch, pine, and river landscapes of Siberia have, moreover, been firmly established as central to Russian and Soviet ideas of natural beauty.⁴⁴ Krasnoyarsk, with its landscapes reminiscent of other ‘most favored’ landscapes like the Volga riverbanks, Zhiguli mountains and the Caucasus, would have been well poised to draw on this tradition of nature appreciation.⁴⁵

Finally, there are grounds to suppose that the conceptual basis for defining “ecological urbanism” varies between Russian- and English-language contexts.⁴⁶ A provocative example of

⁴¹ e.g. Andrew Elam Day, "Building Socialism: The Politics of the Soviet Cityscape in the Stalin Era" (PhD Dissertation, Columbia University, 1998); Figes and Kolonitskii, *Interpreting the Russian Revolution: The Language and Symbols of 1917*; Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*. Examples from the time include annual albums of recent architecture (*Arkhitektura SSSR: Ezhegodnik*) for 1951-53 that often featured renderings of 1930s projects, rather than photos of more recent or completed sites.

⁴² Conterio, "Inventing the Subtropics: An Environmental History of Sochi, 1929-36." Likewise, Bittner, "Green Cities and Orderly Streets: Space and Culture in Moscow, 1928-1933." notes the “proto-environmentalism” of Moscow architects and planners in the early 1930s.

⁴³ Korzhev, M. P. and M. I. Prokhorova. *Album. Arkhitektura Parkov SSSR*. Moscow: Gos. Arkhitekturnoe Izdatel'stvo Akademii Arkhitektury SSSR, 1940. The Central Park in Krasnoyarsk features in image 62 of this album.

⁴⁴ Ely, *This Meager Nature: Landscape and National Identity in Imperial Russia.*, See also "The Origins of Russian Scenery: Volga River Tourism and Russian Landscape Aesthetics," *Slavic Review* 62, no. 4 (2003).

⁴⁵ The importance to Krasnoyarsk of its characteristic vistas is discussed more in the following section.

⁴⁶ Specifically, the translation between “environmental” vs “ecological” and Russian equivalents is not direct. More generally, see Rachel May, *Environmental Nationalism and Russia's Conservation Movement: Ideals of Nature and the National Parks*, *Russia's Conservation Movement* (Washington, D.C.: National Council for Eurasian and East European Research, 1997); "Nar-

such conceptual divergence comes from architectural discourse in Krasnoyarsk, concerning the relationship of architecture and planning to anthropogenic climate change. In August 2007, the International Union of Architects (UIA) announced the theme of that year's World Day of Architecture: carbon-neutral, zero-emission design.⁴⁷ "It is every architect's responsibility to preserve natural resources with the imagination and ingenuity that characterize our profession," stated UIA President Gaëtan Siew in his letter to member organizations, including the Russian Union of Architects.⁴⁸ Despite the supposed universality of this theme, local responses to the WDA 2007 theme framed the built environment's relationship to global climate change and other environmental issues along distinctively national, even nationalist, lines.⁴⁹

The coverage in Krasnoyarsk relied on affect, pride, and regional or national place-identity as means of enrolling the mass population in environmental protection, downplaying arguments based on universal need or scientific consequences.

Ecologically harmless architecture is, first of all, a cozy setting [uiuinaia sreda] for living, with a balanced structure, that takes the particulars of the landscape into consideration, thinks architect Yurii Suzdalev. A city must be not just rational, but also clean and cared for – then citizens will love it, the krai, the country, the planet. In this lies ecological consciousness [ekologiia soznaniia].⁵⁰

Put another way, a better built environment that is responsive to the natural setting will elicit feelings of affection in residents, which they will then transfer to the larger and more abstract sphere of love for the planet, thereby achieving more advanced state of consciousness. As this

rating Landscape, Landscaping Narrative," *Russian Studies in Literature* 39, no. 3 (2003); Bassin, "I Object to Rain That Is Cheerless: Landscape Art and the Stalinist Aesthetic Imagination."; "Landscape and Identity in Russian and Soviet Art: An Introduction."; Caroline Humphrey, "Ideology in Infrastructure: Architecture and Soviet Imagination," *Journal of the Royal Anthropological Institute* 11, no. 1 (2005); Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*; Vergunov, "Toward Ecological Architecture: Problems, Goals and Methods of Soviet Landscape Planning." Such complexity can also be found within a language: see Rachel May, "'Connectivity' in Urban Rivers: Conflict and Convergence between Ecology and Design," *Technology in Society* 28, no. 4 (2006).

⁴⁷ The World Day of Architecture (WDA) is celebrated on the first Monday of October, which coincides with UN World Habitat Day.

⁴⁸ quoted on <http://www.worldarchitecturenews.com/wanmobile/mobile/article/1476>. The global or trans-national ambitions of the UIA are reflected in their mission statement, as found on their website: "The International Union of Architects (UIA), is a non-governmental organisation, a global federation of national associations of architects, that are its members. The UIA's goal is to unite the architects of the world without any form of discrimination. From the 27 delegations present at the founding assembly in Lausanne, Switzerland, in 1948, the UIA has grown to encompass the key professional organizations of architects in 124 countries and territories, and now represents, through these organizations, close to one million three hundred thousand architects worldwide. From <http://www.uia-architectes.org/en/qui-sommes-nous#.WaRRCYqYf0>.

⁴⁹ See Rybachenko, "Ekologicheski Bezvrednaia Arkhitektura" 2007. Responses among Krasnoyarsk architects to the issue of climate change and carbon emissions more generally is discussed in Taylor, "Local Landscapes, Local Views" MLA Thesis, 2009.

⁵⁰ Rybachenko, "Ekologicheski Bezvrednaia Arkhitektura." 2007, p28.

dissertation will show, notions of nested scales of involvement, and a conjunction of regionalism, nationalism and environmentalism enjoyed deep roots in the Soviet era.

Multiple “images of the environment” coexisted within the Soviet Union, with varying degrees of official approval.⁵¹ Alongside that diversity, geographers, anthropologists, and other scholars have noted that conceptual and linguistic differences exist in how to discuss “Nature” “ecology” “environment” and “landscape” in Russian and in English.⁵² Most notably, Russian semantics differentiates between “environment” or natural setting in the geographic sense (originally *landschaft*, after the German) and “natural scenery” (*peizazh*, after the French, *paysage*).⁵³ In contrast, the idea of environmentalism, in contrast, is usually rendered in Russian as, literally, “protection of the surrounding environs” (*zashchita okruzhayushchey sredy*).⁵⁴ The notion of the environment as “surroundings”, which assumes a centered perspective from which to start, is spatial and relational in character.

In contrast, a notion of “the environment” or “Nature/Wilderness” as a category inherently and absolutely separate from and opposed to a human sphere makes no relational claims. Local architects’ depiction of Krasnoyarsk as harmoniously engaged with the surrounding natural environment may rely on the former notion to position the heavily industrial city as “ecologically harmless” or “eco-friendly” (*ekolicheski bezvrednyi*), despite the cognitive dissonance this produces vis-à-vis depictions of Soviet development “scarring the landscape” of Siberia.

An objective of this chapter is to test these three possible explanations of local ‘environmentalist’ discourse against a more detailed consideration of the qualities and sites that are said to represent the identity of Krasnoyarsk as a city. Evidence of Krasnoyarsk’s past attributes are drawn from city guidebooks, emblematic iconography, and other “official” portraits or profiles

⁵¹ Charles E. Ziegler, "Soviet Images of the Environment," *British Journal of Political Science* 15, no. 3 (1985).

⁵² Humphrey, "Ideology in Infrastructure: Architecture and Soviet Imagination.," May, *Environmental Nationalism and Russia's Conservation Movement: Ideals of Nature and the National Parks*; Jonathan D. Oldfield and Denis J. B. Shaw, "V.I. Vernadsky and the Noosphere Concept: Russian Understandings of Society-Nature Interaction," *Geoforum* 37, no. 1 (2006); Shaw and Oldfield, "Landscape Science: A Russian Geographical Tradition."

⁵³ Caroline Humphrey, "Spatial Conjunctions" *Anthropology of the Century* Accessed 05/2016 at <http://aotcpress.com/articles/spatial-conjunctions/>. In contrast to *landschaft*, the English-language term “landscape” which connotes a view or a place or something in between, is more capacious, with its own contradictions and complexities, as shown by scholars such as Denis Cosgrove, "Modernity, Community and the Landscape Idea," *Journal of Material Culture* 11, no. 1-2 (2006).

⁵⁴ The word “*ekologicheskii*” is also used. The review of environmental impact or safety concerns, for instance, is described as “ecological expert review” (*ekologicheskaya ekspertiza*). Another, composite, example: a survey of “ecological propaganda posters (*ekologicheskie plakaty*)” from the Soviet period can be found at <https://yvision.kz/post/384588>.

of the city from across the long-twentieth century. Attention is paid to the period of origin for such claims, their durability or resilience, and change over time. Did architects and other urbanists in Krasnoyarsk seek historically to fuse city with nature, or architecture and landscape, as is currently claimed? When did this discourse of city-nature harmony emerge in Krasnoyarsk? Which “calling cards and landmarks” were associated with the city, which “particulars of landscape” were taken into consideration?

After establishing the canon of landmarks and attributes associated with the city’s identity, the bulk of this chapter is spent delving into the historical specifics of those sites and associations. Although the majority of modern Krasnoyarsk consists of buildings and sites constructed after the Second World War (or Great Patriotic War as it is known in Russian), late Soviet and post-Soviet profiles of the city continued to reference earlier events and attributes, such as the late 19th and early 20th century sojourns in the city of Vladimir Lenin, Anton Chekhov and other international notables. Sites and aspects that have proved durable elements of the public or official identity of Krasnoyarsk are considered according to their respective periods of origin, from pre-Revolutionary visitors’ perspectives to Stalinist ensembles to post-Stalinist large-scale municipal infrastructure projects. Finally, the focus of the chapter turns in closing to questions of significance and generalizability, looking at how developments in Krasnoyarsk connected in the 1960s to better known developments in Soviet environmental history. Was Krasnoyarsk unique in its actual or perceived regard for nature, or was the city’s experience typical of some larger pattern? What type of city case-study of Soviet urbanism (or environmentalism) does Krasnoyarsk represent?⁵⁵

The ambit of these questions extends beyond the Krasnoyarsk Central Stadium and its reception, but the stadium and its site provide a useful stepping stone to the larger historical questions. Let us return to the stadium, paying attention to the conditions of possibility in which it was designed and the Isle of Rest on which it was built. The sport complex of which the stadi-

⁵⁵ The “what kind of city” question has a long tradition in histories and other studies of Soviet and Russian urbanism. French and Hamilton, *The Socialist City: Spatial Structure and Urban Policy*; Danielle Sibener Pensley, “The Socialist City?: A Critical Analysis of Neubaugebiet Hellersdorf,” *Journal of Urban History* 24, no. 5 (1998); Zarecor, “What Was So Socialist About the Socialist City? Second World Urbanity in Europe.”; Hamm, *The City in Russian History; The City in Late Imperial Russia*; James H. Bater, *The Soviet City: Ideal and Reality*, Explorations in Urban Analysis (London: E. Arnold, 1980); “The Soviet City: Continuity and Change in Privilege and Place,” in *The City in Cultural Context*, ed. John A. Agnew, John Mercer, and David Edward Sopher (Boston: Allen & Unwin, 1984); Henry W. Morton and Robert C. Stuart, eds., *The Contemporary Soviet City* (Armonk, N.Y.: M.E. Sharpe, 1984); Frolic, “The Soviet City.”

um is a part was initially slated to follow a standardized template or “typological project” design, one previously used in Moscow at the “Locomotive” Stadium. Concerns about the region’s specific environmental conditions, however, were enough to prompt the switch to an “experimental” or non-standardized design, opening the door to the construction in Krasnoyarsk of Orekhov’s Leningrad diploma Project.⁵⁶

Correspondence with Gosstroi, the central construction agency, shows that local authorities rejected a standardized stadium plan from Moscow on DATE, arguing that the design was “unsuitable” for Krasnoyarsk’s specific climate and terrain. The visibility and centrality of the intended site required something “more impressive.”⁵⁷ The request was approved. As a result, architect Vitaly Orekhov designed an ‘experimental,’ much fêted stadium, the Central Stadium, whose fluid lines are said to evoke the natural beauty of the river.⁵⁸

This explicit appropriation of local landscape features to justify and inspire ‘site-specific’ architecture, and its approval by Gosstroi and other authorities, seemingly contradicts notions of Soviet indifference to landscape and site qualities. Local architects and urban design professionals were able to leverage regional landscape features into architectural agency, not against the dictates of the center, but with central approval and, eventually, widespread acclaim. In this instance, the deeper puzzle remains. Why did the claim of environmental specificity garner traction in the centralized, standardized system of Soviet urban planning and development?

With respect to the site of the stadium—the so-called Isle of Rest—the designation of the island as a rest and recreation zone long preceded the Stadium’s construction and designation as a symbol of the city. The island, accessible visually and functionally to city residents from both banks of Yenisei River, contained some built elements (including manufacturing) but was and is primarily vegetated. In the early 1950s, it was an officially recognized destination for holiday leisure and city festivals, gradually accreting more sports and recreation facilities but maintaining its orientation to outdoor activities.

By leaving the island relatively unbuilt, city planners created a durable space of engage-

⁵⁶ On the difference between “experimental” and “project” design institutes in the late Soviet period, see Rice and Roberts, “A New Era in Soviet Design.”

⁵⁷ State Archive of Krasnoyarsk Krai (GAKK), *fond R-2290, opis 3, del 58, str.57*

⁵⁸ Ikonnikov, Fabritskii, and Shmelev, *Soviet Architecture of Today: 1960s - Early 1970s*.

ment with local landscape features such as the river and local topography. Their actions maintained these features, long associated with the place-identity of the city, as reference points for later architectural production such as the Stadium. Such actions would not have been effective without a system of Soviet architecture-planning practice that afforded traction to the desire for city individuality through landscape aesthetics. The name of that “system” was “urban greening and beautification,” the focus of this dissertation. This chapter lays the groundwork for that broader inquiry into All-Union theory and practice by providing a detailed look at one particular city and the built environments that comprised its public face in the Soviet era.⁵⁹

Modern Calling Cards and Landmarks

When did the discourse of Krasnoyarsk’s fortunate, intentional relationship to landscape that is expressed by local architects circa 2007 first emerge, and what were its lineaments? The starting point for this chapter is a retrospective investigation of the present-day surprising reception of past architectural and urban interventions. For this reason, this section assesses the continuity and change found in official portrayals of the city, evaluated in reverse chronological order as Raymond Williams has done for imagery of the pastoral and rural life in English literature.⁶⁰ While the span of time considered here is much shorter than that studied by Williams, the durability and over-lapping timelines of urban identity formation and reception make his approach an appropriate choice here. In the next section, which focuses more on the built sites and spaces themselves, a more standard chronological organization is used.

The 1991 dissolution of the Soviet Union and associated economic and regulatory changes afforded major changes in the status of Krasnoyarsk relative to regional, national, and international spheres. “Open for your business / your business!” declared a new set of city profiles, highlighting investment and recreation opportunities. International visitors and investors were relatively new audience groups for the city’s discourse of identity, both being only recently permitted in this formerly closed, communist city. During the Soviet period, by contrast, tourism to

⁵⁹ The “behind the scenes” relationship of architects and architectural practice in Krasnoyarsk to developments at the All-Union level is discussed in Chapter Five, which addresses the local architectural community’s post-WWII engagement with urban greening and beautification using archival sources.

⁶⁰ Raymond Williams, *The Country and the City* (Oxford University Press, 1975). A kindred assessment of how the image of Siberia has changed over time in Russian and Soviet culture, including literature, can be found in Diment and Slezkine, *Between Heaven and Hell: The Myth of Siberia in Russian Culture*.

Krasnoyarsk been largely limited to domestic visitors, attracted by official pilgrimage sites such as the Museum of Lenin, or unofficial ones like the studio of dissident artist Pozdeev.⁶¹ Access to Siberian sites by foreigners had been generally restricted, even for those able to visit Moscow or Leningrad and other sites on the main InTourist circuit. Soviet Krasnoyarsk, due to its importance in military-industrial production and particularly its radar and nuclear defense programs, had additional restrictions placed on its accessibility.⁶²

In post-Soviet Russia, even with increased mobility, most Russians probably have not visited Krasnoyarsk. By train from Moscow, it is a journey of approximately 60 hours. Flights take approximately 4.5 hours. Despite these distances, anyone in Russia will be familiar with three iconic sights/sites of the city, thanks to widely circulated imagery representing the city. Since the mid-1990s, Krasnoyarsk has been featured on the 10-ruble banknote, signaling the city's prominence within the post-Soviet "pictography of power" that such banknotes manifest.⁶³ To see a modern "calling card" of Krasnoyarsk, most Russians can thus simply open their wallets.

The Ten-Ruble note is the second smallest paper denomination, perhaps equivalent to the American quarter in its frequency of use during the late 1990s and 2000s.⁶⁴ Other cities selected to represent post-Soviet Russian in this manner were: Veliky Novgorod, 5 rubles; St. Petersburg,

⁶¹ <https://www.erarta.com/ru/calendar/exhibitions/detail/f2dc3a1d-d5b6-11e3-ad2e-8920284aa333/> Krasnoyarsk was the point of disembarkation for many tsarist exiles, including Lenin and Stalin, both of whom departed from Krasnoyarsk by steamship to reach their more isolated ultimate points of exile. Krasnoyarsk was also the location where Lenin worked on *Development of Capitalism in Russia* using the generous holdings of the Yudin [Iudin] library— holdings that now form the base for the Library of Congress Russian collections. Lincoln, *The Conquest of a Continent: Siberia and the Russians*; Alistair Dickins, "Rethinking the Power of Soviets: Krasnoyarsk, March–October 1917," *Journal of Modern Russian History and Historiography* 9, no. 1 (2016). Lenin enjoyed late Soviet status as a patron saint for Komsomol etc., and inspired a considerable degree of pilgrimage tourism to "Lenin Places" in Krasnoyarsk Krai. Stepan Ivanovich Beliaevskii, *V. I. Lenin V Shushenskom; Zhizn' I Revoliutsionnaia Deiatel'nost' V.I. Lenina V Sibirskoi Ssylke* (Krasnoyarsk: Krasnoyarskoe knizhnoe izd-vo, 1960); Stepan Ivanovich Beliaevskii and Nikolai Danilovich Gorodetskii, *Zdes' Byl V.I. Lenin; Po Mestam, Sviazannym S Prebyvaniiem V.I. Lenina V Eniseiskoi Gubernii* (Krasnoyarsk: Krasnoyarskoe knizhnoe izd-vo, 1960); Stepan Ivanovich Beliaevskii and Nikolai Danilovich Gorodetskii, *Zdes' Byl V.I. Lenin; Po Leninskim Mestam Krasnoyarskogo Kraia* (Krasnoyarsk: Krasnoyarskoe knizhnoe izd-vo, 1966).

⁶² During my time in Krasnoyarsk I was frequently the first American people had met; I was also told repeatedly that I "would not have been allowed" to visit during Soviet times.

⁶³ James Cracraft, "Pictographs of Power: The 500-Ruble Note of 1912," in *Picturing Russia: Explorations in Visual Culture*, ed. Valerie A. Kivelson and Joan Neuberger (New Haven, Conn.: Yale University Press, 2008).

⁶⁴ First printed in 1997 and re-issued, with the exception of the 5-Ruble note, in 2001 and 2004. https://www.cbr.ru/eng/Bank-notes_coins/ Accessed 7-10-2018. Recently there have been some attempts to replace a paper 10-ruble note with a coin. Russian currency notes of 1995-1996 featured the same imagery as these notes, but each was valued at 300 times the current demonination. Thus, Novgorod appeared at that time on the 5000-Ruble note, Krasnoyarsk on the 10,000-Ruble note, etc. Since 2017, the Bank of Russia has added two new denominations: a 200-Ruble note, featuring Sevastopol, and a 2000-Ruble note, featuring Vladivostok.

50 rubles; Moscow, 100R; Arkhangel'sk, 500R; Yaroslavl, 1000R; and Khabarovsk in the Far East, 5000R. The cities and sites featured on these banknotes are visual assertions of national claims to territory, technology, and heritage. Tellingly, the “recovered” territory of Crimea features on the newly issued 2 ruble note.

The sites and structures selected to represent the Russian Federation in this way skew heavily towards ports, capital cities, churches, bridges, and other forms of regional or national infrastructure.⁶⁵ Of the seven cities depicted, five are located in the European part of the country, all five with origins dating to Peter the Great or earlier.⁶⁶ Only Krasnoyarsk (founded 1628) and Khabarovsk (founded 1858) are located east of the Ural Mountains in Siberia. Of the cities, most have some degree of international profile as seen in the UNESCO World Heritage designations associated with sites in Yaroslavl, Novgorod, St. Petersburg, and Moscow.⁶⁷

Cultural, industrial, and environmental elements are used in the 10-ruble note's federal representation of Krasnoyarsk. In addition to the national iconography typical of banknotes, Krasnoyarsk is represented by three images: the Krasnoyarsk *Chasovniaia*, or Chapel, a view of the city center and the Communal Bridge over the Yenisei River, and the Krasnoyarsk Hydroelectric Dam or GES located some 30 kilometers upstream of the city.⁶⁸ Of these, the *Chasovniaia* is one of the most recognizable and iconic sites [sights] of Krasnoyarsk. The chapel stands at the ridgeline of a one of the red banks (*krasnyi yar*) that give the city its name, on the site of a former military watch-tower. Typically viewed from the central city with only sky behind it, as it is shown on the 10-Ruble note, the *Chasovnyia* symbolizes the city's origins in 1628 as an *ostrog*, or fortified outpost, on the expanding edge of the Russian empire. Visually cropped to exclude that landscape context, it also serves as an architectural stand-in for Russian Orthodox heritage.

The second image on the front of the note comprises a photo-realistic scene of central

⁶⁵ In contrast, early banknotes of the USSR featured categories of persons: in 1937, Lenin; in the 1938 issue: a miner, a soldier, and a pilot. See <http://banknoter.com/s/russia> (Accessed 01-2019)

⁶⁶ Veliky, or Greater, Novgorod was founded by 859, Yaroslavl in 1010, Moscow by 1147, Arkhangel'sk in 1584 and St. Petersburg in 1703 (on the basis of a pre-existing Swedish settlement). The city of Nizhnyi, or Lesser, Novgorod is a different place; founded by 1221, it was renamed Gorky during the Soviet period (1932-1990).

⁶⁷ <https://whc.unesco.org/en/statesparties/ru> A total of 28 sites are currently designated as UNESCO World Heritage Sites within the Russia Federation. Of these, 17 are cultural and 11 are natural sites. All 17 cultural sites are located in the European-part of Russia; all but two natural heritage sites are located in the Asian part, what is generally referred to in English as “Siberia.” The Krasnoyarsk Stolby (discussed later in this chapter) were nominated by Russia in 2007. They remain one of twenty-two sites on the “Tentative” list.

⁶⁸ full name: Paraskeva Pyatnitsa Chapel

Krasnoyarsk, centered on the *Kommunal'nyi*, or Communal, Bridge. Primarily a view from above of the expansive bridge, with six arched concrete spans and sparse car traffic visible, this image captures the city's presence on both banks of the Yenisei River. It including some of its preeminent civic spaces and buildings such as the Central Stadium, discussed above. Also included is the city's characteristic enclosure by low, forested hills, seen in the back plane of the image. More specifically, the image includes a line of trees at the edge of a plaza in the foreground; this is part of the "350-Years of Krasnoyarsk" *Ploshchad'*, or Square.⁶⁹

In the mid-ground of the bridge image on the 10-Ruble note are found a number of factory smokestacks, complete with smoke, rising out of an indistinct mass of trees and low buildings on the Yenisei's far, or right, bank.⁷⁰ Because it depicts the bridge viewed from the Left Bank to the Right Bank, this view excludes any imagery of the city's historic center. It acknowledges but gives little in the way of detail regarding the city's industrial districts, which largely developed following WWII. Instead, it foregrounds a singular, comparatively recent structure, completed in 1961. More significantly, this "cityscape with bridge," like the image of the Krasnoyarsk Hydroelectric Station (or *GES*) on the obverse of the note, highlights a work of infrastructure that is mutually shaped by technology and environment.⁷¹

Both contemporary and late-Soviet profiles of the city prominently feature some variant of this basic canon, at times reproducing almost exactly the same assemblage of the Communal Bridge over the Yenisei River, the planted Plaza in front, with smokestacks and hills as skyline

⁶⁹ The square has since been redone with a cascade fountain and statues casting the Yenisei River as an old man surrounded by nubile young women, who symbolize tributaries. Haywood, *Siberia: A Cultural History*, 206-18. One recent commentator online enthused: "you can hold a geography lesson on the square...informative and memorable!" https://www.tripadvisor.com/LocationPhotoDirectLink-g298525-d307730-i302317360-350_Year_Anniversary_Square-Krasnoyarsk_Krasnoyarsk_Krai_Siberian_District.html Accessed 7-11-2018. The Yenisei is one of the longest rivers in Asia, and one of the world's largest rivers overall, ranking sixth in terms of discharge volume. Its major tributaries within Siberia include the Angara, Birusa, Bazaikha, Kacha, Mana, Tunguska, and Khatanga rivers. <https://www.britannica.com/place/Yenisey-River>

⁷⁰ Like other Siberian rivers, the Yenisei flows northward to drain into the Arctic Ocean. In the vicinity of Krasnoyarsk, the river bends for a stretch to run West to East; it is therefore easier when discussing the city's relationship to the river to follow local usage and refer to the "Left" bank (i.e., the West or North bank), where the historic city core is located, and to the heavily industrial districts on the "right" bank (i.e. the East or South bank), which were developed during the Soviet period. In discussions of the city's relationship to the larger-scale regional units (Krasnoyarsk Krai, West and East Siberia, etc) I refer to areas as being west and east of the river. In all cases, these spatial designations also carry socio-cultural and economic connotations for those familiar with the region, similar to references to "left bank" and right bank Paris. While individual districts or neighborhoods within the city are referred to by name (both official and informal), the over-arching spatial frame of reference for city residents remains the Yenisei and its flow.

⁷¹ On the back side, the image of the Krasnoyarsk GES is framed by birch trees with its reservoir bounded, in the back plane of the image, by the forested texture of rising hills.

in the background. These views and structures have been consistently selected to represent the city in Soviet-era guidebooks and other official city representations, from the 1950s to the 1980s.⁷²

A 1986 guidebook to the city and its environs uses as one of its first images the same view as on the Post-Soviet ten ruble banknote, albeit with smoke blowing in the opposite direction. This iconic cityscape, in which infrastructure, industry and civic space flow and intermingle with the landscape features of river and hill silhouette, spreads across pages 8 and 9 of the guidebook. It is the first image of the city after the cover. It is preceded by other equally iconic elements that link the city to Lenin and both to a quality of timeless natural beauty. First, after the title page and front matter [pages 1-4], beside a view of Vladimir Lenin's statue in Revolutionary Square comes a poem extolling Lenin's eternal inspiration and relevance.⁷³ While any angle of the statue of Lenin might have served to illustrate this exhortation, the chosen view places Lenin at eye level, with the planted expanse of the square behind him. Barely visible behind full-leaved summer foliage, a line of central administrative buildings including the Regional House of Soviets (Dom Sovetov) serve to close the composition.

An association of Krasnoyarsk with eternal qualities of landscape and Leninism are reinforced on the following page spread (p6-7), in a photograph of rocky slopes capped with trees and plunging into placid blue water. The "crest of the hills," according to the accompanying text, "is by turns wrapped in haze [*dymkoi*] and then by clouds"

but more often appears in all its beauty [*krase*]. V. I . Lenin wrote, "...here the environs of the city, along the Yenisei River, are reminiscent of either the Zhiguli mountains [in the Samara bend of the Volga River], or else like views of Switzerland." So ancient and forever young is the Yenisei side."⁷⁴

The cover of the 1986 guidebook, meanwhile, shows one of the city's most recognizable archi-

⁷² The works included here make up a representative but not exhaustive sample of officially-endorsed Krasnoyarsk portraits and profiles. The selection reflects works recommended by librarians, staff and faculty at KKKM, KNUB, KGA and Siberian Federal University, prioritizing those in which the work of synthesizing and curating a clear, memorable "portrait" of the city has already been done by local specialists and authorities. These include Vinskaia, L. A. *Krasnoyarsk*. Krasnoyarsk: Krasnoyarskoe knizhnoe izd-vo, 1986; Nifant'ev, *Gorod na Yenisei*, 1954; Ruzhze, *Krasnoyarsk*, 1966; Nifant'ev, *Gorod na Yenisei* 1973 2nd edition, and published souvenir materials such as a postcard reprint box set (1990, from 1910), and Stolby reprint pamphlet (original 1925, reprinted 1990s) .

⁷³ (page 5)/ "Listen, youth!" it begins. "Lenin looks / in our eyes. /What shall we say?! ... What have we done? / Who are we?" The author implies that "high news" is "flaming" in Revolution Square: a durable connection between "my generation" and the Bol'shevik agenda. "Life is broad as before / The name of Lenin/ The word of Lenin / The acts of Lenin / are for ever [*na veka*]."

⁷⁴ Vinskaia, L. A. *Krasnoyarsk*. Krasnoyarsk: Krasnoyarskoe knizhnoe izd-vo, 1986.

tectural skylines: the River Station, some ferry boats, and late Soviet housing towers that ‘rhythmically’ define the city, from a vantage point on the river— or more precisely, from the Communal Bridge that came to span the Yenisei river mid-century, after 1961. Tightly cropped, with only hazy sky and a few construction cranes showing beyond the concrete-panel buildings, this is a view that could be almost any city in Soviet Russia, with its preponderance of industrial towns on rivers. Two unique identifiers place the scene: the prize-winning River Station, and the steamship Sv. Nikolaev on which Lenin journeyed to his exile in Shushenskoe.⁷⁵ (This view of the city-river interface was also used on the cover of a 2000 brochure, “Krasnoyarsk in the Eyes of Architects and Builders.”)

Moving deeper into the Soviet period, a portrait of river, bridge, island stadium, smokestacks, and hills was used as the frontispiece of the 1973 book *Gorod Na Yenisei* [City on the Yenisei] by E.S.Nifant’ev. The reverse view, looking across the river from the Right Bank at the bridge, island, historic center and finally up at the Chasovniaia silhouetted on its ridge, was also common. It was used, to give some examples, on the cover of Nifant’ev’s 1973 guide, in a wall fresco of the Kirov District Administration Building cafeteria [likely from the 1970s], and in the 1978 figurative cast bronze wall plaque commemorating the city’s 350th anniversary, the last prominently visible on a facade in central Krasnoyarsk.

The River Station was the pre-eminent element, meanwhile, on the cover of the original 1954 edition of *Gorod na Yenisei* (City on the Yenisei) by E. S. Nifant’ev. This prose city profile, in contrast to the abstracted woodcuts that illuminated its 1973 second edition, featured a range of basic photographs portraying meaningful sites in and around the city. Its cover image was seemingly based on a contemporaneous drawing of the River Station and adjacent embankment, seen from the perspective of someone standing on the bank.⁷⁶ The Yenisei River, in this instance, draws the eye into the far place of the scene, where smokestacks and cranes rise from the river port located downstream on the opposite bank.

Considered together, views of the Yenisei embankment and bridge infrastructure encom-

⁷⁵ This view is repeated in early 2000s promotional materials forming one of the other most familiar portraits of the city. Vinskaia, L. A. *Krasnoiarsk*. 1986, pamphlet discussed above, also *Krasnoiarsk Glazami Khudozhnikov : Al’bom*, (Krasnoiarsk: Platina, 2008).

⁷⁶ This drawing, by Fedotov, was published in the regional daily newspaper, the Krasnoyarsk Workers’ Gazette (*gazeta Krasnoiarskii Rabochii*) on 29 October, 1954.,

pass the city's diverse modes of late 20th-century interaction with the river. No longer only a means of transportation or sustenance, the river figures as an obstacle surmounted by feats of engineering, a visual spectacle, and a compositional aide to framing architectural and technogenic objects. Above all, the city-river interface presents an intrinsic spatial and symbolic component of Krasnoyarsk's identity.

Among the "calling cards and landmarks" of post-war Krasnoyarsk that headline in guidebooks to the city (dating to 1954, 1966, 1973, 1986, 1995, and 2000, inter alia), the city's iconic attributes of river, terrain, industry, river infrastructure, and river embankment appear and reappear. These are views and attributes that were similar or identical to those chosen after 1991 to monetize the city's post-Soviet identity and reinforce the infrastructural sinews holding together the Russian Federation. Less prominent, but still present in these guidebooks, is imagery related to two otherwise important aspects of the city. The city's largest civic ensemble, Revolution Square (completed in 1959), nor Krasnoyarsk's relationship to the Trans-Siberian Railway (which crossed the river in 1888), feature with regularity in these postwar profiles and portraits, demonstrating the considerable influence exerted by railroad, revolution, and this square on the city's modern form and character.⁷⁷ The next section returns to the railroad's arrival in Krasnoyarsk and other pre-revolutionary moments of modernization that, like its connections to select famous men, have proved durable elements in the city's identity.

Pre-Revolutionary Visitors and Vistas

As if encased in amber, with all its associated aesthetic pleasure and distortions, certain canonical views of turn-of-the-20th-century Krasnoyarsk were preserved into the Soviet period in the words and imagery of three major Russian cultural figures: artist Vasily Surikov, writer and playwright Anton Chekov, and Vladimir Lenin himself. The attributes associated with Krasnoyarsk by these famous men continue to be deployed today as part of the city's identity, although Lenin's place in the pantheon of Krasnoyarsk-boosters seems predictably to have lessened. Each of them had expressed appreciation for the beautiful views and terrain surrounding the city, which entered the twentieth century a crossroads of transportation modes. The Yenisei

⁷⁷ Possible reasons for this are discussed in the conclusion to this chapter.

River and tributaries provided primarily North-South movement, while the overland *Moskovskii Trakt* and, later, the Trans-Siberian Railway connected the city to points West and East. Each route came with its distinctive affordances and clientele.

The daily experience of the Yenisei by residents of Krasnoyarsk was functional and visual. Women came to the narrow flat gravel bars to wash clothes, other residents fetched water or fished, vessels of various size were launched and came ashore. Some of those ships hailed from international waters, making Krasnoyarsk a relatively cosmopolitan node in the broader scheme of Siberian transportation.⁷⁸ The Yenisei was one of the few Siberian rivers navigable from the Kara Sea, creating a direct if lengthy and seasonal connection between Krasnoyarsk, the Arctic Ocean, and other seafaring nations.⁷⁹ In the many months of Siberian winter, the frozen river provided firm footing for those wishing to cross the river or travel up and down stream; in summer there was a ferry between right and left banks, and passenger steamships plying upstream and down (including the ones that delivered Lenin and Stalin to their respective sites of exile).⁸⁰

In 1887, two years before the completion of the Krasnoyarsk railroad bridge just upstream of the city's center, civil engineer L.Iu.Prushinskii-Belopol'skii completed a spatial layout plan of the embankment to provide a dock/landing for steamships.⁸¹ This intervention in the physical interface between city and river was just one in a long series of modernizing efforts, akin to similar efforts in a global range of cities.⁸² The first wave of modernization to wash over the city came much earlier. In 1773, and again in 1881, the city underwent a typical modernizing

⁷⁸ Alan Wood and R. A. French, eds., *The Development of Siberia: People and Resources* (New York: St. Martin's Press, 1989).

⁷⁹ In the pre-Soviet period international visitors to Krasnoyarsk included explorers Joseph Wiggins, Robert L. Jefferson; Fridtjof Nansen, and Maria Czaplicka. Historiographic literature on these visitors includes David Norman Collins, ed. *Siberian Discovery* (Surrey, England: Curzon Press, 2000)., Grazyna Kubica. "Maria Czaplicka and Her Siberian Expedition, 1914–1915: A Centenary Tribute." *Arctic Anthropology* 52, no. 1 (2015): 1-22. <https://muse.jhu.edu/> (accessed January 22, 2019); and Janet Hartley, "'A Land of Limitless Possibilities,'" 13, no. 3 (2014).

⁸⁰ Photographic views of all these interactions with the Yenisei were included in a 1910 set of postcards, reproduced for sale in 1990-91 by the Krasnoyarsk Krai Regional Studies Museum (KKKM). Other photographs in the set portray the city's prominent civic and religious buildings, its Central Park, Market Square, and main streets, and the Stolby outcroppings and other regional landscape attractions.

⁸¹ Slabukha, *Arkhitektory Prieniseiskoi Sibiri*, 278.

⁸² To give four examples of river "modernization": See Stuart Oliver, "The Thames Embankment and the Disciplining of Nature in Modernity," *The Geographical Journal* 166, no. 3 (2000); Matthew Gandy, "The Paris Sewers and the Rationalization of Urban Space," *Transactions of the Institute of British Geographers* 24, no. 1 (1999); Randall Dills, "The River Neva and the Imperial Façade: Culture and Environment in Nineteenth Century St. Petersburg Russia" (Dissertation, University of Illinois at Urbana-Champaign, 2010); Richard White, *The Organic Machine: The Remaking of the Columbia River* (New York: Hill and Wang, 1995)..

rite of passage for large cities, a Great Fire and subsequent rebuilding.⁸³ In the case of Krasnoyarsk, the fire's aftermath included the orthogonal regularization of the city's street grid and a lingering quantity of vacant lots. Matters were not helped when the city was repeatedly passed over for administrative "promotion," remaining subordinate to the regional centers of Tomsk and Eniseisk. Despite these setbacks, by the close of the 19th century, Krasnoyarsk had become a center for Railroad-oriented manufacturing and other industries.⁸⁴ The city's international profile rose further in architecture-engineering circles when the Krasnoyarsk Railway Bridge over the Yenisei River was awarded a Gold Medal at the Universal Exhibition of Paris in 1900, one year after Eiffel's tower had been similarly decorated.⁸⁵ This feat remains a notable event in the history of the city, celebrated to this day on the city administration website.⁸⁶

Visitors to the 1900 World Exhibition would have encountered Siberia in the form of a virtual trip along the Trans-Siberian railway, thanks to a 950m long canvas panorama simulating "the illusion of a voyage" between Moscow and Beijing for "passengers" seated in one of three train cars. As the canvas with its painted landscapes moved past the windows in the course of the 45-minute voyage, the primarily European visitors experienced "the stylization of Siberia as a placeholder for the Russian Empire," underscoring the region's qualities "as Russia in hyperbole."⁸⁷ In some senses, this hyperbolic imagined Siberia was grounded in realities pertaining to the regions East of the Yenisei, regions ruled by the severity of climate rather than of laws.⁸⁸

The Krasnoyarsk bridge over the Yenisei no doubt contributed to the spectacle, providing

⁸³ From city administration website: "1881, April 17-18: A huge fire, which destroyed the majority of city buildings, occurred in Krasnoyarsk."

⁸⁴ On 18th and 19th century Krasnoyarsk, see Nevzgodine, "The Impact of the Trans-Siberian Railway on the Architecture and Urban Planning of Siberian Cities."; Slabukha, *Arkhitektory Prieniseiskoi Sibiri*; Albert J. Schmidt, "William Hastie, Scottish Planner of Russian Cities," *Proceedings of the American Philosophical Society* 114, no. 3 (1970); V.T. Gorbachev et al., eds., *Gradostroitel'stvo Sibiri* (St. Petersburg: Izdat. Dom "Kolo", 2011).

⁸⁵ International recognition of this truss bridge as a marvel of early modern engineering seems to have subsided during the Soviet period, then was renewed after the dissolution of the USSR. By then, it was celebrated as "heritage" rather than innovation. The bridge was proposed for listing as a UNESCO World Heritage Site by the International Council on Monuments and Sites (ICOMOS). See the summer 2003 report WHC-03/27COM/INF.8A ADD

⁸⁶ "The Railway Bridge over the Yenisei, constructed in 1899 by mechanical engineer E.K. Knorre as part of the project by known Russian engineer L.D. Proskuryakov, was awarded with gold medal at the World Fair in Paris in 1900 as the highest achievement of technical idea." <http://www.admkrsk.ru/sites/eng/info/Pages/default.aspx> Accessed 7-16-2018

⁸⁷ Claudia Weiss, "Representing the Empire: The Meaning of Siberia for Russian Imperial Identity," *Nationalities Papers* 35, no. 3 (2007): 440.

⁸⁸ About the early 20th century difference between West and East Siberia, historian Bruce Lincoln writes "East of the Enisei, there was that same roughness, that same devil-may-care world of fast money and fast women that had been so much a part of the American West at roughly the same point in its history." Lincoln, *The Conquest of a Continent: Siberia and the Russians*, 261.

simultaneous proof of the Russian imperial victories over geographical and technological challenges. The bridge required technological feats in its construction, and was one of the longest built at that time, reflecting the equally superlative breadth of the “mighty Yenisei.”⁸⁹ Yet for all its national and international significance, the railroad bridge provided only limited daily convenience for city residents and enterprises, since it was only a railroad bridge, without space for pedestrians, carts, or automobiles. The bridge was primarily used for long-distance travel on the Trans-Siberian route. Well into the post-WWII period, local factories wanting to transport material from one side to another had to use the ferry, or else wait for their turn and spare railroad cars.⁹⁰ The infrastructural modernity promised by the bridge could be viewed as a spectacle, but increased local efficiency was less often experienced.

Even after the arrival of the railroad, pre-Revolutionary Krasnoyarsk remained a dusty town, albeit one visited by luminaries. Some visitors, such as Chekhov, Surikov, and Lenin, have enjoyed relatively persistent international fame.⁹¹ Others like Norwegian explorer Fridjof Nansen and Polish anthropologist Marie Czaplicka, have slipped from the heights of international name-recognition.⁹² These visitors’ encounters with Krasnoyarsk enter the city’s public identity as a series of views. In this manner a visual record of drawings, paintings, maps and photographs comingles in the historical imaginary with visitors’ written and spoken reactions to the city. A third set of “views” such as photographs of Nansen or Tsar Nicholas in the city’s main square, serve to place major historical visitors in direct relationship to the city’s primary sites, a cultural-spatial connection reinforced even after demolition or re-development of those sites through the erection of statues and plaques throughout the city, the establishment of house-museums, and the naming of streets. The cultural and material topography of visitation that these interventions produced was further reinforced and circulated by mass production of relevant images, for instance in postcards and encyclopedia entries.⁹³

⁸⁹ On bridges as national(ist) projects see Eda Kranakis, *Constructing a Bridge: An Exploration of Engineering Culture, Design, and Research in Nineteenth-Century France and America*, Inside Technology (Cambridge, Mass.: MIT Press, 1997).

⁹⁰ R-2224 op.1 del.31 L.61 from 1945 Correspondence with Central Architecture Komitet

⁹¹ Surikov, unlike the others included here, was actually born in Krasnoyarsk but returned only briefly to his hometown after departing as a young adult to pursue an artistic education and career in metropolitan St. Petersburg and Moscow. Titova, V. Titov G. *V.I. Surikov*. Krasnoyarsk: Krasnoyarskoe knizhnoe izd-vo, 1956.

⁹² See footnotes 79 and 84.

⁹³ The concept of a city’s “sacred topography” becoming overtaken by Soviet referents and priorities is discussed by Heather

Particularly in the pre-industrial villages and frontier towns of Pre-Revolutionary Russia, natural beauty at the landscape scale was ideally experienced as a prospect or vista, preferably distanced and enframed by either the windows of a train or the height and breadth of a bluff overlooking a river.⁹⁴ Anthropologist Caroline Humphrey and geographer Boris Rodoman note that preference for views out across a river, especially onto an “untouched” wild vista such as those found in Siberia, a relational position that entailed a range of spatial-cultural associations:

“The river here is not a route but a boundary, which preserves the difference in principle of the other side. From the balcony ..., the viewer greets the forests and waters like a tsar, yet paradoxically both looms powerfully over the extending vastness and also bows before its greatness – a greatness greatly exaggerated by desire for it to be so. To feel the full effect, the viewer should know that Moscow is behind him, while what is in front is imagined to be a grandiose, luminous wildness and foreignness.⁹⁵”

The quintessentially Russian urban experience of landscape viewing nature “like standing on a balcony viewing the scene” was made easy in the case of Krasnoyarsk by the same topography that had facilitated the city’s founding as a frontier outpost.

To observe or represent the identity of a city visually requires a vantage point. Krasnoyarsk was indeed fortunate in this respect. The hills surrounding the city, the “bowl” between them in which it was located, these created an obvious and relatively easy choice of location from which to paint, photograph or sketch the city. Paintings and panoramic photographs of Krasnoyarsk from multiple periods have repeatedly taken the same point of view, making comparison of the city’s changing appearance relatively easy, even for non-specialists. These representations typically survey the city from the conveniently located *Karaulnaia Gora [hills]*, which offered a natural ‘birds’ eye perspective’ over the central historical section of Krasnoyarsk located on the high plateau [*mys*] or peninsula between the Kacha and Yenisei Rivers. From within the city, the street layout established after the 1773 fire, meanwhile, created a natural vista at the end of each street, another element contributing to the city’s landscape aesthetic and fre-

DeHaan (2013) in the case of Nizhnyi Novgorod/Gork’ii. The relative youth and frontier status of Krasnoyarsk meant that its topography, in contrast to older cities, was more connected to regional circulation and visitation.

⁹⁴ On “panoramic” images of Siberia, see Weiss, “Representing the Empire: The Meaning of Siberia for Russian Imperial Identity.” On river vistas as characteristic for Siberian cities, see Humphrey, “Spatial Conjunctions” *Anthropology of the Century* (2015), Ely, “The Origins of Russian Scenery: Volga River Tourism and Russian Landscape Aesthetics.” and Boris Rodoman, 2010 ‘Vdokhnovlyayushchie zarech’ya,’ *Geografiya*, 2010, No 13: 3-12; 2010 No 14: 12-20. Reprinted in *Proekt Baikal no32*, 2012. This quote represents Humphrey’s gloss on Rodoman’s original Russian text.

⁹⁵ Humphrey “Spatial Conjunctions” 2015: p6

quently cited as such.⁹⁶

The experience of Krasnoyarsk illuminates how pre-Soviet city-nature relations placed greenery and landscape as largely exterior to the city, but closely identified with it. Public urban greenery existed only in the limited heterotopic space of the city's Central Park, later the 'Gorky' Central Park of Culture and Rest. Late 19th-century visitors to Krasnoyarsk were able to see out, however, into the larger natural landscape from any of the city's streets or its major civic sites. Visits to the relatively nearby "Stolby" granite outcroppings and views of the terrain adjacent to the Yenisei were typical experiences.⁹⁷

Anton Chekhov [1860–1904] is one of the most prominent and internationally recognized late 19th century figure to visit Krasnoyarsk. His pro-Nature verbal portrait of Krasnoyarsk remains prominent in characterizations of the city. In 1890, Chekhov traveled through Siberia en route to Sakhalin, in the Russian Far East. In his diary, Chekhov described Krasnoyarsk as "the best and most beautiful of all the Siberian cities" with a surrounding landscape of "smoky, dreamy" hills reminiscent "of the Caucasus."⁹⁸ This quote has enjoyed consistent use since then, eliding the difference between the city's past glories and future potential.⁹⁹ Chekhov also received his share of urban memorials, which made manifest his connection to the city. A bust of the author was erected on the riverbank, while a street was renamed in his honor in 1936 (between streets Ostrovskii and Dostoevskii).¹⁰⁰

For Lenin and other Tsarist-era revolutionaries, Krasnoyarsk was their threshold between civilization and exile. In Krasnoyarsk they left the train, and made their way by other modes of transport outside the zone in which settlement was forbidden to prisoners.¹⁰¹ Experiences varied.

⁹⁶ As described in 2007: "The lack of conflict between the urban and natural environments distinguishes Krasnoyarsk from many other megapoli. Architects of the past followed the rules of urban design perspective, and today the city strives to observe these traditions. Streets of the historic center open out onto views of the Yenisey and the heights of the relief—and as a result the city is full of airy expanses and there is no feeling of closed-in space." Rybachenko, "Most Mezhdru Proshlym I Budushchim" 2007, p20.

⁹⁷ On the Krasnoyarsk central park, see V.I. Tsarev and V.L.Chobanian, "Tsentral'nyi park v gorode Krasnoiarske: istoriia formirovaniia i arkhitekturno-planirovochnye preobrazovaniia" *Vestnik KrasGAU*, no7 (2013) pp281-88.

⁹⁸ I.M. Ansimova, *Ulitsy Krasnoiarska Rasskazyvaiut... [the Streets of Krasnoiarsk Tell Us...]* Toponymic guide. Krasnoiarsk: PIK: "Offset", 2013.

⁹⁹ e.g. in the wikipedia page for Krasnoyarsk, <https://en.wikipedia.org/wiki/Krasnoyarsk>, accessed 03-23-2016. Also Haywood, *Siberia: A Cultural History*, 206-18.

¹⁰⁰ Presumably playwright Aleksandr Ostrovsky. More recently, statues of Pushkin and his wife, erected in Krasnoiarsk despite the pair never visiting, have earned their share of online mockery. Ibid.

¹⁰¹ Even after a sentence of labor, exile, or imprisonment was completed, additional limitations were placed on where individuals

Lenin's experience passing through Krasnoyarsk en route to exile in the nearby settlement of Shushenskoe (1897-1900) was reputedly fairly pleasant. As mentioned earlier, he was favorably impressed the local scenery. Stalin, in contrast, said of his 1903 exile in more distant and Northerly Kureisk that "Nature is bare to the point of ugliness..."¹⁰²

Another Russian cultural giant with a connection to the city is the Krasnoyarsk-born artist Vasily Surikov (1848–1916). One of the group The Wanderers, Surikov was one of Russia's best known painters, with a reputation that endured into the Soviet period and after.¹⁰³ His primary genre was historical and political, not landscapes. When Surikov returned home from St. Petersburg and Moscow to Krasnoyarsk, he painted a number of landscapes which included the city, its churches, ferry boat and signature topography¹⁰⁴ The fame he garnered spilled over to his home town, which celebrated his connection by re-naming then "Serf Street" in his honor in 1921. The city also established a school of painting named in his honor [mid-1950s, with a perhaps predictable tradition of landscape painting], a Surikov square with a Surikov statue, a Surikov house-museum, and a Surikov Museum of Art.¹⁰⁵

The name recognition given to Surikov meant that even his lesser-known works, e.g. the Krasnoyarsk landscapes he painted later in life, enjoyed a measure of historical prominence.¹⁰⁶ The Surikov Art Museum and house-museum remain among the city's top destinations for national and international tourists.¹⁰⁷ The side-effect of this renown were that the subject matter of those paintings was more firmly entrenched than another painters' might have been as a historical baseline or visual reference to what the city and its environs were at that moment. As with Chekhov and Lenin, Surikov's inscription of regional landscape beauty into the historical record

were allowed to live.

¹⁰² Lincoln, *The Conquest of a Continent: Siberia and the Russians*, 217-21.

¹⁰³ Surikov's best-known paintings are realistic yet emotionally charged depictions of historically significant events: e.g., *The Morning of the Execution of the Streltsy*, 1881; *Menshikov at Beryozovo*, 1883; and *The Boyarynya Morozova*, 1887). Another widely recognized painting is his 1870 depiction of the "Bronze Horseman" statue in St. Petersburg, which had been the subject of Pushkin's narrative poem of the same name (published in 1837) and an enduring landmark of the city. His landscapes of Krasnoyarsk were mostly produced in his later years. See E.V. Gevel', E.Z. Gevel', *Obraz goroda v Krasnoiarskom urochishche*, Krasnoyarsk: 2012, available for download. See http://books.totalarch.com/image_of_the_city_in_the_krasnoyarsk_natural_boundary.

¹⁰⁴ Nifant'ev, *Gorod na Yenisei*, 1954

¹⁰⁵ *Ulitsy Krasnoiarska Rasskazyvaiu*, 2013

¹⁰⁶ See Gevel, *Obraz goroda*, 2012; also *Krasnoiarsk glazami khudozhnikov : al'bom*. Krasnoyarsk: Platina, 2008

¹⁰⁷ <https://www.lonelyplanet.com/russia/siberia/krasnoyarsk>, Last accessed 01/2019, <https://www.erarta.com/ru/calendar/exhibitions/detail/f2dc3a1d-d5b6-11e3-ad2e-8920284aa333/>

was reinforced by the relatively consistent high regard in which he was held, thereby cementing the idea of natural beauty as an attribute of Krasnoyarsk. So long as these figures remained culturally prominent, their words and images would retain their weight—and interventions that might alter those city-landscape relations would be judged by their measure.

Statements by historical luminaries praising Krasnoyarsk's natural surroundings, when used in Soviet-era texts about the city, served multiple goals. They reinforced the status of the city—"the most beautiful in Siberia"—without any risk of seeming to approve of or praise tsarist-era conditions. Tsarist-era cities lacked greenery; this was generally agreed.¹⁰⁸ Any additional greenery added to the city might then be considered an improvement over the "dusty, dreary" tsarist status quo, rather than a sign of neglect or marginal urbanization. The Soviet-era association of greenery with progress was in direct contrast to earlier European characterizations of Moscow as merely "an overgrown village," less dense and therefore 'backward' in contrast to the stony urbanism of European capitals. In the post-revolutionary period, as Soviet Russia, including Siberia, recovered slowly from the trials of international and civil war, the lack of new building construction and vacant lots following the devastating fire of 1881 could in this manner be recast as a positive feature.¹⁰⁹

In jockeying for status in competition with other Western and Eastern Siberian cities like Novosibirsk or Irkutsk, Krasnoyarsk could promote itself in ways that maintained the city's connection to the surrounding landscape environs even under the new Revolutionary and Soviet regimes. This was accomplished in two ways: first, by references to Lenin's productive experience in the Yudin library and his positive comments regarding the region's "Swiss" topography. Second, the city could point to a strong heritage of domestic revolutionary activity, particularly in 1905, when, it was said, the local socialists met at the *Stolby Zapovednik* [granite pillars nature preserve], using its rugged terrain as the backdrop to their rugged political struggle.¹¹⁰ Thanks to

¹⁰⁸ Nifant'ev, E.S. "O zelenom druzhe" *Yenisei*, kn.11 (1953): 176–179; Kazakovtsev, G.M. "K Voprosu Ozeleneniia Gorodov Sibiri" *Arkhitektura Sibiri*, Ezhegodnik Novosibirskogo Otdeleniia Soiza Sovetskikh Arkhitektorov, July 1951, pp65–80

¹⁰⁹ Compare to the tsarist use of greening and greenery in propaganda urging Russian settlement in Central Asia— where the emphasis was largely agricultural, rather than urban, but greening still marked as a sign of progress. Keating, "There Are Few Plants, but They Are Growing, and Quickly": Foliage and the Aesthetics of Landscape in Russian Central Asia, 1854–1914."

¹¹⁰ This connection between political activism and landscape preservation was celebrated from the earliest years of the USSR, as in the 1925 pamphlet about the Stolby and its history. This pamphlet, originally printed to mark the establishment of the Stolby *zapovednik* or Nature Preserve, was reprinted in [1990?] in another instance of post-Soviet appropriation of pre- and early-Soviet landscape engagement. On the significance of *zapovedniki* in Russian and Soviet nature preservation, see Douglas R. Weiner,

these pillars' political pedigree and the favorable "nature writing" produced by men such as Chekov and Lenin, the status of Krasnoyarsk's environs was well positioned to weather the transformations wrought by the Bolshevik Revolution of October 1917.¹¹¹ (Cemeteries, another type of site slated for redevelopment as places of leisure for workers, similarly benefited from their revolutionary associations.¹¹²)

Sites of Sovietization, 1928–1959

During the early years of Soviet power, Krasnoyarsk languished as a secondary city, administratively and economically beholden to Novosibirsk, the capital until 1924 of the "Siberian" Territory. In 1934, the city was promoted to capital of the newly formed Krasnoyarsk Krai, or Territory. The city experienced relatively small growth during this period, and few changes to its overall morphology. The city's sense of place was drastically altered, however, by a three-fold wave of demolitions —physical, spatial, and historiographical. First, beginning in the early 1920s, streets throughout the city were renamed, generally from something descriptive like "Garden Street", "New Market Square", or "Crooked Lane" to names honoring abstract principles and prominent international individuals, e.g. "Street of the Paris Commune", "Revolution Square", "Marx Prospect."¹¹³ A similar process of renaming occurred in cities across the land of Soviets, itself also recently renamed.¹¹⁴

Models of Nature: Ecology, Conservation, and Cultural Revolution in Soviet Russia, Indiana-Michigan Series in Russian and East European Studies (Bloomington: Indiana University Press, 1988); *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*. On the Krasnoyarsk "Stolby" nature reserve, see *Gosudarstvennyi Zapovednik Stolby*, (Krasnoyarsk: Krasnoyarskoe knizhnoe izd-vo, 1960); David Miller Ostergren, "Post-Soviet Transitions in Policy and Management of Zapovedniki and Lespromkhozi in Central Siberia" (Ph.D. Dissertation, West Virginia University, 1997).

¹¹¹ Krasnoyarsk is especially well known in Russian Revolutionary history for its role in the 1905 Revolution, when a short-lived "Krasnoyarsk Republic" was established. Dickins, "Rethinking the Power of Soviets: Krasnoyarsk, March–October 1917."

¹¹² Revolutionaries in St.Petersburg and Moscow had met in the green space of cemeteries, even using coffins to smuggle guns and other weapons to workers' meetings. cf Kholodny, T. (1933) *Moscow: Old and New*. Moscow: Co-operative Publishing Society of Foreign Workers in the U.S.S.R. Rather than spaces of religion or personal emotion, cemeteries were characterized by Kholodny as spaces of revolution where reformers and other opponents of the tsarist regime were able to meet in relative secrecy to discuss their plots against the government. Greenery, politics, and atheism fuse in these plans to provide the workers with new spaces for leisure and health. Quote: "We have driven an 'aspen stake' into the grave of capitalism, and these green gardens furrowed with the tombs of the rich and nameless mounds of the poor have become ours...." (p101) The transformation of cemeteries into public parks, a move also accomplished in American cities such as Brooklyn's Prospect Park, was perhaps overdetermined in the Soviet case, given the demise of religion and concomitant Bolshevik support for cremation.

¹¹³ Ansimova, *Ulitsy Krasnoiarska Rasskazyvaiu*, 2013, See also V.V. Chernyshov, "Iz istorii godonimov Krasnoiarska: 1920–1960-e gg" GAKK Archival guide, available <http://krasnoiarskie-arkhivy.rf/about/perechni-i-obzory-dokumentov/67>. Last accessed 01/2019.

¹¹⁴ A similar process occurred in Gor'kii, compared by Heather DeHaan to a palimpsest incorporating the pre-Revolution "sacred

Secondly, not long after the cessation in 1924 of post-Revolution fighting between Red and White forces in Siberia, Krasnoyarsk celebrated its three hundredth anniversary.¹¹⁵ Any tendency to incorporate pre-Revolutionary accomplishments into the city's Soviet identity were quickly quashed, however. An essay on the history of the city, published in conjunction with the 1928 anniversary, made the mistake of emphasizing past advances; the author, S. A. Smirnov, was arrested and died in prison.¹¹⁶ While references were allowed to those figures like Chekhov and Surikov whose status endured into the Soviet period, the built accomplishments of the Tsarist period were repressed.

Lastly, the distribution and use of civic or open space in Krasnoyarsk was transformed by the demolition in the early 1930s of the city's largest cathedral and market square.¹¹⁷ This Russian Orthodox cathedral was based on a design by well-known architect Konstantin Ton (sometimes Thon). Ton is better known for his works in St. Petersburg and Moscow, including the Cathedral of Christ the Saviour, which was demolished to clear the ground for the *Dvoretz Sovetov* (Palace of Soviets, infamously never-built).¹¹⁸ The vacant area opened up by the demolition of his cathedral and adjacent shopping arcades in Krasnoyarsk was one of the largest in Siberia. Like its equivalent in Moscow, the resulting *tabula rasa* was the subject of a design competition of sorts, of diploma projects at the architecture-planning faculty in Novosibirsk. One representative proposal shows the vacancy treated as classically Stalinist imperial grandeur.¹¹⁹ The square was not completed until the 1950s, however, and by then with a different approach—lawns and flowerbeds instead of stony expanse. Between the 1930s and early 1950s, a “General Plan for

geography” of the city as well as its new Soviet overlay. DeHaan, *Stalinist City Planning: Professionals, Performance, and Power*.

¹¹⁵ Smirnov, V. A. "Trista let zhiznii goroda Krasnoiarska" in *Trista Let Goroda Krasnoiarska 1628 - 1928*, Krasnoyarsk: izd. Gorsovet, 1928. (48 p)

¹¹⁶ Gorbachev et al., *Gradostroitel'stvo Sibiri*, 571. (no source cited by them). They note that the brochure “disappeared from Krasnoyarsk libraries” for many decades. It is now reappeared.

¹¹⁷ With the note-worthy exception of church demolitions, in the mid-1930s, that increased the amount of central city open space considerably. One of these, discussed below, was the future site of Krasnoyarsk's Revolution Square and the Krai Dom Sovietov, by architect Miron Merzhanov.

¹¹⁸ In Krasnoyarsk, there is discussion of reconstructing Ton's cathedral albeit on a new location on the Strelka. On the Moscow Cathedral and Palace projects, see Hoisington, "'Ever Higher': The Evolution of the Project for the Palace of Soviets."; Andrew Gentes, "The Life, Death and Resurrection of the Cathedral of Christ the Saviour, Moscow," *History Workshop Journal*, no. 46 (1998); Sidorov, "National Monumentalization and the Politics of Scale: The Resurrections of the Cathedral of Christ the Savior in Moscow."

¹¹⁹ Slabukha, *Arkhitektory Prieniseiskoi Sibiri*. See figures.

Greater Krasnoyarsk” developed by Moscow experts similarly languished unimplemented, held up by local pushback. The version eventually adopted (in 1950/51) came to reflect many of the proposals made by those local urbanists.¹²⁰

From the 1930s on, the Right bank of the Yenisei across from Krasnoyarsk’s existing center was developing as, in effect, a separate industrial settlement or string of settlements— a “sots-gorod” in the terminology of the day (short for *sotsiogicheskii gorod*, or socialist city). Crossings via ferry between the two banks were difficult, time-consuming, and seasonal. Beginning on 1941, a seasonal pontoon bridge was erected each year after the spring thaw. Need for easier circulation between the banks was driven by the increasing industrial presence of evacuated factories on the relatively level ground of the Right Bank of the Yenisei, opposite the historic core. These factories, evacuated amidst the chaos of war from the vulnerable regions of the Western front, brought Krasnoyarsk into the center of the USSR’s war effort. The opening of the pontoon bridge brought increased convenience during open-water season, but also increased work for already strapped factories, who were expected to collectively pitch in labor and materials for the seasonal deconstruction, repair, and reconstruction of the wooden pontoons.¹²¹ With the exception of these factories, most institutional centers of local power, such as the Forest Technical Institute, remained based on the historical Left Bank, as were most of the city’s cultural institutions and landmark buildings.

As in any city, the changing character of mid-twentieth century Krasnoyarsk shaped and was shaped by its major civic buildings and public spaces.¹²² Up until the mid 1950s, the primary public gathering places were centrally located along what was then Stalin Prospect, (now pr. *Mira*, or Peace Prospect, the middle spine of Krasnoyarsk’s historic district. Like the Stalinskii Raion, or District of which it was a part, Stalin’s name was removed from the city’s most promi-

¹²⁰ Vladimir Innokentievich Tsarev, "Planirovka Bol'shogo Krasnoiarska 1930-Kh Godov: Etapy Proektirovaniia I Gradostroitel'noe Znachenie," in *Sovetskoe Gradostroitel'stvo 1920-1930-Kh Godov: Novye Issledovaniia I Materialy*, ed. Iu. L. Kosenkova (Moskva: URSS: Librokom, 2010). similar sections in Gorbachev et al., *Gradostroitel'stvo Sibiri*.

¹²¹ GAKK f P-17 op.1 del737 L88, 89, 89b; L54, 54b

¹²² In early period of development as a frontier outpost, most prominent sites were churches on the Stelka and the ridge-top Chasovniaia, with their “balcony” views out over the landscape beyond the city. Following the 1773 regularization and modernization of Krasnoyarsk’s post-fire streetplan, this orientation shifted. Nineteenth and early 20th century merchant Krasnoyarsk focused as much on internal sites of city self-presentation, such as the sequence of public squares along the central streets between the Railroad station and the main Novobazarnaia Ploshchad’. See Slabukha, *Arkhitektory Prieniseiskoi Sibiri*; Gorbachev et al., *Gradostroitel'stvo Sibiri*.

ment street only in 1961. Of these civic spaces, the largest and most official was Revolution Square (*ploshchad' Revoliutsii*), located on the former market square and site of Ton's cathedral, adjacent to the city's "Gorky" Central Park of Culture and Rest.¹²³ This space, long-established as one of the city's most representative sites, was joined in the post-war period by two other sites: the River Station, and the Yenisei River Embankment. Both were located on the historic edge of the city, but quickly became established as 'central' sites of gathering and display.

The River Station (1952) and Revolution Square (1959)

The city's national and international profile was greatly altered by the completion in 1952 of the *Rechnoi Vokzal* [River Station], a Stalinist neo-classical building meant to provide stately access to the river and a new focal point along the riverbank. The postwar Urban Reconstruction and Restoration campaign, accompanied by continued industrialization, offered urban administrators and design professionals a chance to modernize what was still in the early post-war period essentially a pre-Soviet tsarist urban environment. The new River Station building—a model of which was awarded a silver medal at the 1958 Brussels Exposition—was a linchpin in the creation of a new, more cultured, urban environment. Described not long after its opening on July 27, 1952 as a “spring swallow” and harbinger of modernization, this River Station marked an architectural gateway between river and city, but remained an outlier in the overall built environment of the district.

Krasnoyarsk's Revolution Square, meanwhile, was not a gateway to the city but a dense node of power within its heart. Anyone who travels today to Krasnoyarsk will likely visit this space, still redolent of Soviet authority and culture as it was typically experienced throughout the USSR. The ensemble of buildings that framed the square represent many of the major institutional players of Soviet Krasnoyarsk, and of Siberia more generally. On the west side of the square is the administration building of the *Krasnoyarskaia Zhelznaya Doroga* (Krasnoyarsk Railroad). To the east is the equally imposing building of the Krasnoyarsk Krai Scientific Universal Library (KNUB). On the North side of the Square rises the Krasnoyarsk Krai Administrative Building [*Dom Sovietov Krasnoyarskogo Kraia*], designed by Miron Merzhanov. This final

¹²³ Photograph of the park included in M.P. Korzhev, and M. I. Prokhorova. *Album. Arkhitektura Parkov SSSR.*, 1940. The Central Park in Krasnoyarsk features in image 62 of this album.

element in a typically-Stalinist grand ensemble of official buildings was finished only in 1959.¹²⁴ The fourth side of the square is not a side per se. To the south lies the city's main public green-space: the "Gorky" Central Park of Culture and Leisure, expanded in 1930s on the basis of a pre-existing central park. The park lies draped over the slope from the city's historic central square down to the bank of the Yenisei River.

The approximate center of the square is currently occupied by a statue of Lenin, erected in 1970. His statue stands on a high plinth in the center of the square's vast expanse—one hand bent to his coat lapel, chin raised, one foot forward as if leaning into the wind. He faces the Yenisei, and the hills beyond it. This location relative to the *Dom Sovietov* makes it a dignified backdrop for photographs of the statue—as seen in the 1986 guidebook discussed earlier. (The view from the buildings' windows, those not blocked by a double row of dark green fir trees, is perhaps less exciting for Council delegates.) While a direct visual and pedestrian connection between regional power center and powerful regional river is currently interrupted by the statue of Lenin, as well as a semi-formal parking lot and multi-lane arterial, it was previously a dominant design feature of the space.

Like the park (and the river), the space of Revolution Square preexisted the Soviet Union to some extent. Following the 1930s demolition of its former structures, e.g. the market bazaar and "new" cathedral by Konstantine Ton, the square was occupied by the concentrated essence of Soviet power in Siberia. The expansive square gains its impact from sheer size, but also taking on a new symbolism as the meeting grounds of all Soviet Siberia's powers-that-be: political, technological, and scientific.¹²⁵ (One could debate the extent to which the park and river beyond it, which define the square's fourth side, represent a fourth, environmental "institutional power" of Siberian life.)

The Square's various built elements grow from specific moments in the city's history, comprising a material record of the rapidly changing character of Krasnoyarsk. For much of that time, this square with its palimpsest of political/ideological, scientific/cultural, infrastruc-

¹²⁴ Designed by Miron Merzhanov, frequently referred to as "Stalin's Architect" for his work on dachas and Sanitoria and other official infrastructure of patronage. Merzhanov lived in Krasnoyarsk after his sentence in the Far East was done. Slabukha, *Arkhitektory Prieniseiskoi Sibiri*.

¹²⁵ This observation made by Tsarev, "Planirovka Bol'shogo Krasnoirska 1930-Kh Godov: Etapy Proektirovaniia I Gradostroitel'noe Znachenie."

ture/technological, and landscape/environmental elements was “the center” of the city — and an index of the changing aspirations, values, and capacities both local and national. After the collapse of the USSR, Revolution Square has continued to afford one of the city’s highest profile places and spaces for gathering.¹²⁶ This outcome is not particularly surprising. The square’s domination by green planted areas, which has been true since the 1950s, was not always assured, however.

As the city grew, the leisure, culture and health functions previously provided by the Central Park demanded additional territory. City authorities looked for new sites to provide these functions, turning to the riverbank and its islands as one such option. The embankment in Krasnoyarsk was gradually transformed almost continuously beginning in the late 1940s, following the Stalinist neo-classical model set by the 1935 reconstruction of the Moscow River embankment. In 1952-53, the then chief architect of Krasnoyarsk, A.E. Tat’ianin [1913–1956?] designed a boulevard for the Yenisei River embankment as part of the Union of Architects’ “stewardship work” [*v poriadke shefskoi raboty*] for the city. The River Station [*Rechnoi Vokzal*], at that point only recently completed, formed one anchor point for the city’s new, more cultured, relationship to the river. A new staircase from the A.M. Gorky Central Park of Culture and Rest to the riverside, designed by Iu.M. Kilovatov of Leningrad, formed another. As described in a 1953 city guide, between them stretched a new, leisure-oriented promenade.

“The Yenisei embankment has been left unimproved (*neblagoustroennoi*) for many years.” About six years ago by the initiative of the deputies of the Stalinskii District council (*Raion Soviet*) on this place arose a large green boulevard. More than two thousand young trees and bushes and great quantity of flowers turned this previously neglected site into a beloved place of rest for workers. In May 1953 the boulevard, stretching almost a kilometer, was refilled with new trees and bushes, green lawns and numerous flowerbeds.¹²⁷

The “improved” or beautified embankment afford visual connection between Right and Left banks of Krasnoyarsk, and encouraged an association with the Yenisei as a visual resource for leisure. Aesthetic and visual connections to the river were expanded with, in 1961, the completion of the concrete Communal Bridge over the Yenisei. In the decades until their sacralization on the ten-ruble note, this bridge and the concurrent construction the Krasnoyarsk Hydro-electric plant marked two additional nodes of interaction between spheres of city and nature, local and

¹²⁶ Including, for instance, the annual “Victory Day” parade by veterans and display of military hardware on May 8th.

¹²⁷ Nifant’ev, *Gorod na Yenisei*, 1954. p177

national, aesthetic and infrastructural.

Infrastructures of Industrial Modernity

The 1940s wartime transfer of Soviet factories eastward behind the Urals to Krasnoyarsk and other Siberian cities had triggered a massive expansion of industry and population, irrevocably transforming the region's ecological and urban characteristics. Like other aspects of Soviet-era development in Siberia, this industrial expansion was unevenly distributed. As described by historian Bruce Lincoln,

Siberia ... held a key to rebuilding the war-torn European lands of the Soviet Union, but the age-old problems remained. Climate, distance, and the need to move armaments from factories to the front as quickly as possible had concentrated the resettlement and industry of the great relocation in Siberia's western lands, while its remaining two thirds had remained much as it had in earlier times.¹²⁸

The Yenisei River defined the border between “western” and “eastern” Siberia: on one side was the relatively more developed lowlands of the Great Siberian Plain, on the other was the colder, more topographically varied, Siberian Plateau. Krasnoyarsk, located as it was on the saddle point between these sub-regions, experienced these transformations in direct and concentrated form.

The industrialization of Krasnoyarsk and other Siberian cities continued long after the war years. Between 1939 and 1970 the city's population grew from 190,000 inhabitants to 650,000.¹²⁹ Where the pre-Revolutionary city had been more or less confined to one high bank, the Soviet “greater Krasnoyarsk” stretched along both sides of the river, encompassing new territory in the form of the islands Tatyshev, Moloko, and Otdykha [Leisure]. In the words of the present-day website of the City Administration of Krasnoyarsk, “A new page of city history came with the development of hydropower resources of Angara and Yenisei, which began at post-war period.”¹³⁰ The following section looks at how developments related to this “new page” of hydropower reverberated in the early 1960s through the city's built environment, with consequences for river, city, and residents' everyday experience of both.

In 1954, workers began to dam the Yenesei River just south or upstream of Krasnoyarsk.

¹²⁸ Lincoln, *The Conquest of a Continent: Siberia and the Russians*, 363.

¹²⁹ Gary Hausladen, *Siberian Urbanization since Stalin* Washington, DC: National Council for Soviet and East European Research, 1990. Appendix 3, 102.

¹³⁰ <http://www.admkrsk.ru/city/Pages/default.aspx>. Accessed most recently 1-31-2018

Construction of the Krasnoyarsk Hydro-Electric Station (GES) was completed in 1972.¹³¹ The impact of the Krasnoyarsk GES on local industry and environment was intense, revealing the complexity of regional city-environment entanglements. Hydroelectric power was celebrated at the time as a marker of modernity and progress, not just in the USSR. The Station itself was celebrated in the Soviet press as the biggest in the world, in a clear example of the widespread Soviet enthusiasm or “gigantomania” associated with large-scale infrastructure projects, particularly hydro-electric power stations.¹³²

The status of the Yenisei River as an attribute of Krasnoyarsk’s identity also shifted relative to the city’s changing morphology and economy. The urban experience of the new, post-Stalinist, modernization of Krasnoyarsk through large-scale infrastructure projects and industrialization is perhaps best understood in connection to the *Kommunal’nyi* or Communal Bridge over the Yenisei River. Construction began in 1956. The bridge was completed in 1961 as a “gift” to the 22nd Party Congress; its builders were awarded a prestigious Lenin Prize in technology in 1962.¹³³ Being permanent rather than seasonal, and designed to accommodate a range of transportation modes, the bridge afforded new opportunities for regular use by local individuals and enterprises as well as regional circulation. It also created a focal point and platform for mutual visibility between city and nature, creating a new center for the city from the river and its islands—elements formerly treated as “border” or peripheral elements of the formerly separated districts.

Plans for an additional, automobile, bridge had long been discussed in Krasnoyarsk. In the early 1950s, the idea of a second bridge moved closer to reality, as planners and hydro-power specialists at Leningrad’s Giprogor began to design and plan for it. The impetus for the technological innovation entailed in building this bridge (& garnering prizes for same) came from dura-

¹³¹ For comparison, the High Aswan Dam was under construction from 1960 to 1970, with the reservoir reaching capacity in 1976. Wikipedia: http://en.wikipedia.org/wiki/Aswan_Dam. See also Timothy Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley: University of California Press, 2002).

¹³² In the same year, for instance, construction began on the Glen Canyon Dam of the Colorado River. The race to build the best and biggest dams was global, and deeply inflected by Cold War tensions. In 1960, construction began on the High Aswan Dam in Egypt, led by the same team of engineers as involved in the Krasnoyarsk GES. Slabukha, *Arkhitektory Prieniseiskoi Sibiri*. The literature on such projects is vast. One source on North American large-infrastructure projects is Benjamin Forest and Patrick Forest, “Engineering the North American Waterscape: The High Modernist Mapping of Continental Water Transfer Projects.” *Political Geography*, no. 0 (2011): 1-17.

¹³³ Names given on <https://ru.wikipedia.org> include A.I. Bakhtin, N.A. Bogdzel’, I.Petrovich, and P. Egorov, K.K. Ivasheva, from a range of institutions.

ble qualities of the Yenisei River, namely its width and the shortness of the construction season which created the need to continue construction in cold water/weather. The surge in right-bank activity that occurred in the late 1930s to early 1950s and concomitant need for reliable river-crossings had acutely stressed the available bridge and embankment infrastructure, then limited to the 1899 Railroad Bridge, seasonal ferry, and equally seasonal pontoon bridge.

The Communal Bridge drastically changed the orientation of the city relative to the river. Its linkage of the two banks and their associated city districts had greater than local significance. The left bank represented Western Siberia in topography and as a prior geographic-administrative unit, as well as the historic (pre-Revolutionary) core of Krasnoyarsk with its cultural and political landmark buildings. The right bank, in contrast, represented the “wilder” realm of Eastern Siberia—more varied in topography, colder, less developed—while the heavily industrial right bank districts of the city encapsulated all the ambitions and challenges of Soviet development and transformation. The bridge linking these realms became, as discussed earlier, a symbol for the identity of Krasnoyarsk as a city— “linking past and future,” technology and terrain.¹³⁴ The two "bridgehead" sites where the structure landed on each bank become some of the most prominent civic spaces in the city's experiential topography.

The dam and the bridge were not isolated interventions in city-river relations. The physical interface between city and river was in almost continual flux from 1941 to 1985, both in the design and redesign of the embankment, and to a lesser extent in the spatial design and orientation of river-side civic spaces. The embankment section of the Yenisei River next to the historical city core was first “beautified” or improved in the late 1940s.¹³⁵ Prior to that, the riverbank was a space in which urban-regional transportation functions coexisted with riparian phenomena such as seasonal river ice and with non-infrastructure direct use of the river water for activities like washing clothes and waste disposal.¹³⁶ In the late 1950s, as the Communal Bridge neared completion, an additional section of riverbank underwent beautification (improvement, *blagou-*

¹³⁴ Rybachenko. "Most Mezhdru Proshlym I Budushchim" 2007.

¹³⁵ According to Nifant'ev 1954, quoted above. Images of the riverbank from the 1930s and earlier show, however, a range of anthropogenic and technological interventions in this contact zone.

¹³⁶ Local awareness of these contrasts was facilitated in the post-Soviet period by the reproduction of pre-Revolutionary postcards and other images of the pre-industrial riverfront). The juxtaposition of “pre-modern” and “industrial” city-river interactions is documented in photographs of the embankment and riverbank published in the newspaper and held in the collections of the KKKM

stroistvo). The new embankment section stretched from the near-bridge square to the *Strelka* or confluence between the large Yenisei and smaller Kacha Rivers. It was designed and built 1959-1960 by Iu.K.Pokrovskii, an architect-engineer from Leningrad—a city defined and made possible by its bridges, canals, granite-clad embankments, and other hydro-engineering projects.

The section of riverbank upstream of the River Station got its turn in 1962-67, in a project co-authored by V.A. Lopatin and T.A. Mogil'nikova. Lopatin was also responsible for the reconstruction of the Krasnoyarsk “Gorky” Central Park of Culture and Rest (TsPKiO) in 1965 and 1971-72; Mogil'nikova worked on the construction plan for Tatyshv Island (1965) and a design detail plan for Otdykha Island (1965-66). Between the two of them, Lopatin and Mogil'nikova were responsible for the design of a highly visible and symbolically potent section of the city's interface with the Yenisei. Considered in sequence, these projects drove a total reorganization/redefinition of the central riverfront, which by the end of the 1960s would have been nigh unrecognizable to the washerwomen of a generation prior.

Following its completion in 1972, the Krasnoyarsk HydroElectric Station (GES) powered the Krasnoyarsk Aluminum factory and other enterprises whose workers swelled new districts on either side of the Yenesei. Although hydro-electric power is often touted as more “clean” than the burning of coal or fuel oil, in the case of Krasnoyarsk the use of energy from the GES for the infamously dirty process of aluminum production meant that air quality got worse in this period, even as individual coal boilers were replaced with centralized district-wide heating systems.¹³⁷ The GES also made its impact felt in the sphere of leisure and recreation. The beaches of the newly filled reservoir, aka the “Krasnoyarsk Sea”, and the reconstructed Yenisei embankment promenade created new opportunities for leisure.

Downstream, meanwhile, the plutonium-producing facilities of Krasnoyarsk's two secret satellite cities (Krasnoyarsk-26 and Krasnoyarsk-45, now Zelenogorsk and Zheleznogorsk) tied the city's fortunes to the international atomic arms race.¹³⁸ The privileged scientists and others

¹³⁷ The significance of such heating systems as a form of specifically socialist infrastructure and welfare provision is discussed by Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics*.

¹³⁸ V. Glazyrina, “Krasnoyarsk-26: A Closed City of the Defence-Industry Complex” pp195-202 in *The Soviet Defence-Industry Complex from Stalin to Khrushchev*, 2000; S.Yamaletdinov, “Ensemble of the Main Square in Krasnoyarsk-26: Humanized Space of Totalitarian Architecture” *Journal of Siberian Federal University. Humanities & Social Sciences*, 5:2012, 742-755.} On the nuclear program in general and its urban presentations, see Sonja Schmid, *Producing Power: The History of the Soviet Nuclear Industry* (Cambridge, MA: MIT Press, 2015; Sonja D. Schmid, “Celebrating Tomorrow Today: The Peaceful Atom on

allowed to live in these closed cities were represented within the official geography of Krasnoyarsk by the development of Krasnoyarsk's own *Akademgorodok* or Academy-town on a high section of bank with views up and down the Yenisei. Like the better-known *Akademgorodok* located near Novosibirsk, the institutional foundation of this enclave was the Soviet Academy of Sciences. As in the other *Akademgorodok*, Krasnoyarsk's resident scientists enjoyed above-average living conditions including better housing and better, more direct access to boundless greenspace directly outside their apartment buildings.¹³⁹

Despite the relative inaccessibility of Krasnoyarsk in the Cold War period, various publications encouraged visual and conceptual appropriation of Krasnoyarsk as a site of All-Union, even international, importance. The city's frequently leveraged connection to Lenin was only one means of asserting the prominence of the city in late Soviet political-cultural topographies.¹⁴⁰ The city's geographical location afforded other perquisites. The dramatic shift in topography between the areas West and East of the Yenisei, i.e., the West Siberian Plain and Central Siberian Plateau, likewise served to place the city on a regional edge, even as it administered territory and settlements on both sides of the river, upstream and downstream.

The politics of this geography continued to shape the city's public profile, as it had in the days when tsarist-era revolutionaries like Lenin transferred in Krasnoyarsk from "civilization" to "exile" in Shushenskoe. Likewise, in WWII, for instance, the special clearance Soviet pilots flying Lend-Lease American aircraft from East to West switched in Krasnoyarsk, handing off the planes to military pilots with only the regular level of security clearance.¹⁴¹ To this day, the city's

Display in the Soviet Union," *Social Studies of Science* 36, no. 3 (2006); Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters*; Paul R. Josephson, *Red Atom: Russia's Nuclear Power Program from Stalin to Today* (New York: W.H. Freeman, 2000).

¹³⁹ *New Atlantis Revisited: Akademgorodok, the Siberian City of Science* (Princeton University Press, 1997); Francis Spufford, *Red Plenty: Inside the Fifties' Soviet Dream* (London: Faber and Faber, 2010); Alexander D'Hooghe, "Science Towns as Fragments of a New Civilisation: The Soviet Development of Siberia," *Interdisciplinary Science Reviews* 31, no. 2 (2006).

¹⁴⁰ As official support for a cult of Lenin continued/grew in the late Soviet decades, Krasnoyarsk leveraged its connection to him as a means of attracting tourists and patronage. e.g. Beliaevskii and Gorodetskii, *Zdes' Byl V.I. Lenin; Po Leninskim Mestam Krasnoiarskogo Kraia*; Beliaevskii, V. I. *Lenin V Shushenskoi; Zhizn' I Revoliutsionnaia Deiatel'nost' V.I. Lenina V Sibirskoi Ssylke*; Beliaevskii and Gorodetskii, *Zdes' Byl V.I. Lenin; Po Mestam, Sviazannym S Prebyvaniiem V.I. Lenina V Eniseiskoi Gubernii*.

¹⁴¹ Krasnoyarsk's war-era status as a liminal city on the border of political, economic, and environmental realms is discussed more in Chapter Five. The city's role in the Al-Sib Air route (Alaska to Siberia) was not officially discussed during the Soviet period. Recent efforts to recovery this history, even recreating the flight routes, have met with some degree of official approval—e.g. link on website, but no American pilots or fuel caches. See Geust, Carl-Fredrik. *Lend-lease: Aircraft Deliveries to the Soviet Union* from http://lend-lease.airforce.ru/english/articles/geust/aircraft_deliveries.htm // (Reprinted from Carl-Fredrik Geust and G. F. Petrov, *Lend-Lease Aircraft in Russia*, Red Star (Tampere: Apali Oy, 2002). with kind permission from the author). See

function as a transfer site between rail and river routes, the latter giving access to the closed city of Norilsk, make Krasnoyarsk an important transportation hub. The city, in effect, functioned as a gatehouse on the threshold of what could be officially known and accessed about Soviet Siberia.

As architects and planners' engagement with the conjoined systems of river, city, and industry evolved, the new-built squares and public spaces in essence pivoted to face the technologically-transformed river and industrializing right bank, forming a new civic image of the city. In the late 1950s, the identity and experience of Krasnoyarsk continued to be linked to the natural landscape as both a historical tie and an aesthetic/experiential ambition. The Yenisei River was a consistent component of the "landscape" bundle of elements/attributes used to frame the identity of Krasnoyarsk. The River did not become a central, or "internal" element of the city's form and identity until after the construction of the *Kommunal'nyi* Bridge provided a permanent, non-seasonal, local use connections between the two banks of the city.

After the construction of the *Kommunal'ny* Bridge and further growth of the city's right bank districts, the "center" of city power and public open space shifted to the periphery of the historic city, to the riverbank. The new City Administration Building and *ploshchad im. 350-let Krasnoiarska* [350-Years of Krasnoyarsk Square], designed and built from 1967-78, replaced a stadium formerly on that site. This new center of city government, and the new Central Stadium, finished in 1968 and located on the appropriately named Isle of Leisure [*ostrov Otdykha*] in the Yenisei, came to define a new, more infrastructural (and riparian) urbanism in Krasnoyarsk.

Even as the country moved into the era now known as "stagnation" under the leadership of Leonid Brezhnev, the transformation of the Yenisei River bank continued.¹⁴² The central embankment of Krasnoyarsk underwent new waves of beautification and improvement in the late 1970s (connected to the construction of the City Administration building and "350 Years of Krasnoyarsk" Square, 1967-76). The low-lying terraces by the confluence of the Yenisei and

also Otis Hays, *The Alaska-Siberia Connection : The World War II Air Route*, 1st ed., Texas a & M University Military History Series (College Station: Texas A&M University Press, 1996).

¹⁴² In contrast, the Moscow River embankment was characterized in 2014 as practically unchanged since its initial 1930s transformation. <http://themoscowriver.com/eng/news/34.html>

Kacha rivers (aka the Strelka) were remade into a park and cultural-historic zone in 1980-85.¹⁴³

While the continued industrialization and transformation of Krasnoyarsk by infrastructure projects included all the qualities associated with “technophilia” “gigantomania” and “mastery of nature,” Krasnoyarsk’s evolving relationship with the Yenisei also produced moments of vulnerability and mutual influence. The dam and hydro-electric station on the Yenisei was just one of a slew of Siberian hydro-electric projects completed or planned during this period. One of the best known of these is Bratsk, a hydro-electric power station, dam and workers settlement on the Angara River. Constructed between 1954-1967, it was a project celebrated in 1965 by poet Evtushenko and castigated in 1976 by writer Valentin Rasputin.¹⁴⁴

The built environment of Bratsk has been received unenthusiastically by historians. One typical example can be found in Bruce Lincoln’s general history of Siberia:

“As in all the gargantuan construction projects that had dominated Siberian life since the 1920s, people took a distant second place to steel, concrete, and machines at Bratsk and the power stations that followed it. [...] What workers’ housing was built continued to follow the predictably ugly pattern that had scarred the Soviet urban landscape since the days of Stalin. ‘It is a beautiful country,’ one commentator wrote of the Saiano-Shushenskoe lands that Lenin had once called the ‘Siberian Italy.’ ‘It is to be hoped that its natural beauty will not be destroyed by the tasteless industrialization characteristic of Soviet development.’¹⁴⁶

Like Bratsk and its neighbor, Angarsk, the Krasnoyarsk GES was the site of an accompanying workers’ settlement (Divnogorsk) built to house the young, idealistic, predominantly Komsomol workers on this “giant” of Soviet infrastructure engineering.¹⁴⁷ Contemporary Russian-language

¹⁴³ Slabukha, *Arkhitektory Prieniseiskoi Sibiri*. project led by A.S. Brusianin [the embankment], and involving V.V. Sarafanov, V.I. Dubovik, and E.A. Ivanova.

¹⁴⁴ The shift between these two positions, according to historian Geoffrey Hosking, represents the impact of new environmental and literary sensibilities, associated with the rise of the environmentally-minded and anti-development nationalism of the Village Prose school of writers, and contemporary resistance among the Soviet scientific community to no-holds-barred industrial development of Siberia. These phenomenon are discussed in the next section of this chapter. See also Geoffrey A. Hosking, “The Rediscovery of Russia,” in *Rulers and Victims: The Russians in the Soviet Union* (Cambridge, Mass.: Belknap Press of Harvard University Press, 2006)..

¹⁴⁵ Elided: “The failure to provide living accommodation, children’s institutions, shops, and schools for a number of new enterprises,” Leonid Brezhnev reported of the industrial complex that had been planned around the great Saiano-Shushenskoe Power Station, ‘has retarded the completion of production units and caused a great flight of labor.’ Lincoln, *The Conquest of a Continent: Siberia and the Russians*, 382.

¹⁴⁶ Ibid.; The “commentator” Lincoln mentions is Violet Conolly; he quotes from her book *Siberia: Today and Tomorrow*, 1975; p82-89 esp. p86 [n18] and 87 [n19]. Violet Conolly (1899–1988), a former Soviet specialist with the British Foreign Service, produced among other works two authoritative books on Soviet economic geography in Soviet Asia and Siberia: *Beyond the Urals*, 1967 and *Siberia: Today and Tomorrow: A Study of Economic Resources, Problems, and Achievements* (London and Glasgow) in 1975.

¹⁴⁷ Krasnoyarsk, Bratsk and Angarsk were part of first wave of Siberian GES construction, seen as successful. Later projects were

descriptions of Divnogorsk, the workers' settlement adjacent to the Krasnoyarsk dam, contain a view of the relationship between housing and urban landscape that is diametrically opposed to that given by Lincoln or Josephson.

Writing in the mid-1960s while the Central Stadium was being constructed not far downstream in Krasnoyarsk, Vera Lvov'na Ruzhze offered a positive characterization of Divnogorsk. She wrote of Divnogorsk in terms that highlight the entanglement of the industrial and the natural in Siberian Cold War urbanism. "The natural landscape of Divnogorsk is exceptionally picturesque. However, the complex topography makes more difficult the application of industrial methods of construction."¹⁴⁸ Despite this challenge, Ruzhze deemed the settlement a success specifically because of its relation to the landscape.

In its development, Divnogorsk represents the idea of the complete fusion [sliianie] of city with nature. Nature surrounds the city, enters inside it [in the form of] large wooded areas, forms an integral part of the residential blocks and planned micro-districts.¹⁴⁹

Ruzhze, an architect and historian of Russian and Soviet garden cities, graduated in 1949 from the Leningrad State University (LGU) with a thesis on the "garden city" idea.¹⁵⁰ She worked in Krasnoyarsk at the city planning bureau during the early 1960s, then returned to Leningrad.¹⁵¹ During this time, she gave lectures to the local chapter of the Union of Architects on urban greening and collected material for a book on Krasnoyarsk, published in 1966.¹⁵² While Soviet discourse is almost always passionate regarding Soviet projects—in approval or disapproval—the basis of judgment could and did shift over time. It is therefore notable that in domestic examples of the mid- and late-1960s, the reception of buildings and towns such as Divnogorsk was

opposed, beginning in 1958 at conference, more by 1961. See Josephson, "'Projects of the Century' in Soviet History: Large-Scale Technologies from Lenin to Gorbachev."

¹⁴⁸ V. L. Ruzhze, *Krasnoiarsk: Voprosy Formirovaniia I Razvitiia* (Krasnoyarsk: Krasnoiarskoe kn izd, 1966), 163.

¹⁴⁹ *Ibid.*, 173. A few pages later, Ruzhze cites the TsK KPSS assertion from the 1963 Party Congress that: "Citybuilding [gradostroitel'stvo] is one of the principal means of educating the new man, eradicating of the last vestiges of a social structure of everyday life and in the minds of people." [p187]

¹⁵⁰ www.archi.ru. V.L Ruzhze "Spisok nauchnykh trudov"; see also *Sotsiologi Rossii i SNG XIX – XX vv. Biobibliograficheskii Spravochnik*. Editorial URSS: Moscow, 1999. p256

¹⁵¹ Slabukha, *Arkhitektory Prieniseiskoi Sibiri.*, Ruzhze "Goroda-sady" 1961. Later, after returning to Leningrad, Ruzhze helped pioneer the use of demographic surveys in sociological research and co-authored an influential work of urban sociology, *Perspectives on the Development of Housing in the USSR*, 1975. She was also one of the primary sources (in interview and in text) for Eric L. Richard's 1972 Princeton thesis "The Garden City in Russia, 1904–1933." Richard's thesis is, in turn, cited by S. Frederick Starr in his two influential book chapters on early Soviet planning thought. See Starr, "The Revival and Schism of Urban Planning in Twentieth-Century Russia."; "Visionary Town Planning During the Cultural Revolution," in *Cultural Revolution in Russia, 1928-1931*, ed. Sheila Fitzpatrick (Bloomington: Indiana University Press, 1978).

¹⁵² Ruzhze, *Krasnoiarsk: Voprosy Formirovaniia I Razvitiia*.

based in the relationship between built and natural environments, with architects, town planners and engineers seemingly attentive to both the specific environment and the idea of “nature” as a category distinct from “the city.”

The city’s more intimate post-war relationship to the Yenisei River had other, physical consequences. In 1966, a massive spring flood arose, far exceeding flood levels as measured in the previous hundred years.¹⁵³ Engineers at the Krasnoyarsk dam, then only partially completed, managed to incorporate the floodwaters into a new regime of management practices.¹⁵⁴ Downstream, the floodwaters inundated the Island of Leisure and other areas designated for metaphorical inundation by greenery. Photographs of the partially built Krasnoyarsk Central Stadium emerging from the waters like a half-drowned shipwreck made clear the vulnerability of the “city on the Yenisei” to the Yenisei.

Over the long term, construction of the Krasnoyarsk GES altered the local environmental experience in multiple ways. First, it altered one of Siberia’s classic features: the region’s winter cold. Increased humidity from the open water of the newly formed reservoir made formerly “dry cold” winters more biting and damp. The hydro-electric station and associated dam, built by workers living in Divnogorsk, likewise altered the hydrology and temperature regime of the Yenisei River, noticeably worsened local urban climates conditions and recreation opportunities for those workers. The stretch of river downstream of the dam no longer froze during the long Siberian winter and stayed cold during the short summers. Because the Yenisei River no longer froze as it flowed past Divnogorsk or Krasnoyarsk, it created cold, damp fogs and other health hazards for residents settled in the new, modern, riverfront apartments.¹⁵⁵

¹⁵³ A. I. Kuznetsov, O. D. Mashukova, and F. F. Razzorenov, "The 1966 Flood on the Yenisei River at the Krasnoyarsk Hydroelectric Project Site," *Hydrotechnical Construction* 1, no. 2 (1967); "The Krasnoyarsk Hydroelectric Station, the Largest in the World, Is Being Readied for Operation," *ibid.*, no. 8; A. E. Bochkin and A. L. Mukoed, "The World's Largest Hydroelectrical Station Krasnoyarsk, Placed in Line," *ibid.* 4, no. 4 (1970). On the 1966 flood, see also "Page 6" Pravda, 24 Jun. 1966, <https://dlib-eastview-com.proxy.lib.umich.edu/browse/doc/21446649>.

¹⁵⁴ Related articles in the journal *Hydrotechnical Construction* are available via EastView in translation, including T. F. Avrova and A. I. Kuznetsov, "Re-Formation of the Channel of the Yenisei River in the Lower Pool of the Krasnoyarsk Hydroelectric Power Station," *ibid.* 2, no. 11 (1968); Ia K. Aleksandrovskaya, "Stresses in the Krasnoyarsk Dam During Construction and During Operation to the Present," *ibid.* 5, no. 4 (1971); A. E. Bochkin et al., "The Condition of the Krasnoyarsk Dam During the Initial Years of Operation," *ibid.*; V. V. Blinkov et al., "Scientific Research on the Krasnoyarsk Hydroelectric Station," *ibid.* 6, no. 9 (1972); K. Aleksandrovskaya et al., "Results of Full-Scale Observations on the General Displacements of the Krasnoyarsk Dam and Its Rock Foundation," *ibid.* 7, no. 1 (1973); Yu A. Grigor'ev and N. M. Sokol'nikov, "Ice-Thermal Reservoir Regimen During First Years of Operation of the Krasnoyarsk Hydroelectric Plant," *ibid.*, no. 10.

¹⁵⁵ Efforts to address these issues included a scientific conference, convened in 1993, which discussed the question of whether the river could be technologically returned to a freezing regime. V. A. Koren'kov, and B. A. Rastoskuev. *Mozhno Li Zamoroziti*

Paradoxically, the new temperature regime created by water released from the “Krasnoyarsk Sea” decreased summertime water temperatures, making the main embankment areas less attractive for swimming.¹⁵⁶ Scenes of “modern” riverfront beach leisure such as that found in photographs from the 1950s-60s now appear as quaint and dated in their way as the earlier scenes of women washing laundry at the river’s edge. In addition to those environmental ruptures to air and water, the cheap power provided by the Hydroelectric Station was directed toward an eminently dirty use. The Krasnoyarsk Aluminum Factory (KrAZ) produced toxic clouds of emissions that poisoned residents and obscured sightlines.

Throughout the 1960s, the GES, bridge, embankment reconstruction and other developments altered the relationship of Krasnoyarsk to the Yenisei, as well as shaping the city’s identity relative to regional and national trends. As a whole, these developments increased the river’s visual, cultural, and spatial importance to the city. Simultaneously, direct economic, transportation, and daily infrastructure uses of the river decreased or were distanced from individual experience thanks to the intervention of technological forms of infrastructure (such as water supply and laundry facilities).¹⁵⁷ The city-river interface examined in this section is better imagined, not as a frontier or contested border between the modern, industrial, infrastructural city and the wild, natural river, but as a interactive “contact zone” of mutual, if lop-sided, interaction.

The shifting relationship between city and river demonstrates the impact/significance of locale and place on this [Soviet] city, even in periods of industrialization, standardization and mass construction. These phenomena, and modernization more generally, are usually considered as antithetical to place-identity and environmental awareness, but clearly it is more complicated. The architects and others involved in re-shaping postwar Krasnoyarsk cannot be divided tidily into “local” and “central” actors, nor into environmentalist and developmentalist camps. Instead,

Enisei: Sbornik Materialov Nauchno-Tekhnicheskoi Konferentsii, Divnogorsk, 27 Aprelia 1993. Divnogorsk, 1993. An earlier, 1989 conference had been more neutrally titled: “Research on the influence of Hydro-node equipment on the ice regime of rivers and surrounding environs.” (“Issledovanie Vlijaniya Sooruzenij Gidrouzlov Na Ledovyj Rezim Rek I Okruzajuscuju Sredu Tezisy Dokladov Vsesojuznogo Naucno-Techniceskogo Sovescanija ; (Divnogorsk, 9-13 Oktjabrja 1989 G.)” (1989).)

¹⁵⁶ The Glen Canyon Dam has had a similar effect on the Colorado River as it enters the Grand Canyon. There, the main environmental impact has not been a change in freezing regimes; still, populations of fish such as the Humpback Chub, which evolved for warm silty water, have plummeted in the resulting cool, clear flows of the dammed River.

¹⁵⁷ KGA *fond* R-1200 op.1 del.95a: K.Matveev, *Istoriia i Razvitie Vodoprovoda i Kanalizatsii Gor. Krasnoiarska* (1963) [History and Development of water supply and sewerage for the city of Krasnoyarsk, manuscript for unpublished book]. See also Tijana Vujosevic, “The Soviet Banya and the Mass Production of Hygiene,” *Architectural Histories* 1, no. 1 (2013).;

the large-scale infrastructures erected during this period often served to reinforce pre-existing connections to nature and place.

Endeavors Tied to Place

The drastic alterations to the physical climate and sense of place that transformed 1960s Krasnoyarsk and other Siberian sites were met with an upsurge in environmentalism and nationalist sentiments. Despite the hierarchy, standardization, and bureaucratic centralization of Soviet governance, place-based activism and heritage preservation had a special status in the late Soviet political sphere. As noted by political and urban historians Blair Ruble and John Czaplicka, “Local history, historic and environmental preservation—endeavors tied to place—were among the few points of social mobilization considered legitimate by Communist regimes throughout Central and Eastern Europe and the Soviet Union.”¹⁵⁸ In this period, a stream of high-profile environmental legislation asserted the Soviet Union’s place at the forefront of international environmentalism, at least on paper.¹⁵⁹ Within the USSR, environmental awareness was expressed in popular and “high” culture, but was also prevalent among scientists and student activists. Resistance to the “obligatory” replacement of “natural beauty” with “industrial beauty” (as Chivilikhin phrased it) among scientists and student activists took forms ranging from volunteer patrols against poachers to professional-scientific conferences.¹⁶⁰ Ultimately, environmental preservation, historical preservation and other “endeavors tied to place” have been credited with contributing to, even triggering, the collapse of the Communist Bloc (1989) and the Soviet Union

¹⁵⁸ Czaplicka, Ruble, and Crabtree, *Composing Urban History and the Constitution of Civic Identities*, 4.

¹⁵⁹ Entry points into this literature include Charles E. Ziegler, *Environmental Policy in the USSR* (Amherst: University of Massachusetts Press, 1987); Philip R. Pryde, *Environmental Management in the Soviet Union*, Cambridge Soviet Paperbacks (Cambridge: Cambridge University Press, 1991); Andy Bruno, "Russian Environmental History - Directions and Potentials (Review: Brian Bonhomme, I.A. Poliakov, Arja Rosenholm, Sari Autio-Sarasma)," in *Kritika-Explorations in Russian and Eurasian History* (Bloomington: Slavica Publishers, 2007); Laura A. Henry and Vladimir Douhovnikoff, "Environmental Issues in Russia [Lit Review]," *Annual Review Of Environment and Resources* 33, no. 1 (2008); Goldman, *The Spoils of Progress: Environmental Pollution in the Soviet Union*; Stephen Brain, "The Environmental History of the Soviet Union," in *A Companion to Global Environmental History*, ed. John Robert McNeill and Erin Stewart Mauldin, Wiley-Blackwell Companions to History (Hoboken, N.J.: Wiley-Blackwell, 2012).

¹⁶⁰ Examples from either side of Gorbachev’s glasnost policy include Svetlana Borisovna Chistiakova, *Vliianie Mestnykh Prirodno-Klimaticheskikh Uslovii Na Proektirovanie Gorodov : Dokl. K Konf. "Klimat-Gorod-Chelovek"* (Moskva: Gidrometeoizdat, Mosk otd-nie, 1974), Conference publication (cnp); V. M. Zhukov, Ssr Geograficheskoe Obschestvo, and Klimat-Gorod-Chelovek Vsesoiuznaia Mezhvedomstvennaia Konferentsiia, "Klimat I Gorod: Materialy Konferentsii "Klimat-Gorod-Chelovek"" (1974); Tatyana Ilyina, ed. *On the Road to the Noosphere* (Moscow: Novosti Press Agency Pub. House, 1989).

(1991).¹⁶¹

Siberia and Central Asia were home to many of the USSR's most acute environmental problems, and the strongest responses.¹⁶² Well-known examples of environmental mobilization include the late-Soviet resistance to various industrial, hydro-electric and nuclear development projects. Of these, one of the most famous causes was the construction of a cellulose factory on Lake Baikal, famously opposed by Siberian writer Vladimir Chivilikhin in his 1963 essay, "Siberia's Bright Eye." Soviet scientists also expressed their opposition, but the plant was eventually built.¹⁶³ In the 1970s, official proposals to further alter regional hydrological systems and settlement patterns by rerouting Siberian rivers southward where they would irrigate the cotton-fields of Central Asia and ameliorate the devastating shrinkage of the Aral Sea also met with popular and scientific opposition. In this case, the opposition was more successful and the diversion plans were shelved.¹⁶⁴

Soviet Writers, particularly those of the "Village Prose" movement, were active participants in environmental preservation and anti-developmental causes of the late Soviet period. Siberia, and to a lesser extent Krasnoyarsk, was well-represented within this Union-wide phenomenon. Starting in the late 1950s and early 1960s, writers of the "Village Prose" movement based in Krasnoyarsk, Irkutsk and other Siberian cities, articulated a critical view of the State's

¹⁶¹ Ruble, Czaplicka, and others tend to assign agency to local rather than national actors, posing the two as inherently opposed. "Such [preservation] efforts frequently brought local communities into conflict with regimes intent on embracing their societies in their totality, thereby submerging and destroying that which was local under the guise of an all embracing ideological blanket. The archeology of the local prompted by an interest in local history as well as in the micro-, built and natural environments provided a spark that, as will be seen in all of the communities discussed in this volume, helped to ignite the transition from authoritarian to post-authoritarian regimes." p4 Czaplicka & Ruble, eds, *Composing Urban History and the Constitution of Civic Identities*, 2003.

¹⁶² At least within the RSFSR. Strong environmental movements also arose in the constituent republics of the USSR, particularly the Baltics, and within the "Soviet Bloc" countries of Eastern and Central Europe. Katrina Z. S. Schwartz, *Nature and National Identity after Communism: Globalizing the Ethnoscape*, Pitt Series in Russian and East European Studies (Pittsburgh, Pa.: University of Pittsburgh Press, 2006).. On Siberian issues, see Stewart, "Air and Water Problems Beyond the Urals."

¹⁶³ Yitzhak M. Brudny, *Reinventing Russia: Russian Nationalism and the Soviet State, 1953-1991* / Yitzhak M. Brudny, vol. Cambridge, Mass. :, Russian Research Center Studies (Cambridge, Mass. : Harvard University Press, 1998), 55; Hosking, "The Rediscovery of Russia."; Paul R. Josephson, "Siberian Scientists and the Engineers of Nature," in *New Atlantis Revisited: Akademgorodok, the Siberian City of Science* (Princeton University Press, 1997).

¹⁶⁴ See "'Projects of the Century' in Soviet History: Large-Scale Technologies from Lenin to Gorbachev."; "Industrial Deserts: Industry, Science and the Destruction of Nature in the Soviet Union."; John Massey Stewart, ed. *The Soviet Environment: Problems, Policies, and Politics* (New York: Cambridge University Press, 1992); Albert J. Semtner, "The Climatic Response of the Arctic Ocean to Soviet River Diversions," *Climatic Change* 6, no. 2 (1984); Ilyina, *On the Road to the Noosphere*; Douglas R. Weiner, "Environmental Activism in the Soviet Context: A Social Analysis," in *Shades of Green: Environmental Activism around the Globe*, ed. Christof Mauch, Nathan Stoltzfus, and Douglas R. Weiner, International Environmental History (Lanham, Md.: Rowan & Littlefield Publishers, 2006).

large-scale hydroelectric projects, which they saw as harming essential Russian values, lifeways, and landscape.¹⁶⁵ One of the most prominent writers associated with this loose movement, Valentin Rasputin, began his writing career as a journalist in Krasnoyarsk, where he was based from 1964-1966.¹⁶⁶ There, he covered the construction of the Hydro-electric Station and dam, focusing on the energy and enthusiasm of the youth involved in this “heroic” work (Komsomol and demobilized soldiers among them).¹⁶⁷ His later and better-known works focused on the disruption and loss caused by the flooding of rivers in conjunction with hydro-power dam construction.¹⁶⁸

Rasputin’s turn away from journalistic writing to fiction and subsequent career hinged on a transformative encounter with another writer and environmental activist, Vladimir Chivilikhin. In 1965, Rasputin participated in a seminar for young authors in Chita, during which he was “discovered and encouraged” by Chivilikhin.¹⁶⁹ Siberian-born Chivilikhin (1928–1984) was one of the major critics of Khrushchev’s environmental policies in forestry, and an ardent Siberian/Russian patriot. He was at one time the science editor for *Komsomol’skaia Pravda*. He also had a Krasnoyarsk connection.¹⁷⁰ In the early 1960s, when Krasnoyarsk was already well estab-

¹⁶⁵ Rasputin and Astaf’ev are the main two writers associated with Village Prose who have Krasnoyarsk connections. David C. Gillespie, *Valentin Rasputin and Soviet Russian Village Prose*, Texts and Dissertations / Modern Humanities Research Association (London: Modern Humanities Research Association, 1986); Kathleen F Parthé, *Russian Village Prose: The Radiant Past* (Princeton, N.J.: Princeton University Press, 1992); Gillespie, "A Paradise Lost? Siberia and Its Writers, 1960 to 1990."; Gerald Mikkelson and Margaret Winchell, "Introduction: Valentin Rasputin and His Siberia," in *Siberia on Fire: Stories and Essays (by Valentin Rasputin)* (DeKalb, Ill.: Northern Illinois University Press, 1989); N. N. Shneidman, "Soviet Prose in the 1970's: Evolution or Stagnation?," *Canadian Slavonic Papers/Revue canadienne des slavistes* 20, no. 1 (1978). See also Diment’s introduction chapter in Diment and Slezkine, *Between Heaven and Hell: The Myth of Siberia in Russian Culture*.

¹⁶⁶ Mikkelson and Winchell, "Introduction: Valentin Rasputin and His Siberia," xi.

¹⁶⁷ Rasputin, *Kostroyvi Novye Goroda* published in Krasnoyarsk in 1966

¹⁶⁸ Further research would be needed to establish the exact dates of Rasputin’s presence in Krasnoyarsk, but it is tempting to suppose he may have been there to see the 1966 flood of the Yenisei and the flooded islands with the Central Stadium. Mikkelson and Winchell only state that “In 1966 [Rasputin] abandoned journalistic writing and returned to Irkutsk.” {Mikkelson, 1989 #6331 @xi}

¹⁶⁹ Mikkelson and Winchell, "Introduction: Valentin Rasputin and His Siberia," xii.. They describe Chivilikhin as “a prose writer with strong interest in ecology and Russian history.” Chivilikhin had, in his turn, been mentored and encouraged by Leonid Leonov, another prominent writer and “environmental” activist most famous for his 1954 work, *Russkii Les (The Russian Forest)*. As discussed elsewhere in this dissertation, Leonov was deeply involved in the “Society of Green Friends” as the All-Union Society for the Protection and Promotion of Urban Greening was popularly known, established in 1948. Leonov’s relationship with Chivilikhin is discussed at length in Weiner *Little Corners*. On Leonov’s career and writings, see also Boris Thomson, "Leonid Maksimovich Leonov, 1899-1994: Novelist and Dramatist," in *Reference Guide to Russian Literature*, ed. Neil Cornwell and Nicole Christian (Chicago: Fitzroy Dearborn, 1998); *The Art of Compromise: The Life and Work of Leonid Leonov* (Toronto: University of Toronto Press, 2001).

¹⁷⁰ The passage discussed in this and the following paragraph are quoted by Douglas Weiner, part of his discussion on Chivilikhin as a middle figure between the 1950s environmentalism of writers Leonid Leonov, and later more nationalist writers such as Rasputin and Astaf’ev. Douglas Weiner, 2002, *A Little Corner of Freedom: Soviet Nature Protection from Stalin to Gorbachev*, p338 note 109 as being on p39. Chivilikhin’s especial focus was responsible forestry: After describing Krasnoyarsk as “an island of good relations,” he turned to further discussion of the surrounding sea of evil: “The taiga is currently felled at an unprecedented

lished as an industrial powerhouse, Chivilikhin wrote that Krasnoyarsk was one of “a few small island of good relations with nature in a sea of evil.” The evil, according to Chivilikhin, lay in the assumption that development or “mastery” of natural resources such as Siberian forests [*taiga*] must automatically entail their destruction.

Chivilikhin foregrounded one of the central quandaries of urban development and design in conditions of modernity: the interrelationship of industry, urbanity, and environment. “Does the introduction of such good things as electricity and residential neighborhoods obligatorily have to be accompanied by the crushing of the flowers?” he asked. “Must industrial beauty replace natural beauty?” If industry and nature are so inescapably opposed, he continues, “Why then were the people of Krasnoyarsk able to preserve a large tract of 'wild' taiga forest right in the middle of their city?”¹⁷¹ Chivilikhin’s praise for Krasnoyarsk seems to suggest that the city enjoyed an exceptional pattern of intentional environmentalism achieved through local agency; the evidence from Krasnoyarsk suggests a more complex interrelationship in which central and local actors both embraced the city’s sense of place.¹⁷²

Conclusions

When considered from the perspective of the architects, urbanists, and others involved in shaping its public identity and spaces, Krasnoyarsk appears neither exceptional nor typical, but as a particularly vivid example and testing-bed of widespread phenomena. Close examination of this one city reveals “good fortune” in terms of innate landscape beauty (if such a thing can be

tempo, on a horrifically grand scale. And it cannot be avoided— after all, the country needs millions of cubic meters of lumber every day. But the felling... is conducted unsystematically, exhaustively, wastefully, without looking back and without looking ahead.” The passage comes from Chivilikhin, “Mesiats v Kedrograde,” p13-14 in *Svetloe Oko*, Moscow: Sovremennik, 1980. Note that this is a compilation, the original essay was written in 1962

¹⁷¹ Chivilikhin is frequently quoted by Weiner and others to illustrate the interplay between Russian nationalism and forest preservation advocacy, as by Katrina Z. S. Schwartz in her book on Latvian environmental attitudes, *Nature and National Identity After Communism: Globalizing the Ethnoscape* p60, (who cites Weiner, “Little Corners of Freedom” p335 as her source of the quotes. See also Brudny, *Reinventing Russia*, Cambridge, Mass. :.. Brudny, p55-56, identifies Chivilikhin as having been a prominent voice opposing Khrushchev’s policies of de-Stalinization.

¹⁷² With regard to the remnant patch of “taiga” forest, Chivilikhin likely had in mind the trees of the Krasnoyarsk “Gorky” Central Park of Culture and Rest. While the forested character of this parcel was a holdover from made possible thanks to the city’s topography and development history, the trees themselves did not survive their urbanization. The original self-seeded evergreens died and were replaced in the post-war period by human-planted ones. V.I. Tsarev, V.L.Chobanian, “Tsentral'nyi park v gorode Krasnoirske: istoriia formirovaniia i arkhitekturno-planirovochnye preobrazovaniia” *Vestnik KrasGAU*, no7 (2013) pp281-88; V.L. Chobanian, “Sadovo-parkovaia arkhitektura sibirskogo goroda: istoricheskii analiz i otsenka (na primere Krasnoirska)” M.A. Dissertation, Siberian Federal University, 2013.

said to exist without the cultural cues that direct the eye and mind to notice and identify a place as “beautiful.” Such a phenomenon could be found in innumerable cities and periods. What is surprising with respect to Krasnoyarsk is not the impressive terrain, or the desire of architects to make and claim connection to that beauty. It is that the Soviet architecture-planning system allowed and supported such connection, despite the centralization, standardization, and supposed indifference to place that are commonly associated with that system. This is the first finding of note to emerge from study of Krasnoyarsk’s public face.

The systemic character of Soviet urbanists’ engagement with environmentalism is made more clear when we return to the passage by Chivilikhin, quoted above, that suggests Krasnoyarsk was a small island “of good relations to nature in a sea of evil.” In fact Chivilikhin saw not one island, but many. In the relevant passage of his essay, quoted here in full, Chivilikhin asked:

Does the introduction of such good things as electricity and residential blocks obligatorily have to be accompanied by the crushing of the flowers? Must industrial beauty replace natural beauty? Why then in the squares of Novosibirsk do they plant each spring the seeds of the amazing taiga flower—the *kandyk*?¹⁷³ Why then were the people of Krasnoyarsk able to preserve a large tract of 'wild' taiga forest right in the middle of their city? Why haven't they leveled the taiga, then, in An-garsk and Akademgorodok, but instead integrated their residential areas into it?

All of that, however, amounts to a few small islands of good relations with nature in a sea of evil.¹⁷⁴

The metaphor of Siberian Gulag settlements being an “archipelago” far from the mainland of European Russia was made famous by Aleksandr Solzhenitsyn’s masterwork, finished in 1968 and published abroad in 1973.¹⁷⁵

Chivilikhin does not use archipelago, chain or other terms to unite the “small islands” (*malen'kie ostrovki*) that he ascribes to Novosibirsk, Krasnoyarsk, Akademgorodok and An-garsk. From the perspective of Soviet urban planning and architecture, however, there was a connection. All of the actions that Chivilikhin lists—from spring planting in city squares, to park design and preservation, to the integration of pre-existing vegetation and tree massifs into residential development—were forms of “urban greening and beautification,” a subfield of Soviet

¹⁷³ Likely the Siberian fawn lily or dog’s tooth violet, *Erythronium sibiricum*

¹⁷⁴ Chivilikhin, “Mesiats v Kedrograde,” p13-14 Quoted, minus the sentence on Novosibirsk, in Douglas Weiner, 2002, *A Little Corner of Freedom: Soviet Nature Protection from Stalin to Gorbachev*, p338 note 109 as being on p39.

¹⁷⁵ The first of three volumes was published in Paris in the original French, followed soon thereafter by English translations. Aleksandr Isaevich Solzhenitsyn, *The Gulag Archipelago, 1918-1956; an Experiment in Literary Investigation*, trans. Thomas P. Whitney, 1st ed. (New York,: Harper & Row, 1973).The same metaphor was also used to title the 1991 Russian-language version of Douglas Weiner’s book on early Soviet nature protection: *Arkhipelag Svobody*, (*Archipelago of Freedom*). For discussion of this title and process, see his afterword to *Models of Nature* (2000: p241).

town planning (*gradostroitel'stvo*). The actions seen by Chivilikhin as isolated “islands” were, in effect, the most prominent peaks of an underwater mountain range. The remainder of this dissertation looks to document and assess the connections between these peaks, from the perspective of the architecture-planning specialists whose responsibility it was to envision and shape the whole complex.

This chapter’s consideration of Krasnoyarsk and its official image offer other insights into the general character of Soviet architecture and planning as applied in Siberia. Consideration of the architects, civil engineers, and builder-planners involved in the successive embankment beautification and improvement projects, reveals the trans-regional, and inter-disciplinary character of Soviet architecture-planning practice. Far from being a closed-off backwater, Krasnoyarsk emerges as more central, and more “networked” than expected. The individuals responsible for these projects in the case of Krasnoyarsk came from many different parts of the Soviet Union, primarily but not exclusively Russia. Some were born in Krasnoyarsk and never left, some resided in Leningrad and paid only short visits if any to the site of their design and planning work. This indicates the mobility of professionals from the metropolises of Moscow and Leningrad to Siberia, not necessarily as a form of punitive exile, but—particularly in the period before Krasnoyarsk had its own educational institutes for architects, planners, and builders—as a form of work placement and distribution of expertise.

In terms of project sequencing and scope, the raft of concurrent projects that transformed Krasnoyarsk in this period are in keeping with the design preference for “holistic” and ensemble design approaches. In part because there was no private property ownership to stop them, Soviet planner-architects of this period could take on the reconstruction of embankment, bridge, islands, and the city administration building all at once. Indoor and outdoor design decisions were necessarily linked, when made by the same architect or design team. The presence of the city’s most prominent architects and engineers, including city chief architects and heads of design studios, among those who oversaw projects for the embankment indicates the relative lack of specialization or internal divisions between architecture, spatial planning, and landscape design, at least under Siberian conditions of professional labor shortage.

To conclude: this chapter explored city-nature relations as encapsulated in Krasnoyarsk’s development across the long twentieth-century. Official/canonical representations of the city (i.e. its portraits and representative civic spaces) demonstrate a continued yet evolving engagement

by local architect-planners with “the natural landscape” even in times of intensive industrialization, centralization, and standardization. This engagement complicates assumptions that the socialist built environment and its production were the product of planners and plans who were anti-place. It sets the stage for closer examination of how architecture and urban design professionals sought to achieve “harmony” and “fusion” between urban realm and natural landscape, using urban greening and beautification as both goal and means to do so.



Map 2.1 Krasnoyarsk City Map, brochure for tourists circa 2000, front and back.¹⁷⁷

¹⁷⁷ undated. "Krasnoyarsk: carta goroda" Predpriatia 'Kredo' AAOT 'Tverskoi poligrafkombinat'. Print run 100,000. Author's collection.



Figure 2.2 Photograph of central Krasnoyarsk with Communal Bridge, winter 2012, from tourist website¹⁷⁸

Website captions include the following commentary:

"Local winters are very severe. In temperature -30 degrees Celsius and very high humidity it is difficult to stay in the streets for longer than 10 minutes. [...]"

The river is not covered with ice anymore because of hydroelectric power plant of Krasnoyarsk.

During construction of the plant scientists made some mistakes in their calculations as related to prognosis of ecological outcomes. Thus, it was thought that the unfreezing band will be 20 km long. But it extended for 200 km and it produced a great influence on climate and ecology."

¹⁷⁸ Lead photograph from "The Frozen Beauty of Krasnoyarsk City" posted on January 16, 2012 by kulichik to English-language website "<http://englishrussia.com/2012/01/16/the-frozen-and-magnificent-city-of-krasnoyarsk/>" Last accessed 01-2019



Figure 2.3 Contemporary Russian 10-Ruble banknote showing Krasnoyarsk landmarks¹⁷⁹

¹⁷⁹ <https://hasbola.ru/exchange/russian-rubles/old-russian-ruble-banknotes/>

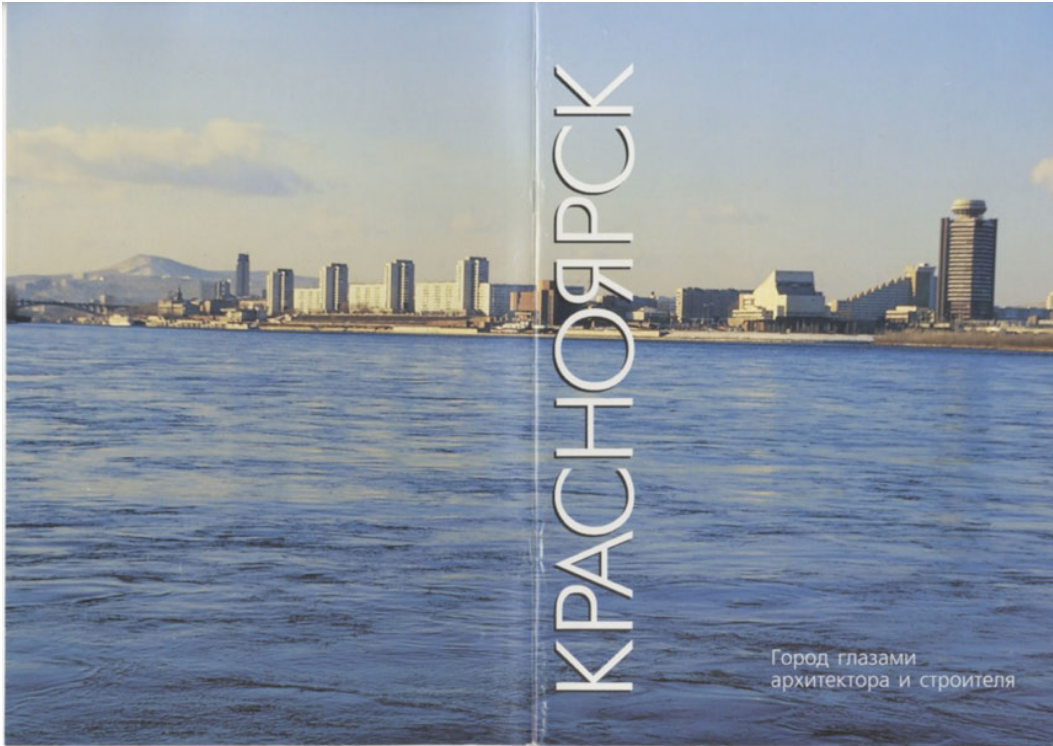


Figure 2.4 Cover of "Krasnoyarsk - in the eyes of architects and builders' Russian-language promotional brochure¹⁸⁰



Figure 2.5 Cover of 1986 Russian-language guidebook to Krasnoyarsk showing riverfront¹⁸¹

¹⁸⁰ Author's collection

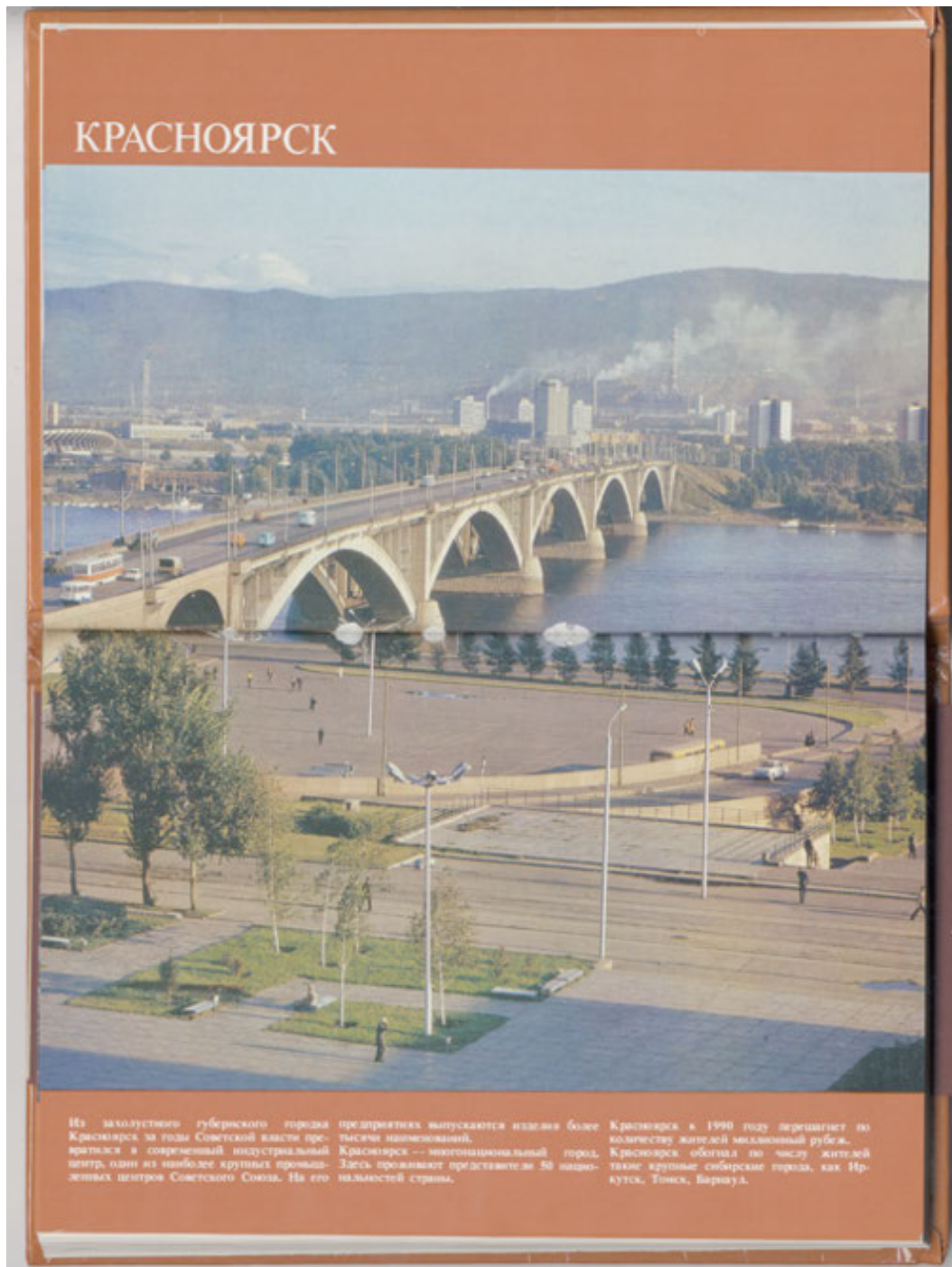


Figure 2.6 City portrait - first image of Krasnoyarsk in 1986 guidebook⁸

¹⁸¹ Vinskaia, Liudmila Andreevna. *Krasnoiarsk*. Krasnoyarsk: Krasnoiarskoe knizhnoe izd-vo, 1986.



Figure 2.7 Large commemorative plaque "Krasnoyarsk 1628 - 1978 -- 300 Years" on building exterior in central city¹⁸²

¹⁸² Photographs by M.Taylor, summer 2012

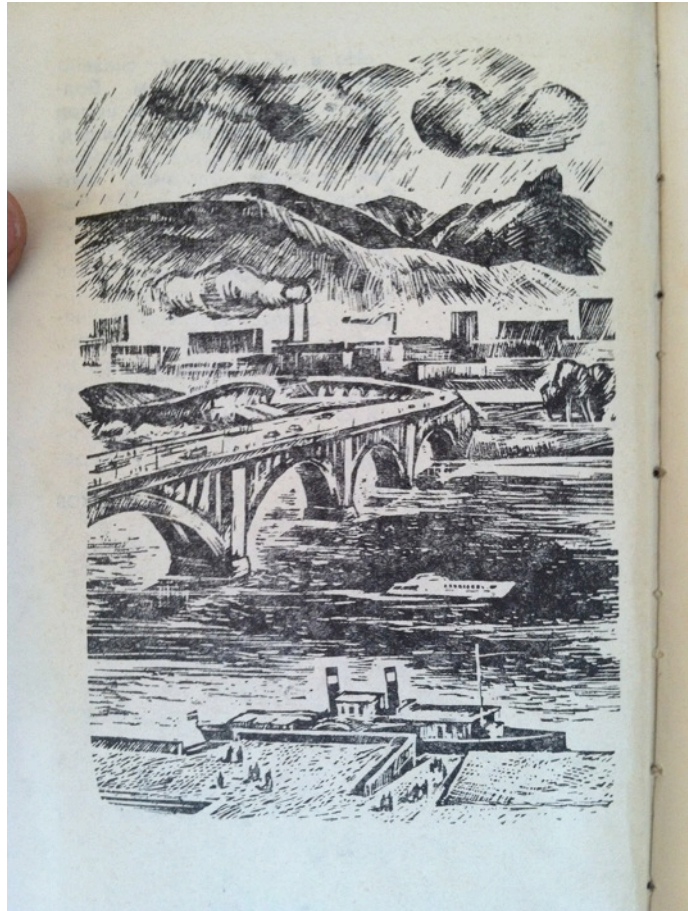
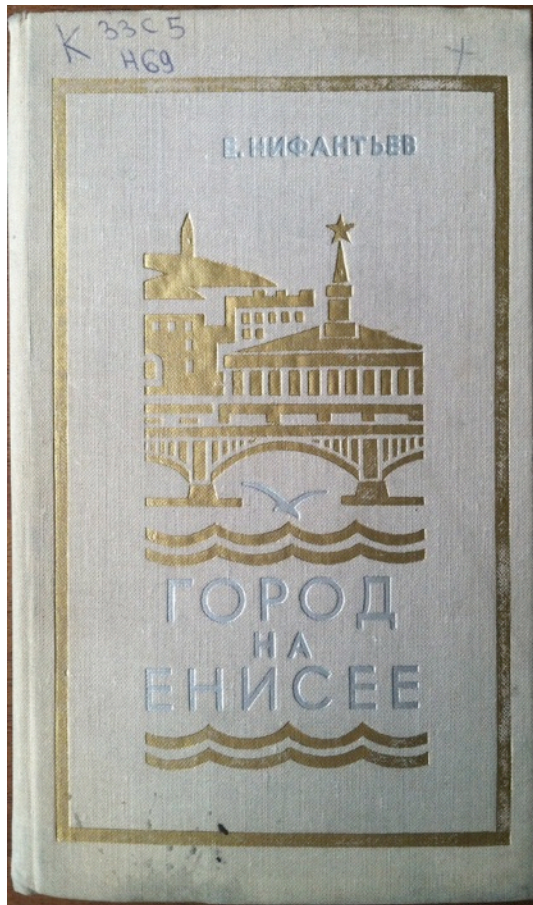


Figure 2.8 Cover and frontispiece of *City on the Yenisei*, Nifant'ev 1973 showing iconic Krasnoyarsk views¹⁸³



Figure 2.9 Cover of 1970 *L'Architecture d'aujourd'hui*, theme issue on Soviet Architecture¹⁸⁴

¹⁸³ E.S. Nifant'ev, *Gorod na Enisei (City on the Yenisei)*, Krasnoyarsk: Krasnoyarskoe Knizhnoe izdatel'stvo, 1973 (2nd edition)

¹⁸⁴ *L'Architecture D'aujourd'hui*, 1970:147. Issue on "L'Architecture Sovietique". Krasnoyarsk featured on pages 22-25.

Chapter 3.

The Stalinist Garden-Factory: Cultured and Hygienic Conditions for Work and Workers

“The thought of greening did not seize the mind immediately. At the factory there were people who thought that in the world of technology and metal there was no place for flowers and greenery. These people dreamed of asphalt. A smooth square of asphalt around the workshops— that seemed the ideal to them, that was the only style which harmonized with the character of an industrial enterprise.

At that time the current theory held that, since a worker deals with metal, with machines, that nothing else can or should interest him. This notion was propagandized even in poems. [...] And in architecture, where others proclaimed that a dwelling doesn't need coziness (*uiut*), but needs geometry, for a house is a “machine for living in.”

Against the factory supporters of asphalt arose the voices of nature enthusiasts. [...] “Look around [they said]. Our district is a green one. What is more beautiful than the pale blue forested distance, running off towards Ostankino? And why shouldn't we let in to the factory the greenery that surrounds us? Who said, that at a factory there must be only asphalt, iron and concrete?”¹

The decade spanned by the first and second Five Year Plans (1928–1932, 1933–1937) was a formative period for Stalinist politics, industrialization, and everyday culture. It was, equally, a formative period for architecture and urban planning, when “Soviet” approaches were developed in self-conscious opposition to avant-garde or modernist developments. This chapter investigates the mutual influence between these spheres in this period, specifically the intersection of Soviet industrialization and modernization with urban landscape design after the 1932 establishment of the Soviet Architects' Union (SSA). As part of my larger project of understanding the environmentalism of Soviet architects and urbanists, I ask here how and why trees, greenery and other seemingly “traditional” landscape elements were incorporated into the 1930s vision of modern industrial cities, cities that were also necessarily self-consciously and visibly “socialistic (*sotsialisticheskiye goroda*, or *sots-gorod*).” I analyze the arguments used within the architecture-planning and public health professional communities with regard to the “greening of factories,”

¹ Usov, I.P. *Zavod-Sad: Zapiski Sadovoda* [*The Garden-Factory: Notes of a Gardener*]. Foreword by Leonid Leonov. Moscow: Profizdat, 1954. Quotes pp10-11

(*ozelenenie zavodov, ozelenenie prompleshchadok*). The attention architect-planners and other urbanists directed toward this topic reflects the significance of city-industry relations as a core concern of Soviet urban planners, as indeed was true in the historical development of modern urban planning globally.

This chapter begins at the time of the consolidation of the Union of Architects of the USSR (1932), when the greening of industrial sites was just starting to develop as a set of standards and shared ideals.² Given that industrialization was a by-any-means-necessary priority of the USSR during the first and second five-year plans, even Soviet landscape architecture had an industrial side.³ In this light, I explore how “environmentalist” ambitions were applied Union-wide to sites of labor and industrial production, to create what was known as a “*zavod-sad*” or Garden-Factory.⁴ I examine the imagined benefits of “factory greening” in relation to a range of factory sites across the USSR, including high profile projects such as the Cheliabinsk and Stalingrad Tractor Factories, as well as lesser-studied projects such as the Kalibr Instrumentation Factory in Moscow and the Tashkent Textile Combine.

These and similar industrial enterprises were central to the early Stalinist project of building “smokestack socialism.”⁵ They set the tone, moreover, for several of the characteristics most durably associated with socialist modernity: the USSR's degree of economic and symbolic reliance on heavy industry, the domination of most or all Soviet cities by industrial production and facilities, and the concomitant environmental consequences of said urban and regional industrialization. By the end of the decade, Soviet urbanists habitually referred to “Garden-Factory” as a exemplary manifestation of socialist industrialization, and would continue to do so through the 1990s.⁶

² In 1937, the editor's foreword to *Problems in Park-Garden Architecture* referred to the early 1930s as the “childhood period” of industrial site design, with all the potential and infectious diseases associated with children. See “Predislovie Redaktsii.” In *Problemy Sadovo-Parkovoi Arkhitektury: Sbornik Statei*, edited by M. P. Korzhev, L. B. Lunts, A. Ia. Karra and M. I. Prokhorova, v–vii. Moscow: Izd-vo Vsesoiuznoi Akademii Arkhitektury, 1936.

³ The Russian equivalent term “*landshaftnaia arkhitektura*” did not come into regular use until the mid-1960s. At this time, the design of outdoor planted areas was more commonly referred to as *sadovo-parkovaia arkhitektura* or *iskusstvo* [garden-park architecture or art], or more prosaically referred to as “green construction” “green architecture” and “greening” [*zelenoe stroitel'stvo, zelenaiia arkhitektura, ozelenenie*]

⁴ The same composite phrase was used to describe a Garden City (*gorod-sad*) in the model of Ebenezer Howard.

⁵ Phrase from Castillo, “Stalinist Modern: Constructivism and the Soviet Company Town.”

⁶ In the post-Soviet period, when many industrial enterprises have ceased production and re-invented themselves as real estate development opportunities, the notion that former factory sites are and should be pleasant, hygienic, cultured urban spaces continues to influence the development of cities in Russia and the former USSR. The Kalibr factory site in Moscow, now re-

Soviet urbanists' vegetated interventions into the traditionally technological sphere of industrial production took place within an often-violent social and economic context of upheaval. The period of the First Five Year Plan (1928–1932) is deservedly infamous in world history, being characterized by the collectivization of rural peasants, the forced settlement of nomads in Central Asia, rapid and frequently chaotic industrialization, and multiple waves of repression, famine, and general material shortages. The overriding prioritization of industrialization and modernization continued into the period of the Second Five Year Plan (1933–1937), culminating in the so-called Great Terror of 1936–1938.⁷ Many of these developments have been described as symptomatic of “high modernism” and the totalizing impulses of modern states, and associated with distinctive forms of aesthetic monumentality.⁸

The “landscaping” of a factory or industrial district with flowers and trees might seem “banal” or “trivial” in such a context—words used by some environmental and cultural historians to characterize the Urban Beautification campaign of the 1930s, of which greening was a significant component.⁹ In contrast, I would argue that the early development of socialist beautification and greening, when considered from the perspective of its professional and

branded as “Biznes-tsentr Kalibr” (Kalibr Business-Center) is one example of this trend. <http://sovprom.info/tool-industry/moscow-tool-plant-kalibr.html> Accessed 9/5/2017

⁷ After the Revolutionary period, the 1930s is probably the most studied period of Soviet history. General histories include Robert W. Thurston, *Life and Terror in Stalin's Russia, 1934-1941* (New Haven: Yale University Press, 1996); J. Arch Getty and Oleg V. Naumov, *The Road to Terror: Stalin and the Self-Destruction of the Bolsheviks, 1932-1939*, *Annals of Communism* (New Haven, Conn.: Yale University Press, 1999); Moshe Lewin, *The Making of the Soviet System: Essays in the Social History of Interwar Russia* (London: Methuen, 1985). On Stalinist everyday life and culture, see Sheila Fitzpatrick, *Everyday Stalinism: Ordinary Life in Extraordinary Times: Soviet Russia in the 1930s* (New York: Oxford University Press, 1999); *Stalinism: New Directions, Rewriting Histories* (New York: Routledge, 2000). See also Katerina Clark et al., eds., *Soviet Culture and Power: A History in Documents, 1917-1953*, *Annals of Communism* (New Haven: Yale University Press, 2007); Dobrenko and Naiman, *The Landscape of Stalinism: The Art and Ideology of Soviet Space*; Wendy Z. Goldman, *Women at the Gates: Gender and Industry in Stalin's Russia* (Cambridge, UK ; New York, NY: Cambridge University Press, 2002); William G. Rosenberg and Lewis H. Siegelbaum, eds., *Social Dimensions of Soviet Industrialization*, *Indiana-Michigan Series in Russian and Eastern European Studies* (Bloomington: Indiana University Press, 1993).

On the presence, then expulsion of many foreign architects and engineers (particularly Germans and Americans) involved in the industrialization efforts see Bliznakov, "The Realization of Utopia: Western Technology and Soviet Avant-Garde Architecture."; Kopp, "Foreign Architects in the Soviet Union During the First Two Five-Year Plans."; Richardson, "Architecture, Urban Planning and Housing During the First Five Year Plans: Hannes Meyer in the USSR, 1930-1936."; Danilo Udovički-Selb, "Between Modernism and Socialist Realism: Soviet Architectural Culture under Stalin's Revolution from above, 1928-1938," *Journal of the Society of Architectural Historians* 68, no. 4 (2009).

⁸ Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*; James C. Scott, *Seeing Like a State: How Certain Schemes to Improve the Human Condition Have Failed*, *Yale Agrarian Studies* (New Haven: Yale University Press, 1998).

⁹ e.g. by environmental historian Douglas Weiner on 1930s urban beautification (citing Starr, Stites). Heather Dehaan in her work on Stalinist urban planning highlights the unease and distrust of local authorities faced with “spontaneous” urban greening efforts in the 1930s at least with respect to Nizhnyi Novgorod [Gorky]. DeHaan, *Stalinist City Planning: Professionals, Performance, and Power*; Starr, "Visionary Town Planning During the Cultural Revolution."; Richard Stites, *Revolutionary Dreams: Utopian Vision and Experimental Life in the Russian Revolution* (New York: Oxford University Press, 1989); Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*.

popular proponents, indexes many dominant concerns and constraints of the times. It thereby provides new insight into the interrelationships among the Stalinist production of urban (green)space, environmental attitudes and symbolism, and labor/material scarcity. In particular, the pursuit of greening at factories pushes us to expand habitual narratives of how Soviet architects used greenspace design as a means of participating in the 1930s industrialization campaign.

The Soviet system of urban industrialization and modernization enrolled architects, engineers, hygienists and others in the project of creating environments appropriate to socialist modernity. This system included elements of what in American urban planning are termed municipal services, infrastructure, and public amenities, all under the hard to translate category of urban “improvement” [*blagoustroistvo*]. In contrast to typical associations of modern urbanism with technological forms of infrastructure, I find that the modern city imagined by Soviet urbanists relied as heavily on urban greenspace and “natural” elements as on the technogenic material systems of metal, concrete, and asphalt. Urban and industrial greening comprised an attractive bundle of professional, popular and political benefits. The sheer multifunctionality and broad appeal of this bundle ensured its durable inclusion in the Soviet urban imaginary, even after other aspects of Stalinist urbanism were discounted as “excesses” in the mid-late 1950s. As I will argue, the very qualities that made factory greening so broadly attractive in its formative period led to unexpected consequences for Soviet urbanism when implemented over the long-term and in a climatically diverse range of cities.

A Period of Emergent Expertise

The organizational phase of Soviet architecture and urban planning coincided in the early 1930s with a retreat from the “cultural revolution” and associated efforts in industrialization and collectivization associated with the first Five Year Plan.¹⁰ A singular Union of Soviet Architects had been organized in 1932, accompanied as in other creative fields by wrenching changes in professional status and orientation. The new, centralized Union of Soviet Architects (*Soiuz Sovetskikh Arkhitektorov*, SSA) corralled the formerly diverse and vociferously antagonistic

¹⁰ On this rubric, see Sheila Fitzpatrick, ed. *Cultural Revolution in Russia, 1928-1931*, Studies of the Russian Institute, Columbia University (Bloomington: Indiana University Press, 1977); “Cultural Revolution Revisited,” *The Russian Review* 58, no. 2 (1999).

groups of the avant-garde. These included the “neo-traditionalist” All-Russian Union of Proletarian Architects (VOPRA), headed by Karo Alabian; the rationalist ASNOVA (the Association of New Architects, led by N. Ladovskii; and the “Constructivist” OSA (the Association of Contemporary Architects, led by Ginzburg and the Vesnin brothers). All such architectural organizations were disbanded, replaced with a single professional body akin to the Unions of Soviet Writers, Musicians, and Artists.¹¹ Along with the All-Union Academy of Architecture, also established in 1933, the new Union directed its members (architects, town planners, engineers and other related specialists) to serve the needs of the Communist Party, socialist realism, and industrialization.

The “liquidation” of all pre-existing professional organizations such as OSA, ASNOVA and VOPRA, in conjunction with the selection in the Palace of the Soviets design competition of a unabashedly neo-classical entry by Boris Iofan, is traditionally used to mark the end of the internationalist avant-garde period in Soviet architecture. Architectural practice underwent a reorientation to “socialist realist” neo-Classical styles. The “socialist realist” approach to city-building, or *gradostroitelstvo*, was encapsulated in the 1935 General Plan for the Reconstruction of Moscow, sometimes referred to as the Stalin Plan for Moscow. For its critics, the 1935 Plan represents another instance of the rout of avant-garde ideas. Developed by engineer-planner Vladimir Semenov under the supervision of Lazar Kaganovich, this plan is associated with classically Beaux Arts or City Beautiful features such as wide boulevards, monumental ensembles, and centralized spatial hierarchy.¹² It is frequently deployed as evidence of Soviet architecture’s transition, in the Stalin era, to “regressive forms of historicism.”¹³ Yet in rejecting modernist architectural styles, Josef Stalin did not reject the pursuit of modernization.¹⁴

¹¹ Although established in 1933, the Union of Soviet Architects did not hold its first Congress until 1937.

¹² Kaganovich was one of Stalin’s chief henchmen and, with Nikita Khrushchev, the driving authority behind the construction of the Moscow Metro. On the 1935 General Plan for Moscow, see Richardson, “Hannes Meyer and the General Plan for the Reconstruction of Moscow, 1931-5.”; Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*.

¹³ Frampton, *Modern Architecture: A Critical History*, 177.. In this book, first published in 1980, Frampton claims that Soviet architecture “has yet to emerge” from this historicism, which it entered in 1932. Most other historical surveys note additional periods in the history of Soviet architecture and planning, separated into before and after Khrushchev’s 1954-58 interventions.

¹⁴ From Ching, Jarzombek, and Prakash, *A Global History of Architecture*, 702. Regarding the Palce of the Soviet competition, they note that “Due to the war, it was never built, and after the war, Stalin lost interest in it. While this was a serious blow for the modernists, one shold remember that Stalin may have rejected modernism, but he did not reject modernization, whihc he applied ruthlessly and with serious social consequences.”

The period between 1932 and 1935, when the General Plan for the Reconstruction of Moscow was adopted, mark a time of transition and consolidation. The various avant-garde proposals of the 1920s and the urbanist/deurbanist debates of the “cultural revolution” (1928-1931) had been roundly discounted, yet many of the central participants in those debates continued to occupy positions of significant responsibility, making it difficult to sustain strict divisions between the “avant-garde” period and its aftermath.¹⁵ In architecture as in literature, art, and other cultural fields, official directives and guidelines conveyed great urgency but little precision.¹⁶ The formation of the Union of Architects was therefore an occasion for much generative theorization among Soviet urbanists, most particularly those involved in the subfields of industrial construction and urban amenities provision, fields for which there was less Classical equivalent. The result was a distinctively Soviet blurring of professional and disciplinary boundaries. In contrast to the active boundary work being undertaken elsewhere in the early twentieth century by architects, landscape designers, city planners, and urban reformers to distinguish themselves from each other, Soviet professionals strove by choice or necessity to demonstrate solidarity with the new Party line and distinguish themselves from foreign practices.

The mid-1930s was also a period when connections between Soviet and international architecture-planning practice—deeply shaken in the aftermath of the Palace of Soviets competition by the rejection of modernist entries such as that by Le Corbusier and other members of CIAM—were further ruptured by the expulsion of many foreign architects and engineers, particularly Germans and Americans involved in the industrialization efforts.¹⁷ The architects, engineers, planners and other built environment professionals who remained in the USSR were all occupied in navigating the sometimes mortally dangerous terrain of Stalinist

¹⁵ Hugh D. Hudson, *Blueprints and Blood: The Stalinization of Soviet Architecture, 1917-1937* (Princeton, N.J.: Princeton University Press, 1994). is one such who characterizes the end of the avant-garde and centralization of architects into a single Union as the triumph of engineers over architects. After the First Congress of Soviet Architects, he writes: “From that point on architecture in the Soviet Union continued its decline into a mere servant of engineering, with its most talented experimental architects, such as the Vesnins and Ginzburg, spending the remainder of their careers working in industrial production.” p467 of Hudson 1992 “Terror in Soviet Architecture: The Murder of Mikhail Okhitovich” *Slavic Review* 51, no. 3 (Fall 1992) pp448-467}

¹⁶ Lodder, “Ghost in the Machine.”

¹⁷ See Kopp, “Foreign Architects in the Soviet Union During the First Two Five-Year Plans.”; Bliznakov, “The Realization of Utopia: Western Technology and Soviet Avant-Garde Architecture.”; Richardson, “Architecture, Urban Planning and Housing During the First Five Year Plans: Hannes Meyer in the USSR, 1930-1936.”; Udovički-Selb, “Between Modernism and Socialist Realism: Soviet Architectural Culture under Stalin's Revolution from above, 1928-1938.”

politics as they tried to identify the “tasks of architecture” that satisfied political and professional demands.¹⁸

It was not immediately clear what the Stalinist consolidation of “socialistic urbanism” and professional unification meant for urban space, much less for urban greenspace, given that the concept and potential form of a socialist city had recently been the subject of imaginative, vociferous debates.¹⁹ The role, extent, and form that “socialist realist” urban greenery should take was yet to be determined, despite Lazar Kaganovich’s 1931 declaration that Soviet cities were by definition “socialistic” following the Bolshevik October Revolution.²⁰ Some vague framing guidelines came from the highest Party leadership (frequently voiced by Kaganovich). In general the early ideal of greening industrial sites was shaped by a mix of ad hoc popular and professional heuristics. This mix only gradually settled into specific regulatory “norms” or standards in the postwar period.

The early 1930s was a period when multiple professional and disciplinary perspectives competed to determine the singular parameters of officially sanctioned socialist urbanism. During this formative period for the Soviet architecture-planning disciplines, the borders separating areas of urbanist expertise were generally blurred. Landscape design was institutionally distributed among architects, urban planners, and engineers, making it a

¹⁸ The best known example of an architect falling victim to the Purges is Okhitovich Hudson, "Terror in Soviet Architecture: The Murder of Mikhail Okhitovich.", but it is unclear how representative of the treatment of avant-garde architects in the post-consolidation era was his repression, arrest and death in the camps Catherine Cooke, review of *Blueprints and Blood: The Stalinization of Soviet Architecture, 1917-1937* by Hugh D. Hudson, *Russian Review* 54, no. 1 (1995); Day, "Building Socialism: The Politics of the Soviet Cityscape in the Stalin Era."; Richard Anderson, "The Future of History: The Cultural Politics of Soviet Architecture, 1928-41" (PhD Dissertation, Columbia University, 2010).. Many of the most prominent figures in pre-Revolutionary and 1920s architecture continued to teach and publish in the post-1932 period, even as mention of their specific projects from the 1920s was repressed. Many of the architects who faced the fiercest denunciations and criticism by Alabian and others around the time of the first All-Union Congress of Soviet Architects were reinstated in position and status shortly thereafter (e.g. Schusev). Those involved in urban planning, as a rule, seem to have been somewhat insulated from these waves of denunciation and high-profile *kritika*, perhaps as a side-effect of their hybrid engineer-bureaucrat status. On the other side, being an engineer didn't protect those implicated in the PromParty trials, nor being a bureaucrat (the purges generally). On engineers see Kendall E. Bailes, "The Politics of Technology: Stalin and Technocratic Thinking among Soviet Engineers," *The American Historical Review* 79, no. 2 (1974); "Alexei Gastev and the Soviet Controversy over Taylorism, 1918-24," *Soviet Studies* 29, no. 3 (1977); "Soviet Science in the Stalin Period: The Case of V. I. Vernadskii and His Scientific School, 1928-1945," *Slavic Review* 45, no. 1 (1986); Loren R. Graham, *The Ghost of the Executed Engineer: Technology and the Fall of the Soviet Union*, Russian Research Center Studies (Cambridge, Mass.: Harvard University Press, 1993).

¹⁹ See, among others, Udovički-Selb, D. (2009) "Between Modernism and Socialist Realism: Soviet Architectural Culture under Stalin's Revolution from above, 1928-1938," *Journal of the Society of Architectural Historians*, 68(4): 467-95, and Buchli, V. (1998) "Moisei Ginzburg's Narkomfin Communal House in Moscow: Contesting the Social and Material World," *Journal of the Society of Architectural Historians*, 57(2): 160-81 (see especially quote from p168 included in footnote 108 below).

²⁰ Kaganovich, *The Socialist Reconstruction of Moscow and Other Cities in the U.S.S.R.*

simultaneously ubiquitous, interstitial, and easily overlooked field of expertise. Questions of urban greening were generally treated as a subset of urban spatial planning or *planirovka*.

At the Academy of Architecture of the USSR, established in 1933, a “cabinet” of urban and landscape design-planning [*kabinet planirovki i sadovo-parkovoi arkhitektury*] began work in 1934 under the leadership of Vladimir Nikolaevich Semenov (1874–1960). Semenov, one of the leading figures in Soviet urban design-planning right up until his death, is notable for his connection to the British Garden City movement.²¹ Meanwhile, at the Moscow State University of Forests, an engineering specialty of “green construction” was established in 1931 by a decree of central political and economic authorities.²² At the agency responsible for the Reconstruction of Moscow General Plan (the Moscow city council or Mossoviet), separate workshops or studios [*masterskie*] existed for urban greening, garden-park design, and “small architectural forms.”²³

In 1931, Lazar Kaganovich ended the “antiurbanist revolt” of urban planners who had called for radical changes in the forms and practices of Soviet urbanism, proclaiming that the Soviet Union’s cities had become automatically “socialist” following the Revolution. It was unclear what this new doctrine meant for urban design, much less for urban greenspace design, given how recently and vociferously architect-planners had clashed over the ideal form, size and composition of a socialist city.²⁴ While the role, extent, and form that socialist urban greenery should take was yet to be determined in 1931, specific forms of urban greening were soon established as a means of distinguishing the socialist city from “capitalistic” urbanism.

²¹ See Starr, "The Revival and Schism of Urban Planning in Twentieth-Century Russia."; Belousov and Smirnova, *V.N. Semenov*; Cooke, "Russian Responses to the Garden City."; Miller, "Garden Cities and Suburbs: At Home and Abroad."

²² “History of the department” section on the website of the Faculty of Landscape Architecture at MGUL (the Moscow State University of Forests) <http://www.mgul.ac.ru/info/fla/history.shtml> Accessed 07-11-2016. This specialty program, which the MGUL department website considers the beginning of higher professional education “in the area of landscape architecture” was established by decree of the Plenum of the Council of People’s Commissars (Sovnarkom) and the Central Committee of the CPSU (31 March 1931). The first separate departments of “Greening” [ozelenenie] were established at the Kirov Leningrad Forest-Technical Academy in 1945 and at MGUL in 1948, with initial intake of 30 students. Faculty included S.N. Palentreer, L.S. Zalesskaia (1906–1979), M.P. Khorzhev (1897–1984), L.B. Lunts, and L.Mashinskii. For more on Zalesskaia, Khorzhev, and M.I. Prokhorova (1907–1959), all prominently involved in the design of the Moscow Central “Gorky” Park of Culture and Rest under leadership of El Lissitzky and Ladovskii, and former members of avant-garde group ASNOVA, see Vronskaya, "Urbanist Landscape: Militsa Prokhorova, Liubov’ Zalesskaia, and the Emergence of Soviet Landscape Architecture "; Bellat, "An Uneasy Metamorphosis: The Afterlife of Constructivism in Stalinist Gardens."

²³ According to Ivanov (2001) on the history of Moscow Landscape architecture, two studios were led by Korzhev, and Dolganov. Biographical sketches of Korzhev, Dolganov and others (but not Lunts) can be found at [GARDENER.ru](http://www.gardener.ru) <http://www.gardener.ru/gap/person/page35.php> Accessed 3/5/2018 See also <http://www.russiskusstvo.ru/authors/146/a71/>

²⁴ Starr, "Visionary Town Planning During the Cultural Revolution."

The relationship between industrial and residential functions/spaces, similarly, was identified as an opportunity to express spatially and experientially the political-cultural differences between these systems. According to architect Ivan Nikolaev,

The question of mutual relationship between factories and cities is a vital question [*zhiznennyi vopros*] for the whole urban population of our country, for the successful work of our socialist industry.²⁵

Nikolaev was a former member of OSA and designer, most famously, of the Communal House of the Textile Institute (1929-1931). After 1934, he served as head of the industrial architecture section of the Academy of Architecture.²⁶ His commentary makes clear that not only were factory-greening opportunities available to architects in the Soviet Union to a greater extent than in “capitalistic” countries and cities, but the ideological stakes were greater as well. Successful resolution of city-factory relations was more than a question of a single factory or a single city’s appearance and functionality. It was a question of experiential and ideological superiority.²⁷

Building Socialist City-Industry Relations

Proclaiming the contrast between socialist and capitalist urban environments, particularly as pertained to urban industrial workers, was a major trope of Soviet political rhetoric. Realizing this contrast was, correspondingly, a central task for Soviet urbanism. As such, it permeated the discourse of architect-planners, whose responsibility it was to envision the forms and relationships that would demonstrate socialist superiority. The socialist city was habitually defined in terms of what it was not, with evidence drawn from the contrast between emergent conditions (even those still aspirational or captured only in planning documents) and the state of affairs in pre-Revolutionary or capitalist cities. This supposed contrast was underscored by a combination of carefully selected data (rates of change being especially popular) and polemic generalizations, such as the statement in a slim 1935 tract published under the People’s Commissariat for Communal Economy that “the capitalist city provides conveniences only to the

²⁵ Ivan Nikolaev, “Zavod i Gorod [Factory and City]” *Voprosy Promyshlennoi Arkhitektury*, published proceedings of conference 10–13 April 1950, Administration of Union of Soviet Architects of USSR. p49

²⁶ Russian architectural historian Khan-Magomedov asserts that industrial architecture was the most experimental and therefore highest status field within Soviet architecture. According to Khan-Magomedov, students seeking the greatest room for creativity and technical innovation competed for spots in industrial architecture programs, in contrast to programs in civil or residential architecture. Khan-Magomedov, *Ivan Nikolaev*.

²⁷ Nikolaev published and spoke regularly on city-industry relations in the Stalinist period and after. His publications included essays, textbooks, and reference works (see bibliography).

bourgeoisie.”²⁸ The socialist city might aspire to the same type of conveniences and environmental amenities as Paris or London or Vienna, but the supposed user-base would be different.

“After the victory of the Great October Socialist Revolution,” proclaimed the 1939 entry on greening [*ozelenenie*], in the Greater Soviet Encyclopedia,

greening was understood as one of the links in a system of widespread activities on the beautification of settlement points and the creation of cultured and hygienic conditions for the labor and rest of workers of socialistic society. [As of the Moscow 1935 plan...²⁹] greening is based on major park massifs and wide boulevards, joined in a united system with the peripheral reservoirs of clean air—the woods and forests.³⁰

Nor was greening restricted to parks, gardens and greenbelts. “Greening also resolves the task of protecting settlement sites from gas and smoke of industries and simultaneously establishes hygienic labor conditions at the sites of production. In creating highly artistic planting forms, greening is at the service of the worker.”³¹ Such references to “the worker” —typical of the period—were used, like reference to the superiority of planned cities, to distinguish the Soviet pursuit of modernization from its antecedents.

The foundational texts of Marx and Engels regarding the state of England’s industrializing cities in the late 19th century and their dismal conditions for workers offered a relatively stable point of reference for Soviet architects, planners, and public health experts.³² Engels’ classic critique of Manchester’s housing made much of the crowded, unsanitary, and unpleasant conditions faced by industrial workers.³³ Socialist urbanism, in contrast, aspired to valorize industrial production and its labor by providing work and home environments that were spacious, hygienic, and pleasant.³⁴ Cemeteries were another site slated for transformation into public parks,

²⁸ N. Valevskii, *Za Blagoustroistvo Gorodov (For the Improvement of Cities)*. Narkom Kommunal’nogo Khoziastva RSFSR. Moscow: izdat-vo "Vlast' Sovetov" pri prezidiume VTsIK, 1935. On p5 “Kapitalisticheskii gorod obespechivaet udobstva tol’ko burzhuzazii.”

²⁹ Elided: “With the decree by Sovnarkom and the Central Committee [by SNK and TsK VKP(b)] on the general reconstruction of Moscow (10.VI.1935), ...”

³⁰ *Greater Soviet Encyclopedia (BSE)* 1st edition, 1939, volume 42, entry on “*Ozelenenie*”

³¹ ... “In this manner, a new type of green construction has arisen: the park of culture and rest, the basic task of which is the provision of workers with healthy, cultured rest. [...]” BSE edition 1, 1939. entry on “*Ozelenenie*”

³² This was not limited to Soviet urbanists. On the influence of Manchester’s slums on urban reform efforts generally see Harold L. Platt, “From Hygeia to the Garden City: Bodies, Houses, and the Rediscovery of the Slum in Manchester, 1875-1910,” *Journal of Urban History* 33, no. 5 (2007).

³³ For instance “The Great Towns” in Friedrich Engels, *The Condition of the Working Class in England*, (New York: Penguin, 1987 [1845]), 68-75, 85-93.

³⁴ Valevskii, N. *Za Blagoustroistvo Gorodov*. Narkom Kommunal’nogo Khoziastva RSFSR. Moscow: izdat-vo "Vlast' Sovetov" pri prezidiume VTsIK, 1935 ch1 “Sotsialisticheskii gorod”

a relatively easy move given the demise of religion and concomitant Bolshevik support for cremation. In addition, cemeteries had become sacred to the Revolution thanks to their use as where reformers and other opponents of the tsarist regime were able to meet in relative secrecy to discuss their plots against the government. Greenery, politics, and a surprising dose of folklore fused in these plans to provide the workers with new spaces for leisure and health. “We have driven an ‘aspen stake’ into the grave of capitalism, and these green gardens furrowed with the tombs of the rich and nameless mounds of the poor have become ours,” crowed the author of a 1933 book, *Moscow: Old and New*.³⁵

“Light, air, and greenery” were some of the primary means by which architect-planners proposed to ensure workers’ health, well-being, and productivity. This included the emphasis on abundance of greenspace in the 1935 General Plan for Moscow and other urban improvement projects. In the years leading up to that plan, Soviet commentators emphasized past characterizations of the city in which it appeared, not as an “overgrown village” but as a overbuilt wasteland. Typical of such discourse is the claim by Kholodny that Old Moscow was a “cobblestone Sahara” which was “cloaked in green” only on the three major religious holidays.³⁶ “Now,” under the new Soviet regime, trees are being planted and transplanted with the goal of transforming Moscow “into a healthy garden city.”³⁷ As Katerina Clark demonstrates in her cultural history of 1930s Moscow, such a “Manichaean scenario of instantaneous transformation from dark to light, from filth to purity” was a standard trope in discourse on the rebuilding of Moscow.³⁸

The 1939 *Greater Soviet Encyclopedia* entry on greening claimed that the new plan for Moscow featured greening that was “based on major park massifs and wide boulevards, joined in a united system with the peripheral reservoirs of clean air—the woods and forests.”³⁹ Such a

³⁵ Kholodny, T. (1933) *Moscow: Old and New*. Moscow: Co-operative Publishing Society of Foreign Workers in the U.S.S.R. p101

³⁶ In addition to the well-known Christmas trees, Trinity Sunday is associated with the birch tree and churches are decorated with cut birches. For a modern description of this holiday see <http://www.visitnovgorod.com/afisha/troitsa.htm> [Accessed September 21, 2018]

³⁷ Kholodny, *Moscow: Old and New*. 1933. See chapter 13, “Making the Capital Green”

³⁸ Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*, 100. Clark focuses on the coming together of architecture, literature, and Stalinist politics/ideology in 1930s Moscow. Urban planning in general is often included in her discussion, but parks and industry, and their intersection in the Garden-Factory, remain in the un-indexed background. See also Katerina Clark, “Socialist Realism and the Sacralizing of Space” in *Dobrenko and Naiman, The Landscape of Stalinism: The Art and Ideology of Soviet Space* .

³⁹ *Greater Soviet Encyclopedia (BSE)* 1st edition, 1939, volume 42, entry on “Ozelenenie.”

system of greenspace corridors, parks, and forest belts could have been just as easily found in plans for American and European cities, from Boston to Paris.⁴⁰ In the “postbourgeois” planned cities of socialism, however, such amenities were to be extended to the working classes, creating an imagined dialectic synthesis of industry, art, and public well-being.⁴¹

“Greening also resolves the task of protecting settlement sites from gas and smoke of industries and simultaneously establishes hygienic labor conditions at the sites of production. In creating highly artistic planting forms, greening is at the service of the worker.”⁴²

Soviet authors claimed their efforts were distinguished by this emphasis on providing parks and gardens to workers, at work and at home, beyond the central districts. Doing so became a marker of ‘doing modernism better’ given that modern, or developed urbanism is usually tied to the industrial revolution and late 19th-early 20th century advances in municipal infrastructure. Factories, being sites of labor, traditionally lacked greenery and other “amenities” typically associated with aristocratic and bourgeois spaces of leisure. The Soviet greening of such sites under the banner of urban environmental improvement was a discursive political statement, meant to signal the superiority of Soviet/socialist industrialism over Western, capitalist, and imperial examples. The environmental amenities provided for workers became a symbol and metric of broader support for the working classes as a concept.⁴³

This was the depths of the Great Depression, making it easy for Soviet urbanists to cite examples of Western workers in woe. For example, one garden-factory proponent describes reading in an unspecified foreign publication about the “squares” of Detroit, in which rows of benches arranged “as if for a concert” were instead occupied each night by homeless workers

⁴⁰ The range of international precedents considered by Soviet urban planners and specialists in greening is best captured in the oft-cited *Parky Kul'tura i Otdykh* by Leonid Lunts, 1934.

⁴¹ The phrase “postbourgeois” comes from Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*, 101.

⁴² *Bolshaia Sovetskaia Entsiklopediia [Great Soviet Encyclopedia]*, 1st edition, 1939, tome 42, entry on “Ozelenenie” [greening, verdification].

⁴³ This supposedly categorical opposition between the Soviet Union’s provision of amenities everywhere and to all, in opposition to pre-Revolutionary and bourgeois urban environments, was a fundamental trope in the Soviet narrative of national/state identity. Another example of this discourse, in which gardens and greening are similarly foregrounded, can be found in the introductory to Malko, *Sadovo-Parkovoe Stroitel'stvo i Khoziastvo*, 1951: “Green plantings are one of the fundamental elements of settlement beautification [*blagoustroistvo*, improvement]. However, in the pre-Revolutionary Russia green plantings presented themselves only as separate spots [*piatna*], often appearing at the whim of local merchants and manufacturers. Districts, settled by the bourgeoisie, drowned in gardens [*utopali v sadakh*], while workers’ quarters, overbuilt and over-populated, had almost no green plantings. [...] The Great October socialist revolution, in overturning private property rights to land, has thrown the gates to all gardens and parks wide open, and given the ability to freely plan and distribute [*planirovat' i razmeshchat'*] green plantings.” [p3]

sleeping between sheets of newspaper.⁴⁴ In contrast, the theoretically abundant open spaces of Soviet factories were places, similar to workers' clubs, where workers freely chose to spend their time in pleasant leisure activities and the pursuit of self-improvement.⁴⁵

To give another instance, in the opening chapter of the 1935 *For the Improvement of Cities (Za Blagoustroistvu Gorodov)*, author Valevskii proclaims the achievements of socialist beautification and citybuilding in contrast to the ills of capitalist cities past and present. As evidence, Valevskii predictably references Engels' critique of the conditions of working class districts in Manchester and London, as well as more recent follow-up studies by English communist Allen Hutt regarding conditions in Glasgow in 1830 and 1926.⁴⁶ Similar remarks by Stalin at the 17th Congress of the CPSU are also quoted.⁴⁷ In both cases, "capitalist" conditions of dark, dank, crowded urban environments are contrasted with "socialistic" light, airy, spacious environments.⁴⁸ Valevskii similarly deplores historical conditions in "capitalist Russia" where workers dwelt

... not only in horrific housing, but in such housing which usually lacked elementary communal amenities. They lacked, as a rule, water, light and sewerage. In workers' blocks there was never any greenery, the air was full of the miasmas of rotting slops and trash. This gives the picture of the conditions from which the working class of the Soviet Union have escaped..." [p13]

Such rhetoric from political and professional authorities vividly underscored the perceived connection between greenery and air quality, and the use of both as an index to socialistic progress. The choices made in the landscape design of factory sites, like architectural and spatial planning decisions generally, might seem trivial at first glance but were inseparable from political and social concerns.

⁴⁴ Usov, *Zavod-Sad*, 1954. Comparisons to international cities of industry such as Detroit abound in Soviet urbanist literature of this period, including such cities as Manchester, Glasgow, Essen, Pittsburgh and Chicago in addition to the usual suspects of international urban comparison (Paris, Berlin, London, New York). See, for instance, Valevskii, N. *Za Blagoustroistvo Gorodov*, 1935, pp3–14.

⁴⁵ Lewis H. Siegelbaum, "The Shaping of Soviet Workers' Leisure: Workers' Clubs and Palaces of Culture in the 1930s," *International Labor and Working-Class History* 56, no. 56 (1999). By the 1930s, the phenomenon of "night sanatoria" where at risk populations were encouraged to sleep out doors was no longer common, but the association of fresh air with moral and physical health remained. Starks, *The Body Soviet: Propaganda, Hygiene, and the Revolutionary State*.

⁴⁶ The work in question is most likely Allen Hutt, 1933, *The Condition of the Working Class in Britain*, reviewed by Gillespie in 1934 in the *Journal of Political Economy*.

⁴⁷ Stalin on gardens/lawns/housing quoted in Valevskii, *For the Improvement of Cities (Za Blagoustroistvu Gorodov)*, 1935

⁴⁸ Valevskii 1935 quotes Engels on Manchester that "...the disorderly construction of all such parts of the city [workers' quarters] makes street ventilation difficult, and as a multitude of people live here in a small area, it is easy to imagine, what the air is like" [p4].

The objectives of factory greening, when considered as an integral component of Soviet urbanism, can also be thought of as an “ensemble” or cluster of aspirational functions, with each separate element intended to contribute to the whole. The following examples elaborate how each “aspirational cluster” was expected to function— i.e. interventions greening was expected/desired to make with respect to factories and industrial territories and the practices deemed necessary to ensure its success. The imbrication of factory greening with the building of socialism meant, meanwhile, that the pursuit of urban and industrial greening was not without risk for its practitioners. As mentioned above, Soviet urbanists’ vegetated interventions into the traditionally technological sphere of industrial production took place within a violent context of social and economic upheaval.

The following section considers the arguments used within the architecture-planning and public health professional communities to promote, shape, and critique “the greening of factories” as a core tenant of socialist industrialization and modernization. In this formative period for Soviet urbanism, the clearest depiction of factory site design, including their proposed greening, comes from professional texts and conference proceedings published by the Union of Architects and the Academy of Architecture, rather than major architectural periodicals such as *Arkhitektura SSSR*. Specifically, I focus on the topic of greening industrial sites as presented in 1936 and 1937 publications on the problems of architecture and garden-park architecture.⁴⁹

Forests for the Factories!

On July 16, 1934, at the Mossoviet Plenum, Politburo member Lazar Kaganovich had “put an end” to the “hesitations, doubts, and harmful deviations” that had earlier defined park construction and the “green place-making [*oformlenie*] of cities” by reminding his listeners of the opinions of the great leader regarding the issue at hand. “Comrade Stalin,” stated Kaganovich in an oft-repeated passage,

... directs our attention to green construction, noting that by ‘green construction’ is meant not small little lawns [*melkie gazonchiki*], which sometimes enthrall our workers, but major park massifs, which we must by all means develop in Moscow and her nearby environs. [We] need

⁴⁹ The two main collections of interest are *Problemy Arkhitektura* 4 volumes, 1936-1937 edited by Aleksandrov and, after his arrest in the Purges, Milonov; and *Problemy Sadovoe-Parkovoe Arkhitektura*, 1936, M. P. Korzhev, L. B. Lunts, A. Ia. Karra and M. I. Prokhorova.

to create forest park massifs and wide boulevards. We need, besides the embankments, to direct construction in our city to the regions of Sokol'nikii, Ostankinskii and other parks....⁵⁰

Kaganovich invoked this appropriately sweeping endorsement of massive urban planted areas at the beginning of the editorial foreword to a 1936 volume of articles published by the Academy of Architecture's Urban Design section titled *The Problems of Garden-Park Architecture*. This book and its political framing indicate some of the professional and political challenges facing Soviet architects at the time when the factory-garden nexus was initially established as an experimental object of praxis.

Produced in preparation for the first All-Union Congress of Soviet Architects, which was held after multiple delays in 1937, texts such as this represent some of the earliest published articulations of how “greening,” conceptualized as a bundle of practices, was to be applied to factories and other industrial sites.⁵¹ At its simplest, “the greening of factories” entailed the deployment of trees, shrubs and other forms of “green plantings” at, on, and around active sites of industrial production. Plants were used intensively inside the buildings, on the building exteriors, in courtyards and other inter-building spaces to create spaces of “leisure” for workers. Areas of greenery were also used extensively in “sanitary-protective zones” surrounding the factory territory, thereby separating and connecting it to nearby residential areas.

As part of the preparations for the first All-Union Congress of Soviet Architects, held in 1937, the Union of Architects leadership [*orgkomitet*] had, with the participation of the All-Union Academy of Architecture, organized a group under its spatial planning section to consider the issue of green construction. The group included “all the available architectural forces on the green construction front.” A wide range of urban landscape architecture topics—also referred to as “green architecture” and “green construction”—were addressed in the group's initial research reports.⁵² This publication and others like it were meant primarily as means of communication among professionals and between them and the political establishment, part of an official search for new “models” and standards to guide production of socialistic cities, regions, and factories.⁵³

⁵⁰ “Ot Redaktsii” v–vii in Korzhev et al, eds. 1936, *Problemy Sadovy-Park Arkhitektury*, page v.

⁵¹ In 1937, the editor's foreword to *Problems in Architecture* referred to the early 1930s as the “childhood period” of industrial site design, with all the potential and infectious diseases associated with children. See “Predislovie Redaktsii.” *Problemy Arkhitektury: Sbornik Materialov*, Volume II, book 1, edited by Milonov, Iu. E. Moscow: Izd-vo Vsesoiuznoi Akademii Arkhitektury, 1937

⁵² Korzhev, “Ot redaktsii”, 1936

⁵³ Two other examples of such texts are A.S. Vaintsvaig, A. S., ed. *Planirovka Promyshlennykh Raionov*. Moscow: NKTP SSSR: ONTI Gosstroizdat, 1934, and Valevskii, N. *Za Blagoustroistvo Gorodov*. Narkom Kommunal'nogo Khoziastva RSFSR.

Another section concentrated on industrial architecture under the direction of former Constructivist, Ivan Sergeevich Nikolaev (1901-1979).

The position of landscape design in heavily industrializing and industrialist Soviet Union in the 1930s was ambiguous. Let there be massive parks! said Stalin, according to Kaganovich, and no doubts or deviations. Yet little was said, much less built, at the time to indicate more precisely what *kind* of parks and urban greenspaces were acceptable in the eyes of the Communist Party leadership and the newly dictatorial urban proletariat. Even if, as the 1936 editorial voice noted, “the place of greenery in the city, its significance for the spatial planning of a socialistic city is already sufficiently defined,” at the architectural scale of individual sites “the problem of green architecture appears today to be the most backward part [*ustupaiushyi uchastok*] of all green construction.” Clearly, there was pressure to improve the situation, and architects scrambled to identify properly socialist approaches to site design and regional planning. The practice of “greening” or “green construction” offered an avenue of response for architects with respect to the urban industrialization and modernization agenda of the period, for more than one reason.

The aspired-to scope of factory greening was immense, commensurate with the All-Union ambitions of the Stalinist agenda of rapid industrialization and modernization. The Academy of Architecture industrial architecture studio lead by Ivan Nikolaev, in connection with the urban planning and greening studio of Vladimir Semenov, developed factory greening projects for a range of sites across the Soviet Union.⁵⁴ These projects trended south and west, with many of

Moscow: izdat-vo "Vlast' Sovetov" pri prezidiume VTsIK, 1935. The former is more explicit about the need to determine new modes and models of professional architecture-planning practice to meet the new demands (scale and complexity) of regional industrial planning. In response to the perceived need to “eliminate the contradictions” between various enterprises’ general plans and other elements, the planners at the Regional Planning Sektor of Narkomtiazhprom [the People’s Commissariat of Heavy Industry, founded in 1932 and dissolved in 1938] foreground the need for connectivity and holism in planning, treating the planned industrial region as a sort of logistical Gesamtkunstwerk. [p5, 7-8].

⁵⁴ These projects discussed in I.S. Nikolaev, “Zavod i Gorod. Po materialy o rekonstruktsii zavodov ‘Serp i molot’, ZIS, GAZ, and STZ” in *Problemy Arkhitektury* T.2 kn.2, edited by Iu. E. Milonov, pp 285-317. Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1937; Lunts, L.B. and T. N. Protasova, “K problem sozdaniia zelenoi arkhitektury v promyshlennom komplekse” in *Problemy Arkhitektury: Sbornik Materialov*, Volume II, book 1, edited by Milonov, Iu. E. pp261–286 Moscow: Izd-vo Vsesoiuznoi Akademii Arkhitektury, 1937; Lunts, Leonid Borisovich, and T.N. Protasova. "Problema Ozeleneniia Promyshlennogo Kompleksa." In *Problemy Sadovo-Parkovoi Arkhitektury: Sbornik Statei*, edited by M. P. Korzhev, L. B. Lunts, A. Ia. Karra and M. I. Prokhorova, 281-305. Moscow: Izd-vo Vsesoiuznoi Akademii Arkhitektury, 1936; Zil’bert, A.E. “Planirovka promyshlennoi territorii” in *Problemy Arkhitektury* T.1 kn.2, edited by A.Ia. Aleksandrov, pp7-38. Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1936; V. Boitler, "Arkhitekturnaia rekonstruktsiia Stalingradskogo traktornogo zavoda" pp129-162, and Boitler, “Arkhitekturnaia rekonstruktsiia zavoda 'Serp i molot'" pp163–170 in *Problemy Arkhitektury* T.1 kn.2, edited by A.Ia. Aleksandrov, Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1936; A.M. Gasparian, “Planirovka i pereplanirovka novykh gorodov pri promyshlennosti” in *Pervaia Vsesoiuznaia Konferentsiia Po Planirovke I Stroitel'stvu Gorodov: Tezisy*

them located outside the ‘traditional’ industrial regions of Central Russia and the southern Urals. Among the high-profile factories whose reconstruction was discussed in architecture-planning publications in the early-mid 1930s were the showcase tractor and car works established or expanded during the first Five Year Plan. These included, in Moscow, the “Stalin” Automobile Works (ZiS from 1931, formerly AMO, after 1956 the Zavod imeni Likhachova, or ZiL).⁵⁵ The Stalingrad Tractor Factory (STZ), the Cheliabinsk Tractor Factory (ChTZ) and the Gorkii Automobile Factory (GAZ) were similarly designated for reconstruction.⁵⁶

Also slated for improvements and reconstruction were equally prominent “historically existing” factories, such as Moscow’s “Hammer and Sickle” metallurgical plant (the *Serp i Molot* works, founded in 1883). Design-proposals envisioned the greening of factories and Thermo-Electric Stations in the Soviet Republics of Ukraine (Gorlovka/Horlivka), Georgia (Tiflis/Tbilisi), Azerbaijan (Nukha, now Sheki), Uzbekistan and Kazakhstan (Tashkent, Almaty, Semipalatinsk). Despite the ideological premium placed on eliminating differences between regions, and between town and country, the distribution of these projects across the territory of the Soviet Union was uneven in practice. This reflected the concentration of actual industrial development in areas with existing industry or raw materials, such as the Donbass or Kuznetsk basin, or in areas with pre-established factories and factory workers.⁵⁷ The mix of imagined

Dokladov Na Sektsiakh. pp65-71. Vsesoiuznyi Soviet po Delam Kommunal'nogo Khoziastva pri TsIK SSSR, Borshchevskii, A. M., N. D. Efremov, and F. V. Popov, eds. Moscow: Vlast' Sovetov pri Prezidiume VTsIK, 1933.

⁵⁵ from wikipedia: “In 1931 the factory was re-equipped and expanded with the help of the American A.J. Brandt Co., and changed its name to Automotive Factory No. 2 Zavod Imeni Stalina (ZIS or ZiS). After Nikita Khrushchev denounced the cult of personality of Joseph Stalin in 1956, the name was changed again to Zavod imeni Likhachova, after its former director Ivan Alekseevich Likhachov.” <https://en.wikipedia.org/wiki/ZiL> Accessed 10-09-2017

⁵⁶ Factory re-design Chapters in *Problemy Arkhitektura* 1936-37. Most or all of these factories were ones whose development during the First Five Year Plan had been directed by foreign experts, particularly the Albert Kahn Co. On foreign engineers in Soviet Russia, and particularly the Kahn firm, see Grant Hildebrand, *Designing for Industry: The Architecture of Albert Kahn* (Cambridge, Mass.: The MIT Press, 1974); Anatole Senkevitch, "Albert Kahn in Russland," *Bauwelt* 86, no. 48 (1995); "Albert Kahn's Great Soviet Venture as Architect of the First Five Year Plan, 1929-1932," *Dimensions* 10 (1996); Fred Irwin Beal, *Foreign Workers in a Soviet Tractor Plant* (Moscow: Co-Operative Publishing Society of Foreign Workers in the USSR, 1933); Kopp, "Foreign Architects in the Soviet Union During the First Two Five-Year Plans."; Joseph Nasr and Mercedes Volait, eds., *Urbanism: Imported or Exported? Native Aspirations and Foreign Plans* (London: Academy Editions, 2003); Bosma, "New Socialist Cities: Foreign Architects in the USSR, 1920-1940."; Chmel'nickij, "The Struggle for Soviet Architecture: Foreign Architects in the USSR During the Stalin Era."; Graziosi, "'Visitors from Other Times': Foreign Workers in the Prewar 'Piatiletki'."; Cohen, "Circulatory Localities: The Example of Stalinism in the 1930s."

⁵⁷ In the 1937 *Problemy Arkhitektura* section focused on industrial architecture and spatial planning, various authors include cost-benefit calculations as evidence of why existing factories should be reconstructed rather than re-located, regardless of their hazard class. The hazard classification would, however, be taken into account in determining the amount of greening and spatial buffers of that reconstruction. The rights of Stakhanovites at established factories were another reason to maintain and improve existing conditions. Lewis H. Siegelbaum, *Stakhanovism and the Politics of Productivity in the USSR, 1935-1941*, Soviet and East European Studies (New York: Cambridge University Press, 1988).

locations, in contrast, reflected an political-professional priority of the period; architect-planners were expected to design and realize a series of showcase projects that could be used as models to modernize (and industrialize) the full expanse of the Soviet Union, including the former colonial periphery.

Architects and urban planners [*planirovshiki, gradostroiteli*] had little control over the economic-political rationales that underlay the location of industry at the national and regional scale. Such decisions were the province of state economic planning [*planirovanie*]. Those involved in urban and regional spatial planning [*planirovka*] were advised to consider the location of industrial works within a region as an “immutable” factor, as natural and unchangeable as the latitude. Specifically, in recommending that planning should include “all region-forming elements (industry, transport, settlements etc) they note that “as is currently the case in the spatial planning of cities, one must account for already-chosen sites of industry as for other immutable external factors ... such as the direction of winds, the presence in subsoils of useful deposits and so forth.”⁵⁸ This comparison indicates the centrality and influence of industry to regional and urban planning—and the lack of agency urbanists faced relative to the siting of said industry. What they could hope to influence was the location of factories within cities or settlements, and the site design of the factories themselves.

The spatial planners of Narkomtiazhprom (The People’s Commissariat of Heavy Industry) argued that the emergent praxis of regional industrial spatial planning would be demonstrably socialist, along similar lines to the socialistic qualities of industrial site design. Regional spatial planning [*planirovka*], according to their definition, was

the task of organizing territory in such a way, that in the interests of socialistic construction, will provide the necessary conditions for the construction and exploitation of industrial enterprises and transport and the organization of agriculture, the creation of hygienic conditions for the life and work of laborers, and the better utilization of natural resources of a region and its long-term development.⁵⁹

Emergent Soviet efforts were compared by the authors to the the historical precedent set by the 1882 Commission for the planning of Boston [sic] and post-WWI planning of the Ruhr region in Germany. They immediately distanced themselves from these models, however, noting that

⁵⁸ Vaintsvaig, *Planirovka Promyshlennykh Raionov* (Layout of Industrial Districts), 1934: p10

⁵⁹ Vaintsvaig, 1934 p9

regional spatial planning in the conditions of capitalist economies “cannot, naturally (*estestvenno*), achieve the necessary development.”⁶⁰

The ideal location and distribution of factories within cities was, as noted, a frequent topic of discussion. The official normative spatial relationship between industry and residential areas was set according to an industry’s classification or degree of public health hazard.⁶¹ In their discussions, Soviet planners often lamented that the proper distances were not observed. In practice, while a planted sanitary buffer zone might exist on paper, the actual groundspace tended to fill up with “temporary” structures, including workers’ housing. One way to avoid this problem was by designing a formal entry plaza, boulevard or other broad street in proximity to the factory, instead of unbuilt greenspace, to create the desired distance between industrial and residential areas. However, planning and public health experts continued to note that neither pure space by itself nor taller smokestacks were enough to ensure desirable environmental quality. Vegetated barrier zones around and within cities were to be preferred, given their perceived multi-functional capacities and supposedly minimal costs.

In this, purely “rational” economic arguments co-existed with politically-infused arguments about the comparative status of workers and industrial works under capitalism and socialism. In combination, these factors made it more likely that existing industrial land uses/users would stay in their present locations, with responsibility for local and regional public health shifted to the territories immediately adjacent. In other words, a factory and its director might be blamed for failing to create or maintain an adequate buffer of vegetated space between its productive workshops and nearby housing or waterways, rather than be explicitly criticized for its emissions per se. The tyranny of sunk costs, while acknowledged as such by commentators, was presented as offset by the supposedly low costs of factory greening—low because, in theory, mature planting materials could be cheaply acquired in nearby exurban areas while labor for installation and maintenance would be provided by “volunteer” brigades of workers participating in *subbotniki*. The greening of factories, like the industrialization and modernization of the Soviet Union generally, was to be a project undertaken by the workers and for the workers, albeit actively guided by the Communist Party.

⁶⁰ Vaintsvaig, 1934, p 9-10]

⁶¹ For examples of these tables, see Nikolaev, “Zavod i Gorod” in *Problemy Arkhitektury*, 1937 and Zil’bert, “Planirovka promyshlennoi territorii” in *Problemy Arkhitektury*, 1936

The benefits of factory greening to factory workers was another reason why all factories were deemed eligible for greening and reconstruction, including those in the dirtiest “Class A” of heavy industry. Garden-factories were what factory workers, especially the over-performing Stakhanovites and those at the showcase factories such as the STZ or ChTZ, deserved as a high status group within Soviet society. While *technological* measures to ensure a healthy “hygienic” work-life environment such as higher smokestacks or filters were generally agreed to be ubiquitous in the imagined socialist future, *vegetative* improvements to the existing territory of active factories could be implemented immediately and produce impressive results.

Soviet “communal hygiene” focused at the time on workers’ psychological as well as physical health, balancing concerns over communicable “social” diseases such as TB or syphilis with concern over nervous disorders. The construction of working environments that were “cultured, comfortable, and restful” thanks to their verdant character were presented as important to worker productivity and workers’ health alike, as desirable as reducing the number of sick-days or workplace injuries and more easily controlled. The landscaped grounds of a “Garden-Factory” such as the Kalibr Instrumentation Factory in Moscow, as described by Usov and documented in multiple decades of photographs of the factory, served workers in many of the same capacities as a workers’ club, providing a venue for workers’ hybrid cultural-political leisure and recreation.

A Youthful Field

The topic of “greening industrial sites [*ozelenenie prompleshchadok*]” was raised in *Problems of Garden-Park Architecture (Problemy Sadovo-Parkovoi Arkhitekturoi, 1936)* by L.B. Lunts and T.N. Protasova.⁶² This, and a closely related version included in a 1937 Academy of Architecture volume, *Problems of Architecture*, was one of the earliest published analyses of how landscape design had been and should be integrated into sites of industrial production in the

⁶² Lunts, Leonid Borisovich, and T.N. Protasova. "Problema Ozeleneniia Promyshlennogo Kompleksa" pp281-304 in *Problemy Sadovo-Parkovoi Arkhitekturoi: Sbornik Statei* edited by M.P. Korzhev (President of editorial commission), L.B. Lunts, A.Ia. Karra and M.I. Prokhorova. All Union Academy of Architecture, Moscow: 1936. Produced by the “Planirovka gorodov” section of the Union of Soviet Architects. Lunts & Protasova were apparently members of the newly formed section on Green Construction within the Academy of Architecture. The chapter by Lunts and Protasova on the greening of factories appears to come from the “cabinet of industrial architecture” within the All-Union Academy of Architecture rather than the green construction/ garden-park architecture research group. Lunts was a frequent contributor on Architecture/Greening themes, often listed as a co-author with better known figures such as Mikhail Korzhev or L. Zalesskaia.

USSR.⁶³ This publication comprised research material prepared in 1935 for the 3rd session of the Academy.⁶⁴ Together, the two represented the ‘state of the art’ in architecture-planning theory and practice in the years leading up to the First Congress of the Union of Soviet Architects (held in 1937). The duplicate publication of the text by Lunts and Protasova, with only minor changes, indicates the perceived relevance of the topic to both “garden-park” and general architecture-planning specialists.⁶⁵

The arguments here and in the other chapters were explicitly framed by the opening editorials as initial rather than conclusive discussions. The editors cautioned that, although Lunts’ and Protasova’s article was “based on interesting and diverse material . . . [the chapter’s] analysis does not fully reveal all the illnesses of the ‘childhood period’ of development of this young area of Soviet green construction.” [1936: vii] Any problems in the fledgling subfield were only temporary, the editors reassured readers. “You need not doubt, that all these problems will be resolved by our architects, who in the land of Soviets are presented with colossal means and opportunities, of which architects in capitalistic countries do not even dare to dream.” [1937:viii].

In professional-audience accounts, such as Lunts and Protasova’s, the functional benefits attributed to greening of industrial production and industrial sites gravitate toward three main areas. All three are said to contribute directly to building better, more socialist, urban environments.⁶⁶ First, greening was a means of producing sites of rest and embodied pleasure. Second, it was a medium of politically/aesthetically significant discourse, meant to represent the Soviet system’s supposed concern for workers, and its superiority over capitalist systems of

⁶³ Lunts, L.B. and T. N. Protasova, “K problem sozdaniia zelenoi arkhitektury v promyshlennom komplekse” in *Problemy Arkhitektury: Sbornik Materialov*, Volume II, book 1, edited by Milonov, Iu. E. pp261–286 Moscow: Izd-vo Vsesoiuznoi Akademii Arkhitektury, 1937. Other sections in that book were Architectural History & Theory, and the Architecture of Kolkhoz settlements [sel]. Volume I of this publication was published in 1936, and edited by Aleksandr Aleksandrov. See *Problemy Arkhitektury: Sbornik Materialov* Moscow: Izd-vo Vsesoiuznoi Akademii Arkhitektury, 1936. Tome I, two volumes. Aleksandrov is described in Anderson, “The Future of History: The Cultural Politics of Soviet Architecture, 1928-41,” 176. as “a prominent Communist Party activist and a secretary in the Union of Soviet Architects, [who] was arrested and jailed in 1936,” as was sociologist-disurbanist Mikhail Okhitovitch. Hudson describes Aleksandrov as “one of Karo Alabian's closest lieutenants.” Hudson, “Terror in Soviet Architecture: The Murder of Mikhail Okhitovich,” 456.

⁶⁴ “Ot redaktsii” *Problemy Arkhitektury*, 1936, vii

⁶⁵ The borders between these areas of specialty was fluid, as previously stated. According to Willen, “Architecture in the Soviet Union: A Report for the Use of Specialists in the Field of Architecture Planning to Visit the Soviet Union,” 6., Soviet academic departments of architecture were divided into three departments: 1. Housing and Civic Design, 2. Industrial Design, and 3. City Planning and Landscaping.

⁶⁶ Usov, *Zavod-sad*, 1954

industrial production.⁶⁷ Third, greenery was expected to contribute to a healthy environment, as a supplement to technological means of emissions control, like smokestack filters which were regularly anticipated but rarely installed.

This last association, of greenery with health was tightly linked to the dominant mode of public health practice in the USSR, which was oriented toward environmentally based prophylaxis, as distinct from treatment-based and clinical modes of medicine.⁶⁸ Considering these three functions together it is clear that greenery meant, first, a combination of trees, shrubs, and groundcover i.e. something more than just “decorative” flowerbeds or lawns, a quality encouraged by statements such as that attributed to Stalin (on “wee little lawns”). Second, greening was expected to have wide-ranging and diverse effects on the quality of factories as places of labor, as sites within cities, and as sources of both harmful and useful emissions. Owing to this ubiquity and applied ambitions, it seems clear that urban greening did indeed have an “enormous [*ogromno*]” significance for the socialist city during this time of industrialization, at least as such cities were imagined by architect-planners.⁶⁹

⁶⁷ Many scholars have studied the aesthetics-of-meta-politics / art-into-life angle of Stalinist culture. Among them, K. Clark is especially clear that Stalinist “aesthetics” included political and ethical positions. See her chapter “Return of the Aesthetic” in Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*.

⁶⁸ Starks, *The Body Soviet: Propaganda, Hygiene, and the Revolutionary State*; Susan Gross Solomon, ed. *Doing Medicine Together: Germany and Russia between the Wars* (Toronto: University of Toronto Press, 2006); Susan Gross Solomon and John F. Hutchinson, eds., *Health and Society in Revolutionary Russia*, Indiana-Michigan Series in Russian and East European Studies (Bloomington: Indiana University Press, 1990); Frances Lee Bernstein, Christopher Burton, and Dan Healey, eds., *Soviet Medicine: Culture, Practice, and Science* (DeKalb: Northern Illinois University Press, 2010). Geisler, “The Soviet Sanatorium: Medicine, Nature and Mass Culture in Sochi, 1917-1991.” in her environmental history of Sochi and its sanatoria argues that Soviet medicine “turned to nature for health” and designed their health resorts accordingly. (see also Conterio, “Inventing the Subtropics: An Environmental History of Sochi, 1929-36.”) My contribution to this topic is to find that Soviet architect-planners are also turning to nature for health not just at the seashore but at industrial factories in Moscow and Tashkent, places rarely associated with recuperation or nature vacations. For examples, see Marzeev *Kommunal’naia Gigiena, 1951*. The idea of environmental health can also be linked to pre-bacteriological ideas aka ‘miasma’ theories of disease, which had a noted impact on early zoning and building code. Works on Western and American zoning and health concepts include Eran Ben-Joseph, *The Code of the City: Standards and the Hidden Language of Place Making*, Urban and Industrial Environments (Cambridge, Mass.: MIT Press, 2005); Marjaana Niemi, *Public Health and Municipal Policy Making: Britain and Sweden, 1900-1940*, Historical Urban Studies (Burlington, VT: Ashgate, 2007); Gregg Mitman, “In Search of Health: Landscape and Disease in American Environmental History,” *Environmental History* 10, no. 2 (2005); Overy, *Light, Air & Openness: Modern Architecture between the Wars*; Ulrich Maximilian Schumann, “The Hidden Roots of the Garden City Idea: From John Sinclair to John Claudius Loudon,” *Journal of Planning History* 2, no. 4 (2003). In this context, it is perhaps significant that Vladimir Semenov returns to Russia from London (where he had been involved with the construction of early Garden Cities by architect-planners Raymond Unwin and Barry Parker) after winning a prize for his design of a “Bacteriological Hospital.” <http://mka.mos.ru/arb/main-architects/semenov.php> (See also Belousov and Smirnova, *V.N. Semenov*.)

⁶⁹ To put it another way: Factories were simultaneously sites, urban elements, and sources of stuff. Greenery was deployed as a response to perceived problems in each of these three aspects of factory-ness. When applied to factories, greenery was expected to improve them as sites to be experienced and “read” discursively; to improve the productivity of workers (quality of job experience, logistics); provide opportunities for collective ‘voluntary’ labor and re-use of materials [economy of scarcity, production of socialistic sociability]; and mitigate negative impacts (air quality, noise), all interventions aimed to improved overall productivity.

Lunts and Protasova were both architects, a professional designation shared with the other contributors to the 1936 and 1937 volumes, indicating the lack of disciplinary distinction among architecture, spatial planning, and landscape design in the USSR. Protasova was a member of the *kabinet* of industrial architecture, but appears not to have published much besides this article. Leonid Borisovich Lunts, in contrast, was a prominent figure in Soviet “green construction,” whose career continued across political and stylistic eras. By 1936 he had already published extensively on the topic of landscape design and green construction, including a well-funded multi-lingual monograph on Parks of Culture and Rest (1935) and two additional chapters in this collection, for which he was one of four editors. Lunts continued to be a central voice in the field, publishing into the mid-1980s.⁷⁰

The “interesting and diverse” material that Lunts and Protasova analyzed consisted of an array of designs for factory plantings, including some of the best known industrial constructions sites or *stroiki* of the interwar period. The locations of these projects varied widely, as did their degree of realization. Many are presented as semi-finished design-plans and were likely never built in the versions reproduced in these articles. Lunts and Protasova were, in essence, providing a public critique of design projects that they themselves had helped produce, as members of the greening and industrial workshops of the Academy of Architecture of the USSR.

Individual projects were treated as precedent studies from which the authors draw preliminary conclusions and suggestions regarding appropriate landscape architecture approaches and practices for industrial sites and production facilities in general. First they articulated the need for factory greening and its expected benefits, making a case for an as yet emergent area of professional architecture-planning intervention in the Soviet built environment. Their reports thus represent snapshots of early notions of the purposes greening should serve, the practices entailed in the greening of factories, and how best to implement such an agenda in the context of interwar Stalinist material and labor shortages. As will be shown in a later discussion of the functions and benefits associated with factory greening, the imagined benefits were many.

⁷⁰ For a seemingly complete list of his publications, see www.mo-la.ru/history/12.html (website of the present-day Moscow Society of Landscape Architects.) I have not been able to find an obituary or other biographical profile of him, unlike other Soviet landscape architects like Mikhail Korzhev (e.g. a biography by Khan-Magomedov) or Zalesskaia and Prokhorova, who feature prominently in Vronskaya, "Urbanist Landscape: Militsa Prokhorova, Liubov' Zalesskaia, and the Emergence of Soviet Landscape Architecture ".

First, it is worth considering the depiction for a non-professional audience of factory greening's emergence and experiential qualities.

A Gardener's Notes

A memoiristic description of one such “Garden-Factory” provides a sense of the multi-purpose ideal to which the greening and beautification of everyday industrial sites aspired. This is the Kalibr Instrumentation Factory in Moscow, established in the early 1930s in what was then a relatively outer-lying district of Moscow. It was thereafter frequently referred to as one of multiple factories being “greened.” The process and experience of greening at the Kalibr Factory was commemorated in a 1954 workplace memoir and “how-to” guide titled *Zavod-Sad: Zapiski Sadovoda* [*The Garden-Factory: Notes of a Gardener*] by the chief of the factory's greening crew [*tsekh ozelenenie*], Ivan Petrovich Usov.⁷¹ The book included a praising foreword “To the Dear Green Friend!” by renowned author-environmentalist Leonid Leonov, who was at that time a primary actor involved in the forest advocacy “Green Friends” society.⁷²

Usov's workplace memoir of the development and maintenance of the Kalibr Factory's gardens, park, and general landscaping—which he describes as one of the earliest examples of factory greening—provides a sense of how the greening and beautification of industrial sites was promoted as a quintessentially socialist activity, produced by workers and for workers. As phrased by Usov, “it is one thing to create a garden somewhere in a rural location, and another thing altogether to built one in the conditions of an industrial enterprise.” His book was therefore intended to inform and illustrate, to convey the value of factory greening and the lessons learned, such that readers felt “as if they themselves had visited the Kalibrovskii Park.” Readers, having visited the Garden-Factory in life or on the page, were expected to be “inflamed in every

⁷¹ In the book's first few pages, Usov thanks a journalist, one M. M. Kondrashova, for her help in “preparing my notes for publication.” This suggests that the book may have been ghost-written to some extent. (p5) Kondrashova specialized in writing about factory gardens, judging by a sample of her wartime articles in the central trade union newspaper *Trud* [*Labor*], e.g. “Khorosho organizovat' okhranu ogorodov,” [Properly organize the protection of vegetable gardens] *Trud*, August 10, 1943, page 3 and “Samodeiatel'naia okhrana ogorodov,” [Amateur protection of vegetable gardens] *Trud*, August 12, 1943, page 3. These and other examples of official support and concern for factory gardens are cited by Karel C. Berkhoff, *Motherland in Danger: Soviet Propaganda During World War II* (Cambridge, Mass.: Harvard University Press, 2012), 317 fn28. in his chapter on the material privations faced by the Soviet populace during WWII. Factory vegetable gardens were officially encouraged as a means of supplementing the nutrition available to workers and others via official rationing.

⁷² Lunts was selected as vice president of the society upon its founding in 1947 (charter approved in 1948).

possible way with the desire to promote the establishment of such a park at their own factories [*iu sebina na zavode*].”⁷³

This admittedly propagandistic memoir has some potential inaccuracies as a historical source of “actually existing” truths, as was true of any piece of officially produced literature or journalism.⁷⁴ That said, it vividly describes the initial problem-solving and innovative thinking associated with the early years of factory greening, the everyday lived experience of a “garden factory” by workers, gardeners and other site visitors, and the integration of greenery into the rituals and responsibilities that characterized the Soviet project of collective, cultured labor. The account it offers follows the traditions of socialist realism; no challenge is unsurmountable given proper attitudes, extensive “voluntary” labor, and creative problem solving. The book’s propagandistic tone and aims contributes to its value as a source on the official aspirations and iconography of the time.

As described by Ivan Petrovich Usov, the chief of the greening or verdification crew [*tsekh ozeleneniia*] at the *Kalibr* factory, the combination of an active factory and its garden constituted a “unified whole” [*edinoe tseloe*].⁷⁵ Usov viewed the garden as the “mirror” of the factory, not its opposite; beautiful, lush gardens were an indicator and producer of factory well-functioning and future growth.⁷⁶ In contrast to the expectation that a factory garden is a high-art object produced by specialist as an aesthetic provocation, Usov and others involved in the “greening of factories” considered the imbrication of industrial production with planted

⁷³ Usov, *Zavod-sad*, 1954: p5

⁷⁴ A useful definition of propaganda in the Soviet context is provided by Berkhoff, *Motherland in Danger : Soviet Propaganda During World War II*, 3.. "It is not easy to provide a precise definition of propaganda that covers all of it—not less and not more—and that is also valid across time and space. It is often considered simply biased information spread to shape public opinion and behavior. In this book it is more than a kind of information, namely a deliberate and systematic attempt to shape perceptions, mental states, and, above all, behavior, so as to achieve a response that furthers the propagandist’s intent. 7 But the word also appears in this study as shorthand for the tools: the Soviet newspapers and radio broadcasts." Berkhoff notes [fn7] that his “definition has been adapted from Garth S. Jowett and Victoria O’Donnell, *Propaganda and Persuasion*, 3rd ed. (Thousand Oaks, Calif., 1999), 6, 45, 290. The former definition is from “State of Deception: The Power of Nazi Propaganda,” special exhibition at the U.S. Holocaust Memorial Museum, www.ushmm.org/propaganda/. Film historian Emma Widdis makes a similar argument regarding the value of “propagandistic” socialist realist films as a source for understanding Stalinist culture. See “The Cinematic Pastoral of the 1930s” in *Picturing Russia: Explorations in Visual Culture*. Kivelson, V. A. and Neuberger, J. (eds.) New Haven, Conn.: Yale University Press (2008). In either broadcasting or cultural production, the imagined and depicted “propaganda” functioned as a form of cultural infrastructure, given the emphasis on Stalinist and Soviet culture on the “having of plans” as a self-identified improvement distinctive to socialism over “chaotic” unplanned capitalist societies. Day makes this argument with respect to urban planning. Day, "Building Socialism: The Politics of the Soviet Cityscape in the Stalin Era." The same was true, I would argue, with respect to greening plans.

⁷⁵ Usov, *Zavod-Sad*, 1954: p62

⁷⁶ Usov, 1954: p67

vegetation to be appropriate, mutually-beneficial, and modern. It was also intrinsically, gloriously a product of mass enthusiasm and labor, as Usov maintained:

Our park was created not only by gardeners. Gardeners constantly helped the rationalizers of the factory. The garden was built with the help of the smiths, the diemakers, the carpenters, the engineers, the turners, the plumbers, the repairmen, the chemists, the pipefitters. The garden was built with the help of those hundreds and thousands of Kalibrovtsy, grey staff-members and beardless journeymen, who spring and fall of every year in any weather came out for *subbotniki* [Saturday work days]. The garden was made and it flowers by the patronage [*pod sheftsvo*] of the whole factory.⁷⁷

The professional hand and eye of architects is conspicuously absent from Usov's account.⁷⁸ Instead the garden-factory's origins lie in a combination of political and popular will. Despite having been initially thrilled by the brightness, cleanliness and other modern "laboratory" qualities of the factory itself, Usov is disenchanted when he sees the muddy, messy state of the factory yard. When a visiting Party official asks why the factory workers don't have a "volunteer" collective project, Usov suggests the greening of the yard and factory grounds "even though the factory administration may not like it."

The project receives approval from on high, leapfrogging the local factory bosses, but faces many practical difficulties. For instance, although the factory itself was built in a formerly agricultural district on the edge of Moscow, the soil is irredeemably compacted and otherwise "soiled" by industrial carelessness. Luckily, thanks to the clever thinking of the enthusiastic factory workers, they are able to bring in fresh topsoil excavated from the reconstruction of the nearby "*Malaia Meshchanskaia*" *ulitsa* [Petit Bourgeois street]. The garden-factory began to grow in earnest thanks to this transfer of fertility from the merchants to the workers. The imagery of layering new fertile soil atop the dead compacted earth of past modes may also have resonated with Marxist concepts of history as "stages" and societal base/superstructure.

⁷⁷ Usov, *Zavod-Sad*, 1954: p98. Stites in *Revolutionary Dreams Visions* links the early Soviet practice of *sheftsvo* to the *smychka* ideal of urban-rural relations. In cases of *sheftsvo*, stronger industries (or workers or party members) were imagined to help weaker ones, just as the more advanced city dwellers would help rural peasants. Stites, *Revolutionary Dreams: Utopian Vision and Experimental Life in the Russian Revolution*, 116. In the postwar period, urbanists in Krasnoyarsk expressed enthusiasm in local Union of Architects meetings for taking on *sheftsvo* over urban street and plaza greening projects. (Discussed in chapter 5)

⁷⁸ While Usov makes little or no mention of involvement by professional architects and engineers, Lunts and Protasova do include discussion of a "finished design" for greening the territory of the "Kalibr" factory done in 1934 by one professor E.V. Shervinskii. His design is criticized for not fully sensing the "organic connections of green architecture with the architecture of the factory" with the acknowledgement that "it is completely clear, that the author of the greening resolved it in isolation from resolution of the architecture of the factory buildings. At the same time it is obvious that the author of the genplan did not consider the necessity of greening the territory of the factory." Lunts and Protasova, "K problem sozdaniia zelenoi arkhitektury v promyshlennom komplekse," 1937: p284.

In Usov's account the factory garden is a bundle of aspired-to qualities: it is innovative and therefore modern, if not modernist; it is produced through collective "volunteer" labor; it transforms and improves the conditions of industrial production (i.e. industrial site conditions); finally, it has the agentive capacity to produce happier, healthier workers. The benefits Usov attributed both implicitly and explicitly to factory greening at Kalibr Factory are consistent with the benefits associated with urban and factory greening throughout professional literature of this period. In the articulation of the values and benefits by Lunts and Protasova, however, there is a consistent call for specialized or expert knowledge, perhaps in an attempt by the architectural community to link itself to the populism and mass enthusiasm associated with greening, or less cynically, to ensure quality control.

The bundled sanitary, aesthetic, social, and political values shaping factory greening were, each in distinct ways, products of both international and specifically Soviet factors. Greening represented a quantitative metric that, like the better-known index of *zhilploshchad* (square meters of living space), could be compared to international and historical conditions.⁷⁹ In keeping with the "revolutionary" re-valuation of many social objects such as the political valorization of workers and factory labor, the Soviet celebration of urban green plantings served to recast a formerly "backwards" characteristic of Russian cities—their "village-like" gardens and unbuilt areas—into signs of those cities' modernization and socialist superiority.

Many dominant Stalinist values and anxieties can thus be identified in the functions attributed to greening and greenery by professional and popular sources alike. These include greening's supposedly mass character and appeal. For instance, in his 1935 account of urban beautification as a "spontaneous" example of the *samodeiatel'nost' mass* (self-directed/amateur performance by the masses), one author quotes Stalin in asserting that the superiority of the Soviet form of governance—the dictatorship of the proletariat—rests on its "mass character." Rather than seeing popular participation in the construction of urban infrastructure (including greening) as a failure of the city or state authorities to provide for the private sphere, mass involvement is reframed as a sign of superiority. Soviet governmentality "gives powerful space [*moguchii prostor*] to initiatives of the masses, generating many forms of struggle for a better

⁷⁹ As is done by L.B. Lunts, "Ocherednye Voprosy Ozeleneniia Gorodov." *Gigiena i sanitariia*, no. 3 (1946): 7–17. See also Vaintsvaig, ed. *Planirovka Promyshlennykh Raionov*, 1934: p9.

life. [*bor'by za luchshuiu zhizn'*].”⁸⁰ Beautification by mass initiative is one of those forms of struggle, shaped by the intersection of urban environmental intervention, political agendas, and industrial models.

The masses of workers themselves without compensation [*neposredstvenno*] took to the beautification of their cities, blocks, streets, buildings and homes ... [They] set to the business of beautification of cities with the same socialist methods of labor as had been born in the years of the first Five Year Plan at socialist enterprises.⁸¹

This 1930s text emphasizes participatory city improvement as an expression of labor struggle and socialist political-motivational superiority. In contrast, postwar discussions of the need for popular “care” or “concern” for urban trees and other forms of environmental quality framed participation as motivated by patriotism, morality, and love.

While aesthetic benefits were consistently included in rhetoric promoting factory greening, visual-aesthetic benefits were consistently bundled together and interconnected with benefits for industrial productivity and communal hygiene, as detailed in the following sections.

Enterprise Ensembles

“Harmony” and “unity” were consistent core values for architecture of the 1930s, just as the construction of “ensembles” was a guiding tenet for Stalinist urbanism.⁸² Greening was similarly associated with wholeness and unity, even as it was applied as a term across scales and at diverse sites (central parks, urban forest parks, boulevards, and factories. The imagined systematic and unitary character of greening was consistent with the emphasis on unity, wholeness, and “ensemble” approach to architecture during the Stalinist period.⁸³ Lunts and

⁸⁰ Valevskii, *Za Blagoustroistvo Gorodo*, 1935: 9}

⁸¹ Valevskii, 1935: p14

⁸² See Christina Lodder, Maria Kokkori, and Maria Mileeva, eds., *Utopian Reality: Reconstructing Culture in Revolutionary Russia and Beyond*, Russian History and Culture (Leiden: Brill, 2013); Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*. The “ensemble” approach was canonical for Stalinist architecture more generally, as was an emphasis on “harmony” “radiance” and “wholeness”... also Cooke, “Beauty as a Route to ‘the Radiant Future’: Responses of Soviet Architecture.” Cooke writes, “The Soviet city was in fact always sharply contrasted to this example of the capitalist city ‘riddled with contradictions’. Such a [capitalist] city might indeed contain ‘great state ensembles’, but they could not form a wholeness when they were lost in a sea of petit-bourgeois mercantile chaos’.” fn42, p149

⁸³ Architectural production, in turn, reflects and contributes to the larger cultural patterns, emphasize a similar phenomenon of fusion and elimination of difference. i.e. Totalitarian state produces total design object (as asserted by Groys) but is also a characteristic of modernity [all that is solid melts into air], and of dialectical synthesis. Interesting for my purposes is the way that this fusion and conflation [merging] of social categories reflected a fusion of seemingly very different professional and institutional actors, agendas, and activities into the supposedly singular “system” of greening— itself, like a multi-building ensemble, having many component parts. As a result of these parallel manifestation of larger-scale cultural values and site-scale

Protasova maintained that, in order to solve the challenges facing industrial architecture in the USSR, it would be necessary to “use all architectural abilities in order to combine in one harmonious and artistic whole all the separate architectural elements.” The terms harmony, artistry, and wholeness appear repeatedly throughout their discussion, indicating the similarity of expectations placed on industrial, residential and civic architecture during this period. In this value system, greenery was “one of the important components of the architectural ensemble of a factory.”⁸⁴ By applying these aesthetic, and classically derived, standards of design to a decisively modern object like a factory, their arguments contributed to the position that all aspects of Soviet society were rightfully subject to planning and designed improvement, from workers’ clothing, to stoves, to factory grounds, to cities and regions.⁸⁵

In applying these political-aesthetic terms to the production of industrial architecture, L&P indicate the status of industrial structures and sites as interior to the domain of Architecture, rather than being the domain of engineers or purely pragmatic criteria. The very ubiquity or “banality” of greening that has caused some historians to dismiss its significance —its being treated by the same criteria as architecture and literature, as part of the same aesthetic system— allowed developments in greening to serve as evidence of broader shifts regarding the development of socialist urbanism in general.

Aesthetics, in Soviet Russia of the 1930s, was much more than met the eye. In Lunts and Protasova’s analysis, themes of environmental quality and visual perception were frequently linked via emphasis on atmospheric clarity or radiance. Greening contributed to the visual legibility of the factory and its sources of authority. It did so by serving the “architectural” function of organizing territory and powerful spaces such as the main factory entrance “where the basic masses of workers pass through. ” This entrance was also, of course, the site from whence the architectural *oblik* [image] of “the factory as a whole” could be perceived. The greening of the entrance contributed to the spatial and visual expression of a factory’s hierarchy, with the administration building receiving the best and most beautiful planting treatment.⁸⁶ Such

expectations, it is reasonable/rewarding to use one specific site as a means of understanding the ideals (if not the implementation) then circulating more widely.

⁸⁴ Lunts and Protasova, 1936

⁸⁵ On the importance of everyday objects to constructivist designers, and socialist ideas of consciousness, see Christina Kiaer, *Imagine No Possessions: The Socialist Objects of Russian Constructivism* (Cambridge, Mass.: MIT Press, 2005).

⁸⁶ Lunts and Protasova, "Problema Ozeleneniia Promyshlennogo Kompleksa," 1936: p283. Greenery is credited with supporting the architectural “composition” of an industrial combine, for instance reinforcing the main architectural axis by outlining the

clear, legible expressions of hierarchy were understood to be in the best interests of the workers and of the factory administration; greenery provided a pleasant material means to that visual-spatial end.

The convergence of visual, spatial, and health concerns was further implied in an assertion early in the 1937 version of this essay, where Lunts and Protasova state that the inclusion of greenery in a factory ensemble “easily... conveys the volume of airy space [*ob’emnost’ vozdushnym prostranstvom*], visually divides the physical plant [*korpus*], and expands the site of the factory. All of these moments... [act] extremely beneficially on the nervous system and create rest for the eyes.”⁸⁷ Yet one could go too far as well. The authors caution that, in pursuit of such harmonious and healthful environments, it remained important to avoid vegetation that might distract workers by being overly bright, variegated, visually diverse, unexpected, or surprising.⁸⁸

The necessary reliance on locally available “wild-gathered” planting materials, in combination with this concern regarding the dangers of over-stimulation, would have contributed to plantings that signaled “care for workers” through quantitative abundance, not species diversity or selective display. More formal or regular planting designs were deemed appropriate for some high-profile areas at factories such as the main entry plazas. Otherwise, factory green plantings that mimicked “actual nature” were preferred. For example, in order to establish the high quality and popular appeal of the green plantings at the Kalibr Instrumentation Factory (located in more or less central Moscow), Usov relates that workers involved in the planting of those areas joked about the risk of being eaten by bears.

primary road network, or by organizing the territory and space of the main entrance to the factory. These main entrance plazas [*ploshchad’*] were consistent with other “vast” public spaces of Soviet monumental urbanism, being intended to function as needed as a gathering place for all workers, staff and dependents of the factory. In their similarity to the baroque use of open space to frame monumental buildings, these near-factory squares were also a commentary on the symbolic importance of factories and industrial production to Soviet society.

⁸⁷ Lunts & Protasova, “K problem sozdaniia,” 1937: 261

⁸⁸ Lunts and Protasova “Problema Ozeleneniia Promyshlennogo Kompleksa,” 1936: p282-83. In terms of framing this section: relevant secondary literature includes Stark 2008 (regarding the phenomenon of “night sanatoria” and other environmental interventions aimed at improving public health in the 1920s); Conterio Geisler 2015 (on Sochi and other Black Sea health resorts as public health measure); and Siegelbaum 1999, 1990 (regarding the Soviet’s perceived need for concern regarding workers’ health, particularly the well-being of their nervous systems, pulmonary functions [TB] and eyes, as well as the chronic shortage of sites for “cultured leisure” and education—workers’ clubs being the indoor equivalent of the uses ascribed above to the factory garden).

Factory greening was undertaken with the goal of having workers spend their hour or half-hour work-breaks “amidst flowers and greenery.”⁸⁹ Such sites should therefore be located to the side of the production zone, away from more harmful workshops and busy roadways, thus contributing by virtue of their isolation to workers’ health and need for relaxation. Such sites were to be bordered with intensive greenery to create conditions for rest that were “as peaceful as possible and the most healthy.”⁹⁰ These recommendations for on-site buffers were repeated across all scales of the socialist built environment. Apartment buildings were spatially protected from road noise and emissions by wide boulevard plantings, factories within and near residential areas were to be buffered by enveloping “sanitary-protective zones” (some times visually indistinguishable from a planted boulevard, park or greenspace), and cities were to be surrounded by forest-park greenbelts that similarly buffered them from adverse environmental conditions.⁹¹

The design recommendations for factory territory leisure spaces for workers relied on the use of “park art” approaches. This included the siting of “small architectural forms” such as sculptures, waterbodies, diverse decorative flora, and the artistic treatment of parterres, gazebos [*besedka*, conversation place], and terraces. Lest the true character of factory sites be lost, the authors cautioned that “the scale and character of park-like elements” should “harmonize with the industrial architecture.”⁹² These statements implied that harmony between park (nature) and factory (modernity, industry) was possible, given the appropriate professional and political conditions. First, achieving the ambition of a garden-factory ensemble required appropriate design interventions that deploy the traditional skill set of “garden-park art” specialists. Lunts and Protasova asserted that the desired results require specific scalar and other aesthetic judgements, making the case for continued professional expertise.⁹³

⁸⁹ Lunts and Protasova "Problema Ozeleneniia Promyshlennogo Kompleksa," 1936: p284}

⁹⁰ Ibid. “*vozmozhno spokoinoi i naibolee zdorovoi obstanovki ot dykha*”.

⁹¹ For instance in articles by Ivan Nikolaev from 1937, 1950, and 1960. See bibliography.

⁹² Lunts and Protasova, 1936: p284. It happens that park design was an area of expertise for Lunts if not Protasova, given his authorship in 1935 of a lavish volume on Parks of Culture and Rest. Additionally, many of the factory greening projects discussed by Lunts and Protasova are attributed to architects whose other known projects include such major urban parks, including Zalesskaia and Prokhorova. Like Lunts, Zalesskaia continued to publish on urban greening and landscape-park architecture into the early 1970s.

⁹³ In contrast, consider the “sublime” effect of the post-industrial park such as Duisburg-Nord by Peter Latz & Associates or Richard Haag’s Gas Works Park, which rely for effect on a perceived juxtaposition of opposed or unexpected elements, namely industrial equipment remnants and leisure/pleasure landscapes.

The comingled and mutually beneficial presence of “garden” and “factory” elements across urban sites and scales required the spatial generosity and respect for labor that only socialism could provide. This aspect was reinforced by two core tenets of Soviet urbanist theory. First, that workers’ environments should afford the same amenities as central or formerly elite environments. This goal was to be realized by normative guidelines ensuring that all urban districts be equally equipped with socialist improvements (including greening, other public conveniences, and industrial enterprises). If that approach failed, workers were to be resettled into central areas, where they would be more easily able to access central cultural and other facilities.⁹⁴

In theorizing and standardizing the primary functions—and functional land-use zones—appropriate to socialist cities, Soviet urbanists consistently named a trio of functions. These were housing, industry, and leisure. A central business district, that mainstay of capitalist urbanism, was conspicuously absent. Instead, many of the programmatic elements associated with modern urbanism that would have been provided through the private sector in non-socialist cities (e.g. cinemas, restaurants, theaters, shopping opportunities) were instead distributed throughout the other districts. Workers were expected to shop at the factory commissary, eat at the factory kitchen, and productively socialize in the factory park, in keeping with the status of factories as the ultimate ‘social condenser’ of the time.⁹⁵

The pleasure and health that workers were expected to gain from being surrounded by or gazing upon abundant greenery while at work was, in theory, supplemented by the multi-functional benefits that greenery afforded the factory relative to its surroundings. In seemingly pragmatic or autonomously professional decisions regarding the greening of factories, the

⁹⁴ L. Perchik, *The Reconstruction of Moscow* (Moscow: Co-Operative Publishing Society of Foreign Workers in the U.S.S.R., 1936).

⁹⁵ Castillo, "Stalinist Modern: Constructivism and the Soviet Company Town," 137. Castillo focuses on Constructivism's relationship to the Stalinist Company-Town during the first Five Year Plan. Regarding factories as social condensers, he states that "Constructivists venerated machine environments for their ordained capacity to transform human nature. The factory was considered the most potent example of the 'social condenser'—a term for building types that, while fulfilling basic needs, also instilled socialist modes of behavior and thought." Other social condensers were the communal house and the Red or Workers' Clubs. While Castillo notes that "public laundries, public baths, the creche, and the 'factory-kitchen'—a cafeteria that served meals on the premises or packed to do—also had ideological connotations similar to that of the communal house." I assert that the factory grounds, particularly of those that aspired to be "Garden-Factories" should be included in such lists. On other kinds of social condensers, see Hugh D. Hudson, Jr., "'The Social Condenser of Our Epoch': The Association of Contemporary Architects and the Creation of a New Way of Life in Revolutionary Russia," *Jahrbücher für Geschichte Osteuropas* 34, no. 4 (1986); Kopp, *Town and Revolution: Soviet Architecture and City Planning, 1917-1935*; Starr, "Visionary Town Planning During the Cultural Revolution."

desired effect of the greenery was consistently tied to “external” benefits, such as the ability to buffer the factory from prevailing winds. Specific types of plantings were often tied to more than one function at a time. The selection of woody plants with tall, spreading and impenetrable crowns for use along the site perimeter was described as a means of buffering the factory from “undesired outside influences,” while thickly planted bushes a meter or 1.5 meters in height would serve as “the basic filters of the lower layers of factory air, as it is this level specifically that carries the most dust.” Flowering varieties might be used as a wall treatment “and sometimes (especially as means of camouflage) on the roofs.”⁹⁶ Greenery at factories was thus even drafted into war preparedness, in camouflaging these strategic sites from prying aerial views.⁹⁷

The camouflage function associated with greenery also extended to professionals in need of protection. Architectural historian Selim Oleg Khan-Magomedov has noted the continuity in the USSR between the avant-garde, with its modernist minimalism, and the relatively autonomous sphere of industrial architecture (evidenced in part by the career of such individuals as I.S. Nikolaev).⁹⁸ Similar continuities of personnel and aesthetics existed between the 1920s avant-gardes and Soviet garden-park design, thanks in particular to the prominence in the latter field of former students of Nikolai Ladovsky.⁹⁹ Significantly, one of the functions of greening Lunts and Protasova identified is to cover up less successful exterior facades, including those that were too bare (or functionalist) in an economical manner. The decorative textures of green plantings would replace the plaster and decorative “adornment” that was generally required of “Stalinist *ampir*” style architecture.¹⁰⁰ In other words, green plantings could camouflage the underlying “Constructivist” minimalism of an industrial building’s façade by providing “decorative” adornment, without the costs associated with actual architectural façade detailing.

⁹⁶ Lunts and Protasova, 1936: p283

⁹⁷ During WWII, architects and artists in the Soviet Union were mobilized to help camouflage potential targets. See Cohen, 2011: *Architecture in Uniform: Designing and Building for the Second World War*

⁹⁸ Khan-Magomedov, S. O. (2008). *Ivan Nikolaev*. Moskva: Russkii avangard. Nikolaev’s most relevant published works include the article “Zavod i Gorod” pp49–58 in *Voprosy Promyshlennoi Arkhitekturoi* (1950) and *Planirovka i zastroyka zavodskikh territorii; arkhitekturno-gradostroitel'nye voprosy*. Moscow, Gos izd-vo lit-ry po stroitel'stvu i arkhitekture. (1954)

⁹⁹ In her work on Zalesskaia, Prokhorova, and the design of various Central Parks of Culture and Rest, Vronskaya emphasizes the connections between Ladovskii’s concern with movement and the psychological agency of visual perception. The emphasis placed by park-garden-greening experts on greenery’s capacity to direct the movement of workers appears to stem from similar origins, in concept and in design personnel. See Vronskaya, “Urbanist Landscape: Militsa Prokhorova, Liubov’ Zalesskaia, and the Emergence of Soviet Landscape Architecture”; “The Utopia of Personality.”

¹⁰⁰ This function can be interpreted two ways: either as camouflage for the modernist tendencies of industrial architecture against the regime’s gaze, or as a “Potemkin” intervention to create the appearance of adornment where none could be afforded through architectural means. These interpretations are not necessarily contradictory.

By declaring greening as “the most artistic approach” to external factory improvement [beautification], Lunts and Protasova were drawing an implicit contrast with the less picturesque arts of technological environmental amelioration, such as water and sewer provision. At the same time, the association of greening with these other forms of urban public infrastructure reinforced its necessity and applied value. The layered classification of factory greening as a subfield of “garden-park architecture,” meanwhile, reinforced the need for artistic expertise. In creating spectacles of biotic abundance at factories—sites more traditionally associated with abiotic technological productivity—architects involved in factory greening were also effectively engaged in an act of borrowed scenery, establishing themselves simultaneously as technical-productivity experts and aesthetic-political cultural workers.

Finally, the imagined ideal of a Garden-Factory appropriated the potent aesthetic trappings of everyday fertility and plenty that had been so successfully deployed at the All-Union Agricultural Exhibit¹⁰¹ as well as the “high art” associations of landscape design, particularly in the ceremonial and most public areas of factory sites.¹⁰² In sum, the aesthetics of greenery were far from neutral, whether the specific style of greening was “naturalistic,” as in Usov’s model planting of the Kalibr grounds, or more formal and neo-Classical, as in the Central Asian projects that Lunts and Protasova critiqued.¹⁰³ As was the case with architectural styles or certain literary tropes, greening was a cultural expression of political discourse.¹⁰⁴ It was legible as such

¹⁰¹ See Dobrenko “The Soviet Spectacle: The All-Union Agricultural Exhibition” in Kivelson and Neuberger, *Picturing Russia: Explorations in Visual Culture*, 189-95.

¹⁰² Perhaps contradictorily, Katarina Clark in her chapter in Rosenberg and Siegelbaum, *Social Dimensions of Soviet Industrialization*. (“Engineers of Human Souls in an Age of Industrialization: Changing Cultural Models, 1929-41” p248 notes that production, industrialization, construction etc were weakly rather than strongly represented in literature of the time, despite their planned prioritization. Instead, were typically portrayed ‘off-stage’ as it were, with only the benefits [modernity, culture] depicted within the film or novel. If so, this would be consistent with the repeated suggestion that greenery be used to mask or obscure the actual structures of industrial production, removing both architecture and labor from the view which then becomes a pure space of landscape/leisure, even as it is populated by workers. These workers are expected to pursue active and passive rest in the gardens; they are also expected to ‘voluntarily’ participate in the construction and maintenance of these gardens, a form of working holiday that is presented as celebratory of Soviet achievements even as the habits of care required by the plants produce more responsible, disciplined, mature [cultured] workers. This theme appears throughout Usov, *Zavod-Sad*, 1954, but particularly in his chapters “Zvodskaya agrotekhnik” [49–59], and “Pomni o kul’ture proizvodstva!” [60-60].

¹⁰³ See also L.S. Zaleskaia L.S. *Ozelenenie gorodov Srednei Azii* Moscow: izdat. Akademii Arkhitektury SSSR, 1949 on the greening of cities in Central Asia, where she criticizes (one of the) interwar general plans for Tashkent as being overly “European” in its layout and planting design. During WWII, the Academy of Architecture had been evacuated to Chymkent, where presumably various urbanists gained direct experience of the challenges, opportunities, and traditional aesthetics of Central Asian cities. On the importance of greenery and landscape transformation as a component of pre-revolutionary settler colonialism, see Keating, “‘There Are Few Plants, but They Are Growing, and Quickly’: Foliage and the Aesthetics of Landscape in Russian Central Asia, 1854–1914.”

¹⁰⁴ Evidence of the degree to which the greening of factories was taken for granted as an element of Soviet planning (and integrated into Soviet literary culture) can be found in the definition of planirovka, spatial planning, given in the 1957-61 *Slovar Russkogo Iazyka*, published by the Academy of Sciences [t3 p184-5]. *Planirovka* is defined as “the disposition (*raspolozhenie*) of

to the expert gaze if not that of the public. The design of factory gardens was in this way another venue of participation by architects in the codified rhetorical system of Stalinism and socialist realist aesthetics.

In terms of lived experience, these bundled aspirations fused thanks to the multiple meanings afforded by vegetative abundance. On the bustling grounds of the still-active Kalibr factory, the landscape was lush, complex and a bit messy; flowering trees and diverse shrubbery were clumped in “naturalistic” groupings to provide factory workers with places of respite and leisure, to energize them before they returned to their shifts. In his introduction to the 1954 book *Zavod-Sad (The Garden-Factory)*, renowned Soviet author and forest-preservation and urban plantings activist Leonid Leonov praises the Kalibr gardens as being so close to “authentic” natural forest that nightingales sing there, to the appreciative delight of the workers.¹⁰⁵ The notion that workers under socialism would be free “to enjoy the song of skylarks” had earlier been a point of contention between Moisei Ginzburg and Le Corbusier in their 1930 correspondence at the time of the “Green City” competition. The assertion, by Ginzburg, that workers could and would want to enjoy such birdsong is generally used as evidence of early Soviet urbanists’ utopianism. That such easy, pleasant connection to nature was supposedly realized at the Kalibr Factory speaks to the persistence of this ideal.

For work and workers: greenery and productivity

Greening was consistently presented as a means to improve industrial territories as sites of production. This meant, first, supporting outdoor activities at industrial sites such as the circulation of workers and materials. This goal indicated the use of greenery as “living fencing”

separate parts of something in relation to each other, the *ustroistvo* of something e.g. the disposition of a city.” To demonstrate the concept in use, the dictionary provides two quotes, the first regarding a park by LeNotre and the second describing an example of factory greening found in 1950 a novel by V. Popov, *Stal' i shlak*. [Steel and slag]. First: “Through the high, openwork [*azhurnyi*], gilded gates one could enter the royal park, preserved in all its beauty; an exemplar of Le Notre’s spatial planning. [*obrazchik planirovki, sozdannyi Lenotrom*]” - from Ignatiev, *Piat’desiat let v stroiu*. [not used in 1981 edition.] Second: “Makarov admired the spacious and reasonable layout. Between the workshops were large sites [*ploshchadki*] planted with trees, surrounded by intricate fencing. [*ogradami*]. — from V. Popov, *Stal' i shlak*. [1950] // was published in *Znanya*, no.1, 1949 pp113-14. Discussed by Vera Dunham, *Middle-Class Values*... pp111– 113 in the beginning of chapter “Parasites and Builders” Vera S. Dunham, *In Stalin's Time: Middleclass Values in Soviet Fiction*, Revised ed. (Duke University Press Books, 1990 [original 1976]). on the female narratives of *meshchanstvo* (in which a disaffected wife, Ms. Kraineva, “defects” by refusing to evacuate from the Donets Basin to the Urals, instead expressing ambivalence toward the Germans and doubt in Russian victory, eventually ending up as a prostitute in German hands. (This making her a demonstration of a “parasitical type” and their fate).

¹⁰⁵ Usov, *Zavod-Sad*, Introduction

to frame paths that would direct the pedestrian flows of workers to and within industrial production sites. Greenery also organized the flow of visual and aural perceptions, being used to screen or isolate individual buildings, both “harmful, noisy” workshops and “quiet” laboratories and “experimental pavilions.”¹⁰⁶ These improvements in the “use value” of factories-as-sites were intended to make them better functioning, more comfortable, more efficient, and more legible sites in terms of hierarchy and logistics. (This is similar to advanced industrialization throughout the world, but is not always accomplished by means of *vegetated* interventions in the site.) Such improvements were meant to be experienced by the bodies and especially the gaze of the workers, as they walked to the factory, between its buildings, and from within the buildings as workers looked out onto the factory grounds. Additionally, Usov spends a chapter describing how the assembly line facilities were similarly improved through an abundance of indoor greenery.¹⁰⁷

Among the psychological benefits associated with greenery, Lunts and Protasova assert that proximity to greenery and its visual perception would improve workers’ moods, in keeping with Stalinist emphasis on “better, more joyful” life under socialism:

... the organization of cultured rest on the territory of a factory is unthinkable [*nemyslima*] without a noticeable quantity of vegetation, as greenery in itself brings elements of peacefulness and joy. These emotions are easily perceived by a person during their breaks as well as during the processes of work itself (e.g the walk through the courtyard between workshops, glances out the window, etc).¹⁰⁸

In Usov’s account, the logistical challenges of procuring plant material, clean air, water, labor and other needed “in-puts” for the Kalibr gardens are resolved through a combination of spatial

¹⁰⁶ Lunts and Protasova, 1936: p281; similar assertions in Usov, *Zavod-Sad*, 1954

¹⁰⁷ Captured by slightly blurry photographs included in the book, as well as in a more composed photograph by A. Shaikhet. “Greening up Kalibr factory. Moscow, 1955” (included in the post-Soviet *ProZavod* exhibition of factory art at the Lumiere Brothers Center for Photography, in Moscow (15 Jan – 1 Mar 2015) <http://photography-now.com/exhibition/104923>).

¹⁰⁸ Lunts and Protasova, 1936: p282. The frequent mention of visual perception of nature from within buildings as a desirable design feature is similar to that attributed to M.Ginsberg’s designs for the Narkomfin Dom Kommuna by Victor Buchli. Buchli, “Moisei Ginzburg’s Narkomfin Communal House in Moscow: Contesting the Social and Material World.” Buchli situates Ginzburg’s attempted visual and spatial connection between house and landscape in relation to larger debates of the time, and core ideas of modern urban planning: “The idealistic cultivation of a “natural” realm, unspoiled by the industrializing capitalist city, was a theme of long-standing importance in nineteenth-century planning and architecture. For Marxists, rejection of the ill effects of the capitalist city and resolution of the contradiction between town and country were central to the possibility of reform. Marxist Constructivist architects, therefore, were greatly inspired by the overlapping social and spatial concerns of Ebenezer Howard and the Garden City movement in England and the post-Enlightenment tradition of town planning in general. Within the Moscow architectural community, oscillation between a complete rejection of the capitalist city and the possibility of a socialist urban space was vociferous and extremely frustrating to state officials, who sought immediate and realizable solutions to the management of urban growth and the creation of housing.” [p168] Regarding the Russian Garden city movement, Buchli cites Catherine Cooke on the Garden City idea’s influence on Russian and Soviet architecture. Cooke, “Russian Responses to the Garden City.”

luck and worker enthusiasm. Success also depended on the adaptability of plants and humans alike. The garden's need for fresh air was to be answered by taller smokestacks, theoretically lofting particulates up and away. Grass could replace less smoke-hardy types of vegetation. Usov voices seemingly boundless faith in both the survival capacity of plants and the continued perfection of "labor hygiene" protections (i.e. technological solutions to factory emissions).¹⁰⁹

The plants themselves were to come either from a nursery or be gathered in a "campaign" expedition to nearby forests. The collection of mature wild-grown specimens was described as triply advantageous. Such gleaning for industrial use would provide a wider choice of species for little or no cost beyond the truck needed for retrieval. It would accelerate the otherwise too-slow process of growing a planted paradise on-site, and re-enforce the preferred "natural landscape" style.¹¹⁰ The burden of acclimatizing to a new site went unremarked. Other examples of can-do ingenuity included the manufacture on site of needed equipment such as spray-heads for watering plants gently from spare bits and pieces of industrial equipment, for which Usov provides measured drawing. Fertilizer was, similarly, to be produced by the bartered acquisition of bonemeal and other spare industrial outputs from nearby manufacturing enterprises.¹¹¹

The need for labor in the garden-factory is answered by mass participation of purportedly enthusiastic workers in Saturday *subbotniki*, or volunteer work days. Usov frequently describes these as "holidays" for workers and school children, healthful and delightful thanks to the accompanying fresh air, change of pace, lunch buffet, and even a wind ensemble.¹¹² Such

¹⁰⁹ In actuality, such measures were often required but rarely installed. See Louis Siegelbaum, "Okhrana truda: Industrial Hygiene, Psychotechnics, and Industrialization in the USSR" in Solomon and Hutchinson, *Health and Society in Revolutionary Russia*. For the postwar period, see Donald Filtzer, "The political economy of water supply under late Stalinism" in Bernstein, Burton, and Healey, *Soviet Medicine: Culture, Practice, and Science*.

¹¹⁰ Usov considers and then dismisses the French [baroque] and English [landscape park] styles, stating that the Russian landscape is more beautiful and more appropriate for a factory garden or any other urban park. The strict geometries of French garden style (à la Le Nôtre and Versailles) were too rigid and would not provide the necessary mental/visual respite from the geometries and mechanic aesthetics of factory production; the English landscape park style is closer but "not ours" and "too artificial" when considered for use in Moscow. This explicit preference for "native" natural scenery is consistent with the pre-Revolutionary nature aesthetics discussed by C.Ely. *Christopher Ely, "Critics in the Native Soil: Landscape and Conflicting Ideals of Nationality in Imperial Russia," Ecumene (continues as Cultural Geographies) 7, no. 3 (2000); "The Origins of Russian Scenery: Volga River Tourism and Russian Landscape Aesthetics."; This Meager Nature: Landscape and National Identity in Imperial Russia.* See also L.O. Mashinskii, "K Voprosu o massovom ozelenenii gorodov" (Regarding the Issue of Mass Greening of Cities) pp61–91 in *Problemy Sovetskogo Gradostroitel'stva* Theme: "Current Problems". Akademiia Stroitel'stva i arkhitektury SSSR [Academy of Construction and Architecture of the USSR], 1960 no08. Moscow: GossStroiIzdat.

¹¹¹ In her study of Hungarian industrial ideologies, Gille notes a similar pattern, wherein factory by-products were categorized as "resources" rather than "wastes" by the socialist regime. Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*.

¹¹² Rosalind Sartorti describes Stalinist holidays as theoretically consolidating all of ideal everyday life Rosalinde Sartorti, "Pictures at an Exhibition: Russian Land in a Global World," *Studies in East European Thought* 62, no. 3 (2010). Similarly, here

enthusiasm was further encouraged by the assignment of workers to plant the areas adjacent to their own workshop or residence.¹¹³ The desired affective and embodied connectivity between factory worker and factory garden was reinforced by the integration of garden “outputs” into daily life.

Direct benefits to workers of the Garden-Factory included serving fruit from the factory’s allées of apple, cherry and pear trees in the factory cafeterias, especially in the childcare facilities.¹¹⁴ Bouquets gathered from the factory grounds were to be integrated into all the usual rituals of celebration and commemoration: births, graduations, plan over-fulfillments, marriages, promotions. Workers are expected to improve their mental health, work-readiness, and levels of *kulturnost*’ by relaxing, socializing with party activists, reading or playing chess in the factory gardens between and after their shifts—though not before, when they were efficiently and pleasantly directed to their stations by “living fences” of shrubs. Taken in combination, the shadows, colors, smells, and sounds of nature that surround and infuse the factory floor were said to prevent fatigue without causing distraction. In this sense they were a “necessity” not an amenity or excess luxury. As Usov elaborated:

Let builders not forget the gardens that will grow around the productive buildings [*korpus*] they make. Let them not ruin the factory soil, but protect it by all means. Let them not destroy the fertile layers of earth.

Project-designers ought to remember, that the modern *sovetskii* socialistic factory cannot and must not develop on dead cemented earth. The greening of factories must be planned simultaneously with the project-design of its buildings. For at a socialistic factory, greenery is not an excess, but a most authentic productive necessity, a beautiful means of labor protection [*prekrasnoe sredstvo okhrany truda*]. A garden is the “lungs” of a factory. A garden is a jolt of vivacity for the full working day.¹¹⁵

Stalinist factories such as Kalibr were envisioned to be, ideally, concentrated microcosms of urban modernity. This accords with Castillo’s observation that the Constructivist factory was imagined to be the ultimate social condenser. On Stalinist celebration see also Karen Petrone, *Life Has Become More Joyous, Comrades: Celebrations in the Time of Stalin*, Indiana-Michigan Series in Russian and East European Studies (Bloomington: Indiana University Press, 2000).

¹¹³ A stock recommendation that likely contributed to the eventual mass character of Soviet environmental activism (and the regime’s support/tolerance for such social advocacy).

¹¹⁴ The use of fruit trees in *allées*—i.e. linear plantations parallel to paths or roads—seems to have been done as a means of saving space (vs planting those trees in an orchard) and bringing the sensory benefits of fruit and blossoms closer to workers walking on the factory grounds. The idea of phyto-bioaccumulation of heavy metals and other toxins does not enter Usov’s account.

¹¹⁵ Usov, 1954: p25.

Year-round Utopia

Lest someone think that such pleasure and productive necessity is a seasonal affair, Usov dwelt on the aesthetic and functional benefits afforded by vegetated grounds in all times of day and times of year. “Of course, the garden is best in spring” he admitted, but it has its advantages at other times as well. Thanks to the transplantation of mature trees “from nature” and various other techniques of acceleration, the factory garden answers the workers’ desire for tomorrow to arrive today. Furthermore, the usual seasonal peaks of various species could be extended into a “greater summer” in which flowers would be blooming practically year-round thanks to applied techniques of “*agrotekhnika*,” e.g. special pruning, soil amendments, and the Michurnist improvement of species hardiness.¹¹⁶ Such “scientific” innovations are instantly naturalized in Usov’s narrative; once created, the factory garden is fully equivalent to a “natural” forest, complete with the signature nightingales that Leonov mentioned.

Encounters with the garden as a place and as a set of practices were said to be beneficial “cultivation” for young workers, teaching them responsibility, instilling a sense of collective belonging, and providing opportunities for socialistic competition. Pre-revolutionary associations of the Russian forest with the Russian nation echoed into the Soviet period, for example in Stalin’s 1934 pronouncement that “people must be carefully and attentively cultivated the way a gardener tends a favorite tree.”¹¹⁷ For the experienced or senior worker, the garden provides an index to the functioning of the factory. Is the workplace orderly, efficient, well-cared for? If so, the garden will show it. Finally, in the so-called workers’ state, the greening of sites of production communicates to an international audience care for the worker and mass “democratic” support. The multiple benefits of a garden-factory for all who encounter it can thus

¹¹⁶ The links between Soviet greening and “Lysenko-Michurinist” horticulture is discussed in the postwar Moscow chapter. The gardener-botanists Michurin and Kolesnikov feature prominently in Usov’s text, praised for their development of new varieties that extend the climatic range and bloom-season of species such as lilacs. Lysenko is not mentioned but logic suggests that his ideas regarding tree hardiness and plant community cooperation were a “hidden partner” in these developments. On Lysenko’s ideas as an influence diverting some of the original plans of the “Great Stalin Plan for the Transformation of Nature” see Stephen Brain, “The Great Stalin Plan for the Transformation of Nature,” *Environmental History* 15, no. 4 (2010); “Stalin’s Environmentalism.” On Michurin, see N.P. Goncharov, N.I. Savel’ev, “Ivan V. Michurin: On the 160th Anniversary of the Birth of the Russian Burbank” *Russian Journal of Genetics: Applied Research*, 2016, Vol. 6, No. 1, pp. 105–127; and Weiner, “The Roots of ‘Michurinism’: Transformist Biology and Acclimatization as Currents in the Russian Life Sciences.”

¹¹⁷ Quoted in David Brandenberger, *National Bolshevism: Stalinist Mass Culture and the Formation of Modern Russian National Identity, 1931-1956*, Russian Research Center Studies (Cambridge, MA ; London, England: Harvard University Press, 2002), citing Robert C. Tucker, *Stalin in Power: the Revolution from Above, 1929-1941* (New York, 1990), 320. According to Brandenberger, Tucker identifies this pronouncement as a turning point where the CPSU sought a new “modus vivendi with Soviet society,” in contrast to the former exaltation of technology over cadres. On the latter point, Brandenberger (p27) cites K. Clark, “Utopian Anthropology as a Context for Stalinist Literature” in *Stalinism: Essays in Historical Interpretation*, ed. Robert C. Tucker (New York, 1977), 184.

be loosely summarized as improvements, first, to the public health environment, especially with regard to workers' mental fatigue. Second, a garden-factory improved the overall urban environment by giving workers access to better air quality, the provision of leisure space, and other amenities. Finally, the garden-factory contributed symbolically to the Soviet project of creating an orderly, harmonious, verdant workers' society in direct rhetorical and statistical contrast to capitalist urbanism.

As if the political-aesthetic and spatial-productive agency attributed to trees, shrubs and flowerbeds was not sufficient logic for the deployment of greenery at Soviet factories, green plantings were also expected to function as a mitigating factor against the variations in temperature, humidity, and air cleanliness that might otherwise mar the harmony and healthfulness of Soviet cities.¹¹⁸ Greenery was repeatedly and consistently described as having the capacity to do work on the world, to make impacts on urban microclimates and air quality, in addition to its effect on the minds, moods, and self-respect of workers.¹¹⁹ Plants of different heights would filter different levels of the factory air, for instance, while planted parterres would replace a source of particulates (open dusty squares) with a catchment function.¹²⁰ Green plantings would also serve as a natural defense "against noise, wind, snow, [and] sand drifts," as in addition to the dust reduction function mentioned earlier; they acted to "hold and direct air currents while serving camouflage goals."¹²¹ Similarly, plants at plants would hold, direct and camouflage pedestrian and vehicular circulation.

Trees in particular were thought to make a particular contribution to urban health. In the USSR, public health was primarily approached as a consequence of environmental quality under

¹¹⁸ Similarly, hygienicist A.N. Sysin, in his speech at the First Congress of the Soviet Architecture Union, identifies "daily variation" in the microclimate as greater threat to communal health and hygiene than big-picture climatic features. Sysin, A.N. "Sanitarno-Gigienicheskie Voprosy V Praktike Planirovki Naselennykh Mest " In *III plenuma pravleniia Soiuza sovetskikh arkhitektorov SSSR: Planirovka i stroitel'stvo gorodov SSSR*, 34-43. Moscow: Izdatel'stvo Vsesoiuznoi akademii arkhitektury, 1938.

¹¹⁹ The table of contents of Soviet urban greening textbooks typically includes a chapter discussing greening's "significance" that give explicit numbered form to these expectations: for instance Chapter II in Lunts, L.B. *Zelenoe Stroitel'stvo*, Moscow: Goslesbumizdat, 1952 includes the following sections: "1. the Struggle for the transformation of natural resources in the USSR; 2. The Influence of plantings on microclimate; 3. The influence of plantings on air cleanliness; 4. The significance of plantings in the struggle with drifts, fires, landslides, and ravine formation; 5. The significance of plantings in the struggle with urban noise; 6. Architectural-planting significance of plantings." Given that the urban sanitary inspectors tasked with monitoring and improving urban environmental conditions were chronically unable to effect change in the behavior of industrial bureaus, these 'reactive' measures represented attempts to address and mitigate pollution not at the end-of-pipe source, but at the "sink" of the sanitary-protective zone (SZZ).

¹²⁰ Lunts and Protasova, 1936: p283}

¹²¹ *Ibid.*

the banner of “communal hygiene” and prophylaxis.¹²² Lunts and Protasova maintained that the planting of trees (more than lawns or shrubs) at and around a factory would improve the air and other qualities of the immediate environment and also the quality of the more distant environment. The residential areas on the far side of that planted belt of trees would be farther away, but more importantly, they would be protected from the unhealthy air quality resulting from factory emissions thanks to the “activity” of the trees in altering air flow, serving as sinks for noise, dust and other impurities, and changing atmospheric characteristics such as humidity and air temperature variation. In a similar manner, green plantings protected a factory from outside environmental factors such as regional dust that might contaminate production processes.¹²³

This double-ended line of argument was based in the perceived mechanical properties of leaves and other surfaces to capture particulate matter while at the same time effecting temperature-driven changes in airflow that contributed to the influx of fresh air to urban areas. This role of greenery as functional and spatial intermediary—to protect industries from environmental hazards while also protecting the environment and public health from industrial hazards—appears to have grown more urgent with time, as it became clear that “socialist labor protection” would not in itself control industrial emissions, notwithstanding Usov’s multiple cavalier statements to that effect.¹²⁴

¹²² Starks, *The Body Soviet: Propaganda, Hygiene, and the Revolutionary State*; Solomon and Hutchinson, *Health and Society in Revolutionary Russia*. See also Geisler, “The Soviet Sanatorium: Medicine, Nature and Mass Culture in Sochi, 1917-1991.”

¹²³ “In combination with fountains and open waterbodies, greenery at factory sites would ... serve as a natural [*estestvennyi*] filter, protecting production from dust.” They present this last function, that of air quality control / dust protection, as an economic boon and necessity, given that “the amortization of expensive aggregates depends in large part on the quantity of dust falling onto them.” Lunts and Protasova, 1936: p281.

¹²⁴ Similar statements asserting the “any day now” resolution of pollution issues through technological means are also found in Sysin, “Sanitarno-Gigienicheskie Voprosy” 1938. Without specifically mentioning the health of workers as a concern, Lunts and Protasova do note that “besides the above,” plantings on factory sites and along their edges “protects adjacent districts from harmful outputs [*vrednye vydelenii*] of production.” Specifically, greening functioned to regulate the moisture and oxygen content of air, preventing “a sharp difference between the air content on the factory site and that of the residential settlement.” Lunts and Protasova, 1936: 281. According to Nikolaev (1950), this effect was more than just a spatial diffusion/ defense through distance intervention. The in-between buffer zone needed to be planted in order to achieve the desired impact.

While Usov and the architecture-planning-public health experts seemingly agree on the need for this vegetal supplement to administrative and technological labor hygiene measures, at least in the meantime, they disagree on the particulars. Usov frequently references a “professorial” textbook on greening (without ever naming the author) in which, he complains, the only plant species recommended for use on factory sites were juniper, American elm, and [*mogilnik?*]. He then points with verbal flourish to the wide variety of species that seemingly thrive on the Kalibr grounds as proof that, with proper *agrotehnika* and massive labor inputs, any plant can be grown anywhere.

Threats: Pests, Wreckers, Inattention

Greening's presumed agency in the realm of public health was originally based on fears of infectious biological disease and epidemics, as was true in international public health circles.¹²⁵ It gradually acquired the role of a "go-to" prophylactic measure for other abiotic forms of air-borne harms, a process exacerbated by Soviet urban planners' lack of control over production quotas or location of existing industrial enterprises.¹²⁶ The design and function of the public urban landscape, on the other hand, was something that architect-planners could control, at least within the theoretical space of sanitary building norms and technical literature.

The diffuse boundaries of planted open-space enabled its theorists to emphasize greening as a form of interstitial or connective intervention, capable of creating wholeness from disparate parts at the regional or urban scale. Recall how Lunts and Protasova praised greening's ability to create an "architectural-planning unity [*arkhitekturno-planirovochnyi edinstvo*]" from the industrial territory and "the housing that gravitates to it." The region, like the city, was figured in architecture-planning terms "as a whole organism," consistent with the emphasis on "harmony" "wholeness" and "ensembles" found throughout Soviet architectural discourse of the period. Such totalizing modes of spatial-aesthetic discourse appear less banal in the context of the violence, political purges and population resettlement that characterized the Soviet 1930s, when whatever or whoever did not belong "organically" to the social organism were "cleansed," like a disease—or a parasite.

Greenery and greenspace provision, as we have seen, were promoted as a means of mitigating industrial production's hazardous emissions [*vrednye vydelenii*]. The plants faced their own threats however, endangering their survival and, by extension, their capacity to improve conditions for work and workers under socialism. Vigilance, specifically *agrotekhnika* (agrocultural techniques, technology) was required to protect green plantings against their enemies: insects, diseases, poor growing conditions, and indifferent authorities. At the same

¹²⁵ This aspect of greening is studied by Johanna Conterio Geisler but not yet published to the best of my knowledge. (Geisler, ASEH 2017 paper proposal, personal correspondence). See also Conterio, "Inventing the Subtropics: An Environmental History of Sochi, 1929-36."; Geisler, "The Soviet Sanatorium: Medicine, Nature and Mass Culture in Sochi, 1917-1991."

¹²⁶ Vaintsvaig, A. S., ed. *Planirovka Promyshlennykh Raionov*, 1934. The centrality and influence of industry to regional and urban planning (perhaps a given, considering the source) comes out in a comparison of industry to facts of nature: in recommending that planning should include "all region-forming elements (industry, transport, settlements etc) they note that "as is currently the case in the spatial planning of cities, **one must account for already-chosen sites of industry as for other immutable external factors** ... such as the direction of winds, the presence in subsoils of useful deposits and so forth." [p10, emphasis added].

time, workers and Party members were exhorted to vigilance against wreckers, saboteurs, indifferent authorities and other various enemies of industrialization. In the jargon of the day, the enemies of plants, Party, and production were one and the same: pests, *vreditely*.

In discourse of the time, multiple sources of threat—to the project of socialism, to green plantings, to industrialization and modernization—were all habitually discussed in relation to the concept of *vred*, that which is hazardous, harmful, or noxious. This was also the root word used to denounce industrial saboteurs or underminers as “wreckers” [*vreditely*]. By the mid-1930s, “wrecking” [*vreditel'stvo*] was listed as an official crime in the notorious Article 58 of the Soviet Penal Code.¹²⁷ This linkage is obscured in English by the varied translations of these words, although the relationship between “pests” and “pestilence” is similar.

The intersection between the regulatory discipline, care, and vigilance to combat vegetal pests, on the one hand, and the 1930s “cleansing” of enemies of the people and other “wrecker-pests” on the other was more than linguistic. Stalinist efforts to combat political and environmental threats were linked in discourse but also in practice, shaping the options available to Soviet urbanists seeking applied solutions to the challenges of rapid industrialization. In these formative and violent years, the boundaries between categories of political, urban and environmental threats blurred, as when factory bosses who failed to properly separate factory and residential areas with green sanitary-protective zones were denounced as “*vreditely*” amidst a larger discussion of how greening can serve to mitigate industrial hazardous outputs like dust, smoke, noise and gases.¹²⁸

Instances of this overlap are found in a keynote speech given in 1938 by prominent hygienist Dr. A.N. Sysin to the 3rd Plenum of the Union of Soviet Architects.¹²⁹ At this time, the “Great Terror” of denunciations, arrests and executions, begun in 1936, was still running full-

¹²⁷ On wrecking and other forms of anti-Soviet or anti-Revolutionary activity, see Sarah Davies, “The Crime of “Anti-Soviet Agitation” in the Soviet Union in the 1930s” *Cahiers du Monde russe*, Vol. 39, No. 1/2, Les années 30: Nouvelles directions de la recherche (Jan. - Jun., 1998), pp. 149-167. Also: wikipedia: Wrecking (Russian: *vreditel'stvo*, lit. “inflicting damage”, “harming”), was a crime specified in the criminal code of the Soviet Union in the Stalin era. It is often translated as “sabotage”; however, “wrecking”, “diversionist acts”, and “counter-revolutionary sabotage” were distinct sub-articles of Article 58 (RSFSR Penal Code) (58-7, 58-9, and 58-14 respectively), and the meaning of “wrecking” is closer to “undermining”. [https://en.wikipedia.org/wiki/Article_58_\(RSFSR_Penal_Code\)](https://en.wikipedia.org/wiki/Article_58_(RSFSR_Penal_Code)) Accessed 9-13-2017

¹²⁸ A.N. Sysin, “Sanitarno-Gigienicheskie Voprosy V Praktike Planirovki Naseleennykh Mest ” In *III plenuma pravleniia Soiuza sovetskikh arkhitektorov SSSR: Planirovka i stroitel'stvo gorodov SSSR*, 34-43. Moscow: Izdatel'stvo Vsesoiuznoi akademii arkhitektury, 1938. See p39.

¹²⁹ Sysin was also a member of Architectural Council of the State Committee on Architecture Affairs, established in September 1943. Day, “Building Socialism: The Politics of the Soviet Cityscape in the Stalin Era,” 180-81.

bore.¹³⁰ It continued through the dismissal and arrest of NKVD Chief N.I. Yezhov in November 1938, albeit “perhaps not at the hysterical pace of 1937.”¹³¹ The First All-Union Congress of Soviet Architects, held roughly one year earlier in June 1937, had covered questions of urbanism alongside those of architectural style and education.¹³² At the 1938 Plenum, which met July 7-11 in Leningrad, members of the Union leadership gathered with “specialists in communal sanitation and hygiene, local workers in municipal economy, and others” to focus specifically on the design and construction of cities.¹³³

Aleksei Nikolaevich Sysin (1879–1956) was perhaps the ideal candidate to speak to architect-planners regarding issues of urban environmental health.¹³⁴ His career included such prominent positions as chairman of the Public Health Bureau of the All-Russian Union of Cities (1915–1918), head of the department of public health and epidemiology of Narkomzdrav (the People’s Commissariat for Public Health of the RSFSR, 1918–1932), and head of community hygiene at the Central Institute for the Advanced Training of Physicians (1931 to 1951). Sysin founded the journal *Gigiena i epidemiologiia* (Hygiene and Epidemiology) in 1922, and in 1924 co-edited a book on rural housing sanitation with E.A. Bragin, another hygiene specialist who published on the topic of city greening.¹³⁵ By March 1932 Sysin had completed a draft of a

¹³⁰ The 1936-1938 wave of arrests and executions swept away “provincial party secretaries, party and state personnel among the national minorities, industrial managers, and other officials” as its primary victims. In March 1938, trials of prominent Bolshevik party members and accused “Rightists” Nikolai Bukharin, Alexsei Rykov and others concluded with their execution, in the third of the three “elaborately staged show trials” that were the most public face of the Purges. Lewis Siegelbaum, “The Great Terror” subject essay, Seventeen Moments in Soviet History on-line archive, <http://soviethistory.msu.edu/1936-2/the-great-terror/>. Accessed 9/13/2017.

¹³¹ Getty and Naumov, *The Road to Terror: Stalin and the Self-Destruction of the Bolsheviks, 1932-1939*, 527. Getty and Naumov note that Yezhov’s autumnal fall “meant an end to the mass operations and executions, but not to the terror or its effects.” [546]. Thereafter, repression continued but was increasingly legalistic.

¹³² 1st All-Union SA USSR Congress Resolutions summarized in “Rezoliutsiia sezda po dokladam o zadachakh sovetskoi arkhitektury” *Arkhitektura SSSR*, no7-8 (1937): 4–6.; Overview of speakers is given in *Soiuz Arkhitektorov SSSR. 100 Let Obshchestvennykh Arkhitekturnykh Organizatsii v SSSR, 1867–1967* (istoricheskaiia spravka). Moscow: 1967.

¹³³ *Soiuz Sovetskikh Arkhitektorov. Planirovka i Stroitel'stvo Gorodov SSSR; Materialy III Plenuma Pravleniia Soiuzna Sovetskikh Arkhitektorov SSSR 7-11 Iiulia 1938 Goda.* Moskva. Izdatel'stvo Vsesoiuznoi akademii arkhitektury, 142 p., 1 l. illus., plates, fold. plan. 26 cm.

¹³⁴ Biographical information on A.N.Sysin can be found in Michael Zdenek David, “The White Plague in the Red Capital: The Control of Tuberculosis in Russia, 1900-1941” (PhD Dissertation, University of Chicago, 2007), 189.. See also see John F. Hutchinson, “Who Killed Cock Robin?,” in *Health and Society in Revolutionary Russia*, ed. Susan Gross Solomon and John F. Hutchinson, Indiana-Michigan Series in Russian and East European Studies (Bloomington: Indiana University Press, 1990), 10-12., and the entry on Sysin in the 1979 Greater Soviet Encyclopedia, accessed 09/13/2017). (<http://encyclopedia2.thefreedictionary.com/Sysin%2C+Aleksei>) A.N.Sysin should not be confused with plant scientist Tsitsin, who appears here in Chapter Four, on postwar Moscow.

¹³⁵ A.N. Sysin, E.A. Bragin, eds. *Sel'skoe zhilishche- po dannym rabot sanitarnykh organov RSFSR*. Moscow: Izdatel'stvo Narkomzdrava RSFSR, 1928. The two were co-authors in 1933 of another conference presentation on “sanitary-hygienic factors in spatial planning” at the First All-Union Conference on Spatial Planning and Construction of Cities. See Sysin, Professor [sic] and Doctor [sic] Bragin. “Sanitarno-gigienicheskie factory planirovki” pp115–117 in *Pervaia Vsesoiuznaia Konferentsiia Po*

handbook for Narkomzdrav, known as the Sanitary Codex, that provided guidelines for Soviet sanitary policy. The Codex “stood as a symbol of the new sanitation-centered philosophy of Soviet health care between 1930 and 1934” although it was never published.¹³⁶ Sysin also authored a published encyclopedia entry on one of the key elements of that philosophy: the concept of the “sanitary minimum,” intended by Narkomzdrav and other proponents to function “as a valuable quantifiable measure of sanitation and health conditions in any given region or city.”¹³⁷ Later, in 1948, Sysin was responsible for the foreword to a book-length treatment of factory greening by Leonid Lunts.¹³⁸

Sysin’s 1937 report, titled “Sanitary-Hygienic Issues in the Practice of Settlement Design,” came third in the conference program, bracketed by reports on the residential block and transportation engineering.¹³⁹ Sysin began by contrasting the attention paid (and decrees issued) under socialism on the holistic creation of healthful urban environments with the “narrow, piecemeal” approach of architects in “capitalistic countries.”¹⁴⁰ He then reviewed the three “fundamental sanitary-hygienic needs, to which architect-planners must attend ... needs so clear and understandable that they can be formulized like elementary principles [*kak azbuchnye istiny*].” These needs include the use of beneficial Natural conditions like sun, natural ventilation, free open spaces [*svobodnye otkrytye prostranstva*], water basins, and the site relief.¹⁴¹ Architect-

Planirovke i Stroitel'stvu Gorodov : Tezisy Dokladov Na Sektsiakh. Vsesoiuznyi Soviet po Delam Kommunal'nogo Khoziastva pri TsIK SSSR, Borshchevskii, A. M., N. D. Efremov, and F. V. Popov, eds. Moskva: Vlast' Sovetov pri Prezidiume VTsIK, 1933. Bragin was the co-author, with L.B.Lunts and V.I.Fedynskii, of a 1947 volume Greening of Cities: Hygienic Fundamentals, published by the Academy of Medical Sciences. This work is almost universally cited but seemingly unavailable in North American libraries (WorldCat) or online sources.

¹³⁶ The Sanitary Codex is discussed by David, "The White Plague in the Red Capital: The Control of Tuberculosis in Russia, 1900-1941," 275-77.

¹³⁷ Ibid.. Cited in David is: Sysin, “Sanitamyi minimum,” *Bol'shaia meditsinskaia entsiklopediia*, 1st ed., Vol. 29 (Moscow: Gosudarstvennoe slovamno-entsiklopedicheskoe izdatel'stvo “Sovetskaia entsiklopediia”, 1934), 665-71.

¹³⁸ Sysin, A. “Predislovie [Foreword]” in Lunts, L. B. *Blagoustroistvo i Ozelenenie Territorii Zavodov* (The Beautification/Improvement and Greening of Factory Territories). Moscow: Moskovskii rabochii, 1948.

¹³⁹ in *Planirovka i Stroitel'stvo Gorodov SSSR*, 1938. The opening address was made by Professor V.A. Vesnin. In addition to Sysin’s report, the conference proceedings included conference resolutions, a shortened stenogram of discussion of the reports, and the text of reports by the conference’s other 5 headline speakers: (1) “The applied praxis of spatial planning and construction of cities” keynote report by architect V.V. Baburov; (2) “The Residential Block” co-report by B.R. Rubanenko; (3) “Questions of engineering-transport structure in the layout-planning of cities” co-report by prof. A.E. Stramentov; (4) “The Volume and content of project-design planning work” co-report by architect N.B. Baranov; and (5) “the Role and meaning of the city architect in the sp-planning and construction of cities” co-report by engineer A.F. Sharov.

¹⁴⁰ Sysin, A.N. "Sanitarno-Gigienicheskie Voprosy" 1938: 35}

¹⁴¹ Here, Sysin makes use of two words, distinct in Russian, which both typically translate into English as “natural”: *prirodnyi*, of Nature, and *estestvennye*, actual or unartificial. At times, Sysin uses both simultaneously: e.g. natural factors, *estestvenno-prirodnyy faktory*. I have chosen to indicate the difference by capitalizing the former: thus, Natural conditions [*prirodnye uslovia*], and natural ventilation or windiness, [*estestvennye provetrivanie*]. Sysin, A.N. "Sanitarno-Gigienicheskie Voprosy, 1938: p36. Regarding the importance of solar exposure, Sysin states that “the sun is the fundamental regulator of all biological

planners must study, secondly, those artificial conditions [*iskusstvennyye usloviia*] that arise in and from built environments, “which worsen the unartificial Natural conditions” e.g. by soil and air pollution. Finally, architect-planners must study issues of everyday life [*byt’*] pertaining to “socialistic cities.”

Sysin acknowledged that the “present praxis of city design and construction” included many examples of factories improperly placed, thereby endangering the health and well-being of those workers living nearby. In the course of his speech, he denounced by name the actions of “wrecker-pests” such as the factory directors or regional bosses who had prevented the relocation of those factories, or their reconstruction. Specifically, Sysin called out an animal vaccine factory in Alma-Ata (Kazakhstan), at which anthrax spores had been found in the adjacent soil and air, and other medical production factories in the Urals.¹⁴² In both cases, Sysin asserts that proper concern for workers and their health would have entailed the provision of a vegetated buffer zone around the factory.

Conclusions

This dissertation argues that greening was a ubiquitous and influential ambition of Soviet urbanism, one that influenced the general development of Soviet urbanism and environmentalism, and explains otherwise incomprehensible features of the Soviet built environment. This included the site greening of industrial enterprises. Factory greening, which gradually became standard practice for the design-planning profession, established a link between its professional sphere of expertise and official Marxist-Leninist ideology regarding workers’ well-being, socialist superiority, and eliminating the differences between town and country. The task of eliminating the opposition between industrial production and urban environmental quality has motivated the development of modern planning and architecture,

life on earth, and thus the issue of insolation [*insoliatsia*] must be given particular attention.” Similarly, open spaces “afford the broad development and use for persons of greenery and watery expanses [*vodnye zerkala*, also used to describe the water table].” Sysin’s recommendations included comments on how spatial-design interventions could be used to improve the *mikroklimat* of cities.

¹⁴² Sysin names “Piatakov” as a wrecker-enemy with regard to the latter. Presumably this is Iurii Piatakov. Piatakovs links to the 1935 *Industry of Socialism* art exhibit (and his positions as chief editor of *USSR in Construction*, among others) are discussed in Susan E. Reid, “Socialist Realism in the Stalinist Terror: The Industry of Socialism Art Exhibition, 1935-41,” *Russian Review* 60, no. 2 (2001).. Piatakov was sentenced to death in 1937.

including the theories of pivotal figures such as Ebenezer Howard and Le Corbusier. This task was professionally, ideologically, even existentially vital to Soviet architects and urban planners.

Recall that Engels' classic critique of Manchester's housing had centered on the crowded, unsanitary, and unpleasant environmental conditions faced by industrial workers under capitalism. Socialist urbanism, therefore, would valorize industrial production and its labor by providing work and home environments that were spacious, hygienic, and pleasant.¹⁴³ By the postwar period, green plantings were firmly established as one of the primary means by which architect-planners proposed to realize these "socialistic" environmental qualities.

Architect-planners in the USSR promoted greenery and spatial interventions as appropriate and necessary responses to urban industrial production. In so doing, they attributed multiple functions to green plantings and to greening as a practice. Greening's agency extended across the realms of ideology, aesthetics, public health, professional expertise, and municipal capacity, and proved resilient to the ruptures that characterized other aspects of Soviet urbanism, including the drastic shift in form and aesthetics experienced between high Stalinist urbanism (see chapter three) and its neo-modernist Khrushchevian successor (see chapter four). In its realization, greening was meant to be multi-functional and inclusive. The planting of trees and shrubs in streets, squares, factories, courtyards, and near-city shelterbelts was an explicitly public endeavor drawing on mass participation to ensure planting, maintenance, and enjoyment.

As this chapter has sought to demonstrate, the 1930s saw the development and consolidation of the idea that factories and other industrial sites were appropriate, necessary and beneficial objects of greening. This chapter examined the overlapping rationales offered in support of factory greening by architects-planners, public health experts, and political ideologues starting in the early 1930s period of professional consolidation and institutionalization. During the Stalinist interwar period, the designed planting of factory territories—known as the "greening" of factories—went from being an unusual but welcome resolution for the intersection of environmental health and comfort to being an obligatory element of the regulatory sanitary "norms" governing factory construction as an aspect of socialist city-building.

Factory greening, like other sub-areas of Soviet urban greening and beautification, was from its initial conceptualization a capacious vehicle for multiple professional, political, and

¹⁴³ Valevskii, N. *Za Blagoustroistvo Gorodov*, 1935 particularly ch1 "Sotsialisticheskii gorod"

cultural agendas. The how, what, and why of factory greening mattered to a diverse set of actors, and it mattered deeply, given its actual and rhetorical associations with core areas of Soviet society, including industrialization, the health and productivity of factory workers, and the superiority of Bolshevik socialist living conditions over bourgeois capitalist cities. This chapter identified and analyzed the main bundle of values and functions associated with factory greening in its initial instantiations in the 1930s as articulated in professional, political, and popular texts. As time would show, that very bundling of aspirations and participants made urban and industrial greening a resilient component of the long-term Soviet project of building socialism, but produced unexpected "cross-pollination" between Soviet urban environmental design, official political priorities, and popular environmentalism.

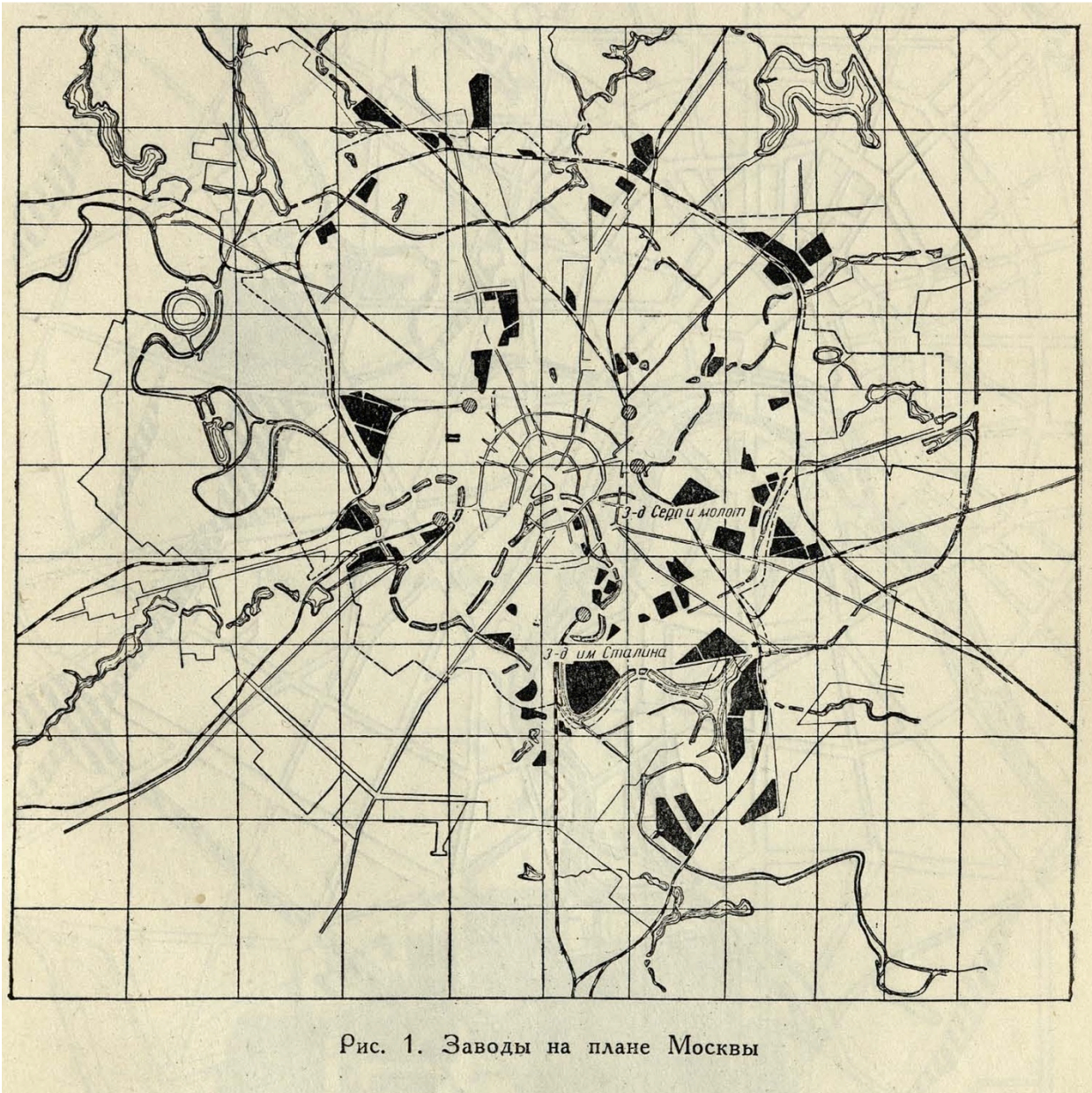
In the Soviet Union, architecture-planning *doxa*—expected or habitual practices, normative theories of praxis—included a bringing-together of factories and designed landscapes, which remains counter-intuitive to western expectations. The Soviet garden-factory represents an intentional imbrication/intersection of categories more often thought of as opposed: the natural or biotic versus the industrial or technological. The components of “factory” and “park” were in themselves coded differently under capitalistic and socialistic urbanism (at least according to Soviet commentators), as was the tenor of their co-location and interrelationship. Socialist and non-socialist approaches to the problem of city-industry relations both grew from shared roots in early twentieth-century urban planning and design. One of the primary means by which Soviet urbanists sought to distinguish themselves, and Soviet cities, from those shared historic and international origins was through the abundant and systematic use of greenery. The contrasts and continuity manifested in the Soviet theories and practices of urban and industrial greening during the 1930s continued to be felt after the war. Tracing this evolving field of practice contributes to our understanding of Soviet cities as the product of distinctively socialist versions of modernism *and* environmentalism.



Map 3.3 General Plan for the Reconstruction of Moscow, 1935 by V.N. Semenov and S.E. Chernyshev¹⁴⁶

¹⁴⁵ Initially published in Nikolai Miliutin, *Problema stroitel'stva sotsialisticheskikh gorodov* [Problem of Building the Socialist Cities], Moscow-Leningrad- GIZ, 1930; Republished by MIT with Introduction and translation by Arthur Sprague, 1974. [p72]

¹⁴⁶ Approved 10 July 1935 by decree of Central Committee of the All-Union Communist Party (Bolsheviks) or TsK VKP(b). Accessed from Wikimedia Commons https://commons.wikimedia.org/wiki/File:Moscow_General_plan_1935.jpg



Map 3.4 Factories shown on a plan of Moscow, from *Issues in Architecture*, 1937¹⁴⁷

¹⁴⁷ from Ivan Nikolaev, “Zavod i Gorod. Po materialy o rekonstruktsii zavodov ‘Serp i molot’, ZIS, GAZ, and STZ” (Factory and City. From material on the reconstruction of ‘Hammer and Sickle,’ ZIS, GAZ and STZ factories”) in *Problemy Arkhitektury* tome 2 book.2, edited by Iu. E. Milonov, pp 285-317. Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1937

Класс А	Класс Б	Класс В
Защитная зона (минимум) 2 км	Защитная зона (минимум) 250 м	Защитная зона (минимум) 50 м
Металлургические Нефтеперегонные Химические заводы: кислотные и аммиачные Бумажные Цементные Кирпичные Силикатные Керамические Утилизационные Взрывчатых веществ Удушливых газов Примечание автора: сюда можно добавить лесопильные заводы.	Производство хлора, сажи, скипидара, ртути, канифоли и минеральных красок Парфюмерные фабрики Мыловаренные фабрики Свечные заводы Машиностроительные заводы Снарядные заводы Кабельные » Посудные фабрики Литейные заводы Механические цеха Текстильные фабрики Табачные » Деревообрабатывающ. фабр. Стекольные фабрики Электростанции Пищевые предприятия: бойни, маргариновые, винокуренные, мельницы, хлебозаводы, маслосеяные, колбасные и т. п.	Фабрики-кухни Ремонтные мастерские Пошивочные » Столярные » Переплетные » Типографии Чаеразвесочные Подъемные Электростанции Примечание автора: сюда можно отнести гаражи, хранилища пищевых продуктов, овощехранилища, холодильники, элеваторы.

Из этой таблицы можно заключить, что предприятия классов Б и В — предприятия городские, так как разрыв (зона) в 250 м в городской системе вполне достижим (для новых предприятий), не говоря уже о разрыве в 50 м.

Класс А — т. е. металлургия, основная химия, цементно-силикатное и кирпичное, бумажное, лесопильное производства — разряд сооружений, изъятие которых из города обязательно, так как в границах города невозможен разрыв в 2 км.

Каковы же вредности в производствах классов Б и В, с которыми допустима борьба при помощи зон, не превышающих 1/2 км?

Это прежде всего — дым, а затем газы, пыль, шум и пожарная опасность. Борьба со всеми этими вредностями не только возможна, но и успешна, особенно в области задымления.

Дым составляет главную вредность, отравляющую промышленный город, и необходимо использовать все средства для борьбы с ним.

По расчетам английских статистиков, годовое потребление топлива в Лондоне только на промышленные цели равно 16 млн. т угля; при учете 1—2% серы в угле и осаждения 3/4 ее количества в виде серной кислоты, получается до 500 тыс. т кислоты, которыми ежегодно поливается столица Англии¹.

В Глазго на 1 кв. милю попадает в течение года 1 330 т сажи и пыли, в других городах это количество достигает 2 000 т. Весьма вредны для здоровья человека выделения окиси углерода, сернистого и серного ангид-

¹ Г. Е. Азрелян, Критический обзор мероприятий по борьбе с дымом в США. ГНТИ, 1931.

Figure 3.1 Table showing three classes of Industry, with respective Protective Zones of 2km, 250m, and 50m, from Nikolaev "Factory and the City" 1937¹⁴⁸

Framing text:

"From the table one can conclude that factories of Class B and C are urban factories, given that a gap (zone) of 250m is fully achievable in an urban system (for new enterprises), not to speak of 50m gaps. [...] Smoke is the main harm, poisoning an industrial city, and it is necessary to use all means in the fight against it."¹⁴⁹

¹⁴⁸ Ivan Nikolaev, "Zavod i Gorod. Po materialy o rekonstruktsii zavodov 'Serp i molot', ZIS, GAZ, and STZ" (Factory and City. From material on the reconstruction of 'Hammer and Sickle,' ZIS, GAZ and STZ factories") in *Problemy Arkhitektury* tome 2 book.2, edited by Iu. E. Milonov, pp 285-317. Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1937

¹⁴⁹ Here Nikolaev cites. E. Aerelian, "A Critical Review of Measures in the Fight Against Smoke in the U.S.A., GNTI 1931 regarding the "annual consumption of fuel oil in London"... no statistics are given regarding Soviet equivalents.



Figure 3.2 Images of between-building spaces at the Cheliabinsk Tractor Factory (ChTZ) in USSR in Construction, 1933¹⁵⁰

Framing text, from bottom left:

“Young trees have been planted on the territory of the new tractor plant. Flower gardens and grass-plots have been laid out. A wide tire-polished asphalt road runs between the shops. It is cleaned, washed and well taken care of by the sweepers. Such is the style of the second pyatiletka.¹⁵¹ Such are the first shoots of the new industrial landscape.”

¹⁵⁰ from *USSR in Construction (SSSR na Stroike)*, no8 (August 1933), English-language version.

¹⁵¹ *pyatiletka* – informal name for Five Year Plan



Figure 3.3 "Gorky. Perspective of the Molotov Car Works (GAZ) before reconstruction" from Nikolaev, "Factory and City" 1937¹⁵²



Figure 3.4 Photograph of greened territory at Molotov Car Works in Gorky (GAZ), from USSR in Construction, November 1936 (no.11)

¹⁵² Ivan Nikolaev, "Zavod i Gorod. Po materialy o rekonstruktsii zavodov 'Serp i molot', ZIS, GAZ, and STZ" (Factory and City. From material on the reconstruction of 'Hammer and Sickle,' ZIS, GAZ and STZ factories") in *Problemy Arkhitektury* tome 2 book.2, edited by Iu. E. Milonov, pp 285-317. Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1937

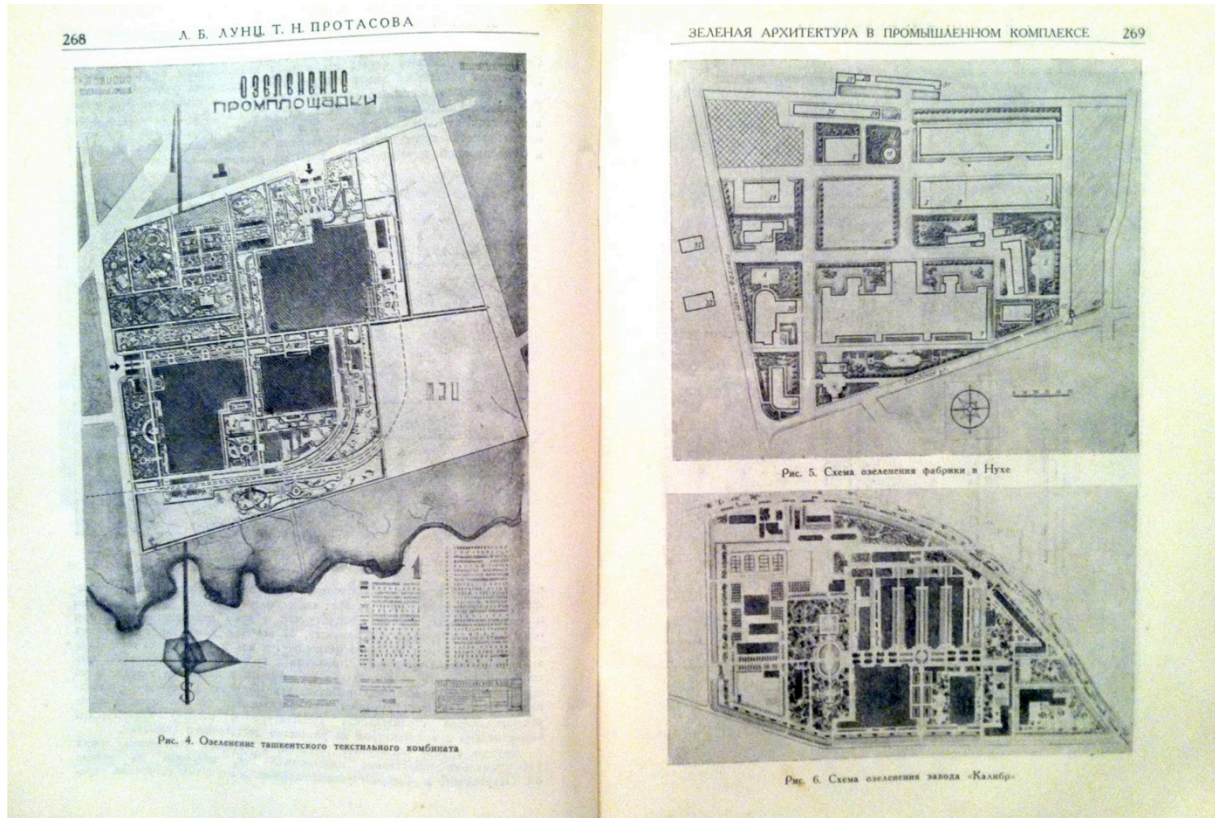


Figure 3.5 Prototype plans of factory greening in Moscow, Tashkent and Azerbaijan, 1937¹⁵³

Left: “Greening of the Tashkent Textile Combine”

Right above: “Greening proposal [*skhema*] of a factory in Nukha” [in Azerbaijan]

Right below: “Greening proposal for the ‘Kalibr’ factory” [Instrumentation Factory in Moscow].

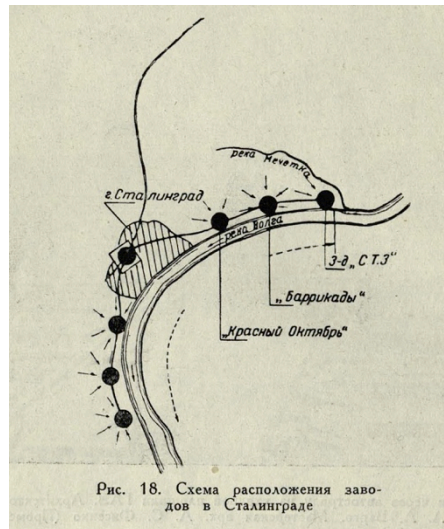


Figure 3.6 Diagram of factory distribution in Stalingrad, showing Stalingrad Tractor Factory (STZ) at top right, 1937¹⁵⁴

¹⁵³ Lunts, L.B. and T. N. Protasova, “K problem sozdaniia zelenoi arkhitektury v promyshlennom komplekse” [On the issue of creating green architecture in industrial complexes] in *Problemy Arkhitektury: Sbornik Materialov*, Volume II, book 1, edited by Iu. E. Milonov, pp261–286 Moscow: Izd-vo Vsesoiuznoi Akademii Arkhitektury, 1937.

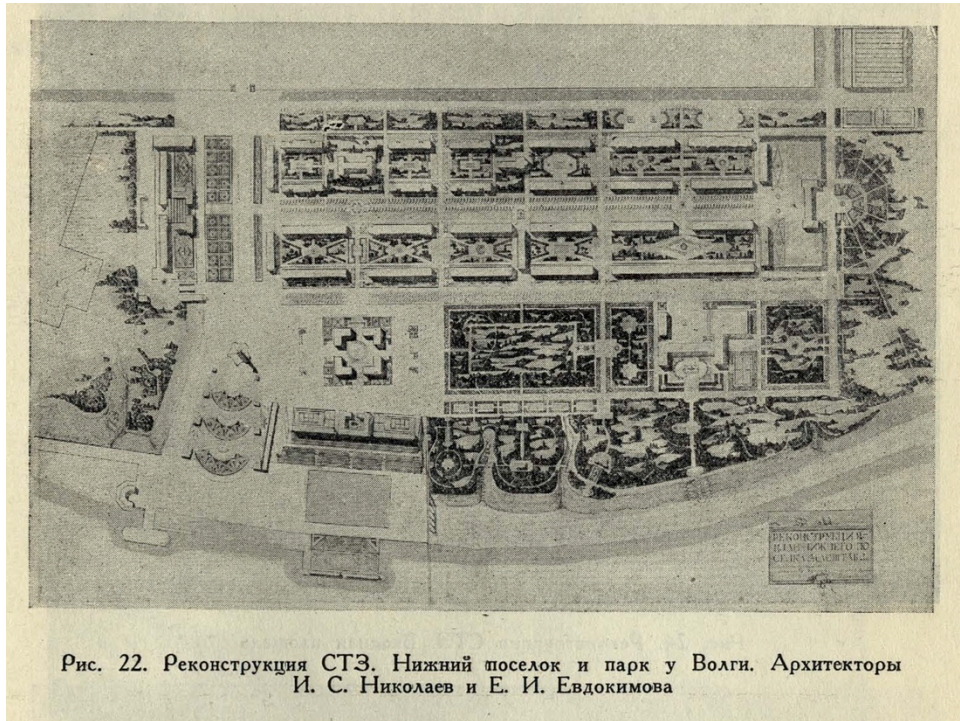


Figure 3.7 "Reconstruction of Stalingrad Tractor Factory (STZ)" Rendering by Ivan S. Nikolaev and E. I. Evdokimova, 1937, showing "lower village and park by the Volga River."¹⁵⁵

¹⁵⁴ Nikolaev, "Zavod i Gorod. Po materialy o rekonstruktsii zavodov 'Serp i molot', ZIS, GAZ, and STZ" (Factory and City. From material on the reconstruction of 'Hammer and Sickle,' ZIS, GAZ and STZ factories") in *Problemy Arkhitektury* tome 2 book.2, edited by Iu. E. Milonov, pp 285-317. Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1937

¹⁵⁵ Nikolaev, "Zavod i Gorod. Po materialy o rekonstruktsii zavodov 'Serp i molot', ZIS, GAZ, and STZ" (Factory and City. From material on the reconstruction of 'Hammer and Sickle,' ZIS, GAZ and STZ factories") in *Problemy Arkhitektury* tome 2 book.2, edited by Iu. E. Milonov, pp 285-317. Moscow: Izd-vo Vsesoiuznoi akad. arkhitektury, 1937 p317



Figure 3.8 "Reconstruction of STZ. View from the Volga. Architects I. S. Nikolaev and E.I. Evdokimova" from *Issues in Architecture*, 1937¹⁵⁶

¹⁵⁶ Ibid., p316



Figure 3.9 Cover and page from 1939 issue of *USSR in Construction*, theme 'Rest Day'



Figure 3.10 Photograph of Kalibr factory workers playing chess amidst greenery while on lunch break, 1954



Figure 3.11 Photograph of Moscow 'Kalibr' Instrumentation Factory and greened territory, 1941¹⁵⁷

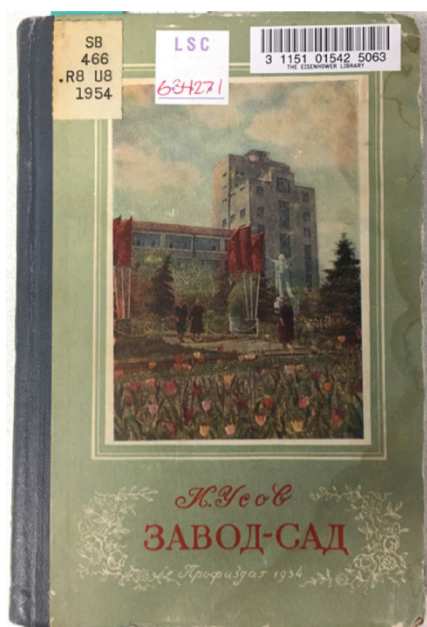


Figure 3.12 Cover of *Zavod-Sad* [Garden-Factory], 1954¹⁵⁸

¹⁵⁷ Downloaded from Ostankino District administration website. <https://ostankino.mos.ru/the-70th-anniversary-of-victory-in-great-patriotic-war-of-1941-1945-is-dedicat-ed/detail/1739909.html>, <https://ostankino.mos.ru/upload/medialibrary/a82/kalibr-1941-g-.jpg>

¹⁵⁸ I.P. Usov, *Zavod-Sad: Zapiski Sadovoda*, Foreword by Leonid Leonov. Moscow: Profizdat, 1954.

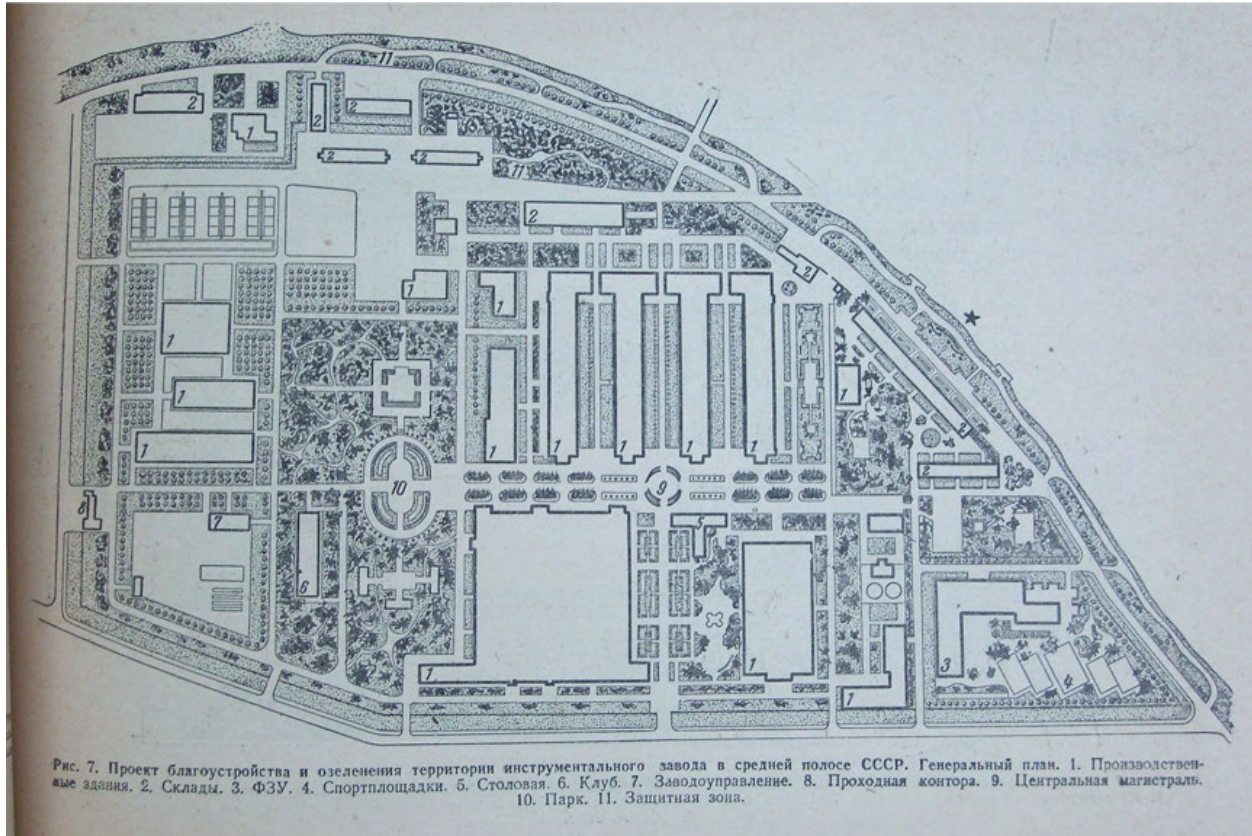


Figure 3.13 Site design plan for Kalibr Factory, in Lunts, *Beautification and Greening of Factory Territories*, 1948¹⁵⁹

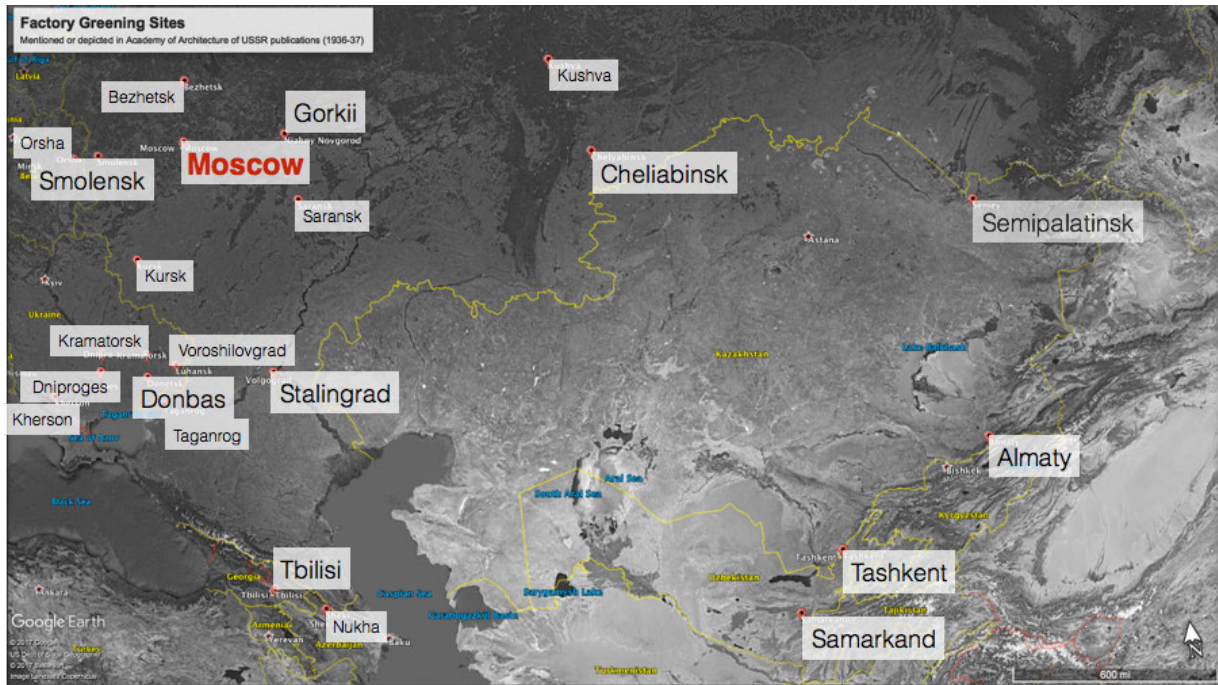
Original caption reads “The design-plan of improvement and greening the territory of an instrumentation factory in the middle belt of the USSR. 1) Manufacturing facilities. 2) Warehouses. 3) Factory-Plant School [FZU, Fabrichno-Zavodskoye Uchilishche]. 4) Sports fields. 5) Cafeteria. 6) Club. 7) Factory administration. 8) Entrance office. 9) Central street (magistral) 10. Park 11. Protective zone.”

¹⁵⁹ L.B. Lunts, *Blagoustroistvo i Ozelenenie Territorii Zavodov*. Foreword by A.Sysin. Moscow: Moskovskii rabochii, 1948. p83



Figure 3.14 Photograph of "Greening up Kalibr Factory" by A. Shaikhet, 1955. Included in 2015 PROzavod exhibit, at Moscow's Lumiere Brothers Center for Photography¹⁶⁰

¹⁶⁰ <http://www.photography-now.com/exhibition/104923> Last accessed 01/2019



Map 3.5 Location of Factory Greening sites mentioned in 1936-37 Soviet Academy of Architecture texts¹⁶¹

¹⁶¹ base layer satellite imagery from Google Earth, additional work by author

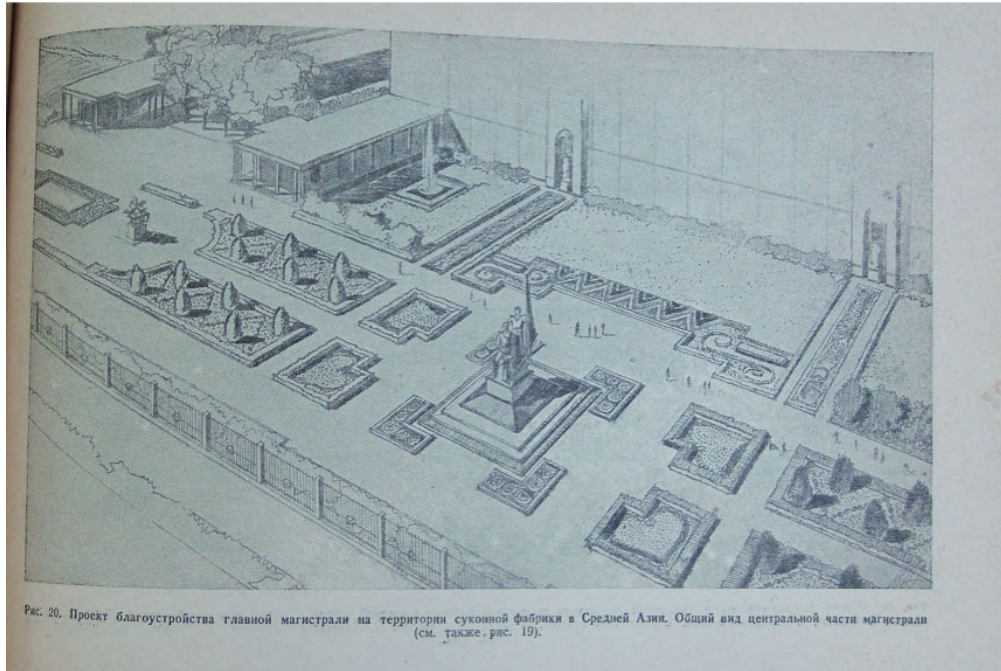


Рис. 20. Проект благоустройства главной магистрали на территории суконной фабрики в Средней Азии. Общий вид центральной части магистрали (см. также, рис. 19).

Figure 3.15 Design-plan for main street [*magistral*] of factory in Central Asia, from *The Beautification and Greening of Factory Territories, 1948*¹⁶² As was typical of post-WWII publications, no exact location is given.

¹⁶² Lunts, L.B., *Blagoustroistvo i Ozelenenie Territorii Zavodov*. Foreword by A.Sysin. Moscow: Moskovskii rabochii, 1948. fig. 20, p95.

Chapter 4 “Let’s Care!” Patriotism, Politics and Plants in Postwar Moscow

In late March 1945, with the Red Army less than 40 miles outside Berlin, acclaimed Soviet writer Leonid Leonov authored a short piece in the newspaper *Vecherniaia Moskva* titled “Let’s Care for Greenery.”¹ Residents of Moscow, he began,

will understand immediately [*s poluslova*]. Any plant—a tree, a shrub, a flower—is our fundamental green wealth, which has the ability to increase with each year. And perhaps no other people’s capital gives such a high percentage, as green plantings. In them is invested the health of Muscovites.” ...And if only certain of our organizations had proved able to manage and protect this community property, we would not now have to come forward on the pages of newspapers in defense of greenery!²

Leonov (1899–1994), perhaps best known today for his 1953 proto-environmentalist novel *Russkii Les (The Russian Forest)*, was among urban greening’s most prominent advocates.³ He also inspired and actively mentored a new generation of young writers who would become active in the Soviet environmental movement. “The majority of writers who have gotten involved in environmental causes are associated with the “Village Prose” school (*pochvenniki, derevenshchiki*) and trace their genealogy back to Leonid Leonov and Vladimir Chivilikhin, themselves parvenu writers who began as grateful Soviet patriots and ended as disgruntled Russian nationalists.”⁴ (Siberian-born writer Vladimir Chivilikhin, who entered this dissertation with his comments on the urban greening and beautification of Siberian cities, including Krasnoyarsk, was of the next generation younger than Leonov.⁵)

¹ Leonov, “Pozabotimsia o zeleni” *Vecherniaia Moskva*, March 24, 1945. Active fighting in the Battle for Berlin resumed on April 20th and ended May 2nd, with German surrender on May 8th marking the end of the war in Europe. The USSR had sought to capture the German capital before the other Allies, and ideally before the May 1st International Workers’ Holiday. In this they were only somewhat successful. Today, Russia continues to observe the conclusion of the Great Patriotic War with “Victory Day” celebrations on May 9th, that being the date in the Moscow timezone of the German surrender. Victory in the “Great Patriotic War against German-Fascist Aggression” as it was known within the Soviet Union provided the State with a new, more powerful narrative of identity and triumph, supplanting the October Revolution. On this see, Weiner, *Making Sense of War: The Second World War and the Fate of the Bolshevik Revolution*.

² Leonov “Pozabotimsia o zeleni” 1945.

³ Thomson, *The Art of Compromise: The Life and Work of Leonid Leonov*; Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*; Thomson, “Leonid Maksimovich Leonov, 1899-1994: Novelist and Dramatist.”

⁴ Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 8.

⁵ Leonov’s direct relationship to Chivilikhin, and of both to the Village Prose writers is detailed in *Ibid.* and demonstrated more directly in Chivilikhin’s biography of Leonov, Chivilikhin, *O Leonove..* Chivilikhin’s relationship to Russian nature appreciation

Leonov, in 1945, was not alone in urging for care and attention to the cause. A whole grove of prominent and everyday individuals including botanist P.M. Zhukovskii, architect A.V. Shchusev, and agronomist N.V. Tsitsyn joined him to mobilize support for Moscow's "green friends," the trees.⁶ In the years following the Second World War—known in Russia and the USSR as the "Great Patriotic War"—support for urban greenery and greening came from a broad coalition of institutional and professional authorities, including but not limited to architecture-planning specialists.⁷ Engineers, communal hygiene experts, and a variety of plant specialists continued to be involved, as they had been throughout the 1930s. In the post-war period, prominent advocates of all backgrounds called for popular engagement with the cause, urging the populace at large to participate in caring for, and caring about, urban green plantings.

The "Great Green Friendship" between professionals, politicians, plants and populace, as I will refer to this coalition, drew on the same functions associated with greenery from before the war, namely urban greenery's capacity to effect cities that were "hygienic, cultured and beautiful," and distinctively socialist. To this fundamental bundle of functions were added attributes of patriotism and populism, as urban greening was proclaimed a key element in the postwar re-building of Soviet cities, signifying a broader flowering of Soviet culture and power. Along these lines, specialists were urged to "support the further development of green construction at the grandiose scales that our remarkable epoch demands."⁸

The focus of this chapter is on urban greenery's accumulation of more-than-physical potencies in the period of late or high Stalinism, from 1945 until the early 1950s. The first part of this chapter examines the "cues to care" voiced by Leonov and other friends of green plantings between 1945 and 1948, noting how these cues echoed and expanded the values and functions

and nationalism is also discussed in {Shtil'mark, 1992 #6259; Schwartz, 2006 #4172 @60; Brudny, 1998 #6323 @55}.

⁶ These articles, including Leonov's, are discussed in detail in a later section of this chapter. The personification of trees as friends, along with portrayals of the boreal Eurasian forest as a proxy and protector of the Russian people, have a long cultural history in the region. Bonhomme, *Forests, Peasants, and Revolutionaries: Forest Conservation and Organization in Soviet Russia, 1917-1929*; Brain, *Song of the Forest: Russian Forestry and Stalinist Environmentalism, 1905-1953*; Costlow, *Heart-Pine Russia: Walking and Writing the Nineteenth-Century Forest*; Kivelson, *Cartographies of Tsardom: The Land and Its Meanings in Seventeenth-Century Russia*.

⁷ On popular support and desire for greening as found in readers' letters of complaint sent to *Vecherniaia Moskva*, see Varga-Harris, "Green Is the Colour of Hope?: The Crumbling Facade of Postwar Byt through the Public Eyes of Vecherniaia Moskva." Varga-Harris dismisses official promises as "greenwashing;" in any case, her work demonstrates that greening as considered legitimate grounds for public and popular dissatisfaction.

⁸ A.A. Antonova "Iz istorii zelenogo stroitel'stva" (From the History of Green Construction) pp3–10 in *Ozelenenie Gorodov: Sbornik Statei [Greening of Cities]* Vekhov, N. K., A.G. Al'benskii, and A.G. Blakhtin, eds. Moscow: Ministerstvo kommunal'nogo khoziaistva RSFSR, 1954. Quote on page 7

associated with the greening of cities by its theorists and practitioners. Such cues demonstrate how officially-sanctioned postwar values of patriotism and engagement converged with specifically disciplinary concerns to establish greening as a necessary, expected element in the official push for the restoration and recovery of Moscow and other cities suffering from the direct and indirect wounds of war.

For trees and their friends, the crux years of high Stalinism came in 1947–1948, when a number of events and campaigns converged to push the Great Green Friendship onto the national stage. In June 1948, official approval was granted to the All-Russian Society for Construction the Promotion and Protection of Urban Green Plantings (VOSSiOGZN), with Leonid Leonov serving as Vice President. The greening and beautification of Soviet cities became, at this point, a potent index of political, social, and scientific trends in addition to its continued significance within Soviet urban environmental design. Other fields of Soviet architecture and city-building practice were subject at this time to similar political pressure, e.g. to demonstrate their connection to the masses and affirm their socialist realist credentials, being targeted like other creative professions by the anti-formalist and anti-cosmopolitan campaigns of 1946-1948 (or *zhdanovshchina*). The fundamental importance of trees and other vegetal lifeforms to urban greening and beautification efforts rendered these fields of practice vulnerable to additional pressures, however. Specifically, the field of urban greening was sensitive to developments in Soviet agriculture, natural science, and landscape painting—areas of Soviet society-nature relations for which 1948 was also crucial.

The second part of this chapter considers how urban greening was affected when, between 1948 and 1953, the Great Green Friendship became entrenched as a national project within the USSR. The section examines how greening's association with national character and nascent environmentalism was expressed in these years in both discourse and design. Publication of a wave of new textbooks for practitioners developed the idea of greening as a city-scale system redolant of Stalinist “care for persons,” now additionally inflected with national and regional particularity. The new patriotism of plants was also visible in spaces of national display, e.g., the renovation and re-design of the Main Botanical Garden of the Academy of Sciences, and of the All-Union Agricultural Exhibit (VSKhV, later the VDNKh). The process of linking urban greenery to nature protection, and both to populism and sense of place, culminated in 1953 when, a few months after Stalin's death in March, the “Society of Green Friends” (aka VOSSiOGZN)

merged in June 1953 with the All-Russian Society for the Protection of Nature (VOOP).⁹ While the importance during this period of nature to Soviet national(ist) identity is widely recognized, as is the burgeoning popular enthusiasm for nature preservation and engagement, this chapter asserts the importance of understanding the relationship of each to the greening and beautification of Soviet cities.

Despite the anticipated prospect of military-political victory in the Great Patriotic War, mid-1940s Moscow was in rough shape. The city's infrastructure, housing stock and demographics had all been hard-hit by the war years, with chronic consequences for Soviet urban public health.¹⁰ The postwar emphasis on "beautification" [*blagoustroistvo*] as a component of the urban restoration and reconstruction was to a certain extent a direct action sanitation campaign to improve dire public health conditions. The ambitious scope of work as centrally envisioned went far beyond limited "cosmetic" or "political" aims.¹¹ Fully recognizing the aspirational breadth and depth of beautification—its imagined capacity as a multi-functional form of quintessentially Soviet urban infrastructure—requires, however, that adjustments be made to the "poetics and politics of infrastructure" as conceptualized in non-Soviet settings.

Let's Care, Let's Adorn, Let's Defend

Leonid Maximovich Leonov (1899–1994) was the recipient in 1943 of a Stalin Prize in Literature for his 1942 play, *Invasion*. In 1953, the year of Stalin's death, Leonov published *The Russian Forest*, which similarly won the Lenin Prize in 1957. "If read carefully," notes literary scholar and Leonov specialist Boris Thomson, this novel "is one of the most damning indictments of the Stalin period, but it was soon overshadowed by the more outspoken products

⁹ This dating comes from the website priroda.ru [nature.ru] which published a history of VOOP in 2014, in honor of its 90th anniversary. <http://www.priroda.ru/news/detail.php?ID=10902>. Weiner (1999) gives slightly different dates, based on archival documents giving official approval to the charter of the merged organization, the All-Russian Society for the Promotion of Nature Protection and Greening of Settlements (VOSOPiONP). In 1961, the organization reverted to its historic name (VOOP).

¹⁰ This topic studied in depth by Donald A. Filtzer, e.g. Filtzer, "The Standard of Living of Soviet Industrial Workers in the Immediate Postwar Period, 1945-1948."; Filtzer, *The Hazards of Urban Life in Late Stalinist Russia: Health, Hygiene, and Living Standards, 1943-1953*. See also "Veterans and the Village: The Impact of Red Army Demobilization on Soviet Urbanization, 1945–1955" by Mark Edele, *Russian History* Vol. 36, Issue 2. (2009): 159-182.

¹¹ The challenge for historians is to distinguish between the on-site efforts of "volunteers" to improve specific streetscapes and parks, for instance in Stalingrad or Sebastopol, and the holistic vision of "greening Soviet cities" from which those specific measures drew inspiration. On the widespread efforts to improve public space through vegetal interventions, see Day, "Building Socialism: The Politics of the Soviet Cityscape in the Stalin Era."; Qualls, *From Ruins to Reconstruction: Urban Identity in Soviet Sevastopol after World War II*; Dale, "Divided We Stand: Cities, Social Unity and Post-War Reconstruction in Soviet Russia, 1945–1953."

of the 'Thaw.'"¹² In the years between these two high-profile publications, Leonov published little fiction, but became a vocal proponent for greater environmental care and, specifically, improved management of Russia's forests.¹³

Leonov's most influential work of forest advocacy focused on urban trees. In December 1947 Leonov published a lengthy and somewhat polemic piece on forest protection in the official government newspaper, *Izvestiia*, entitled "In Defense of a Friend." This article was widely read, with many readers writing directly to Leonov in response.¹⁴ It is credited with triggering new levels of official and popular support for the protection of trees (the "green friend"), including the formation of the All-Russian Society for the Promotion and Protection of Urban Green Plantings (VOSSiOGZN), its charter approved in June 1948. Leonov was named vice president.¹⁵ The national focus and nationalist rhetoric of the 1947 article, which will be discussed in more detail later in this chapter, built on moral and patriotic lines of mobilization established by Leonov in his less known 1945 public intervention in the cause of greenery protection.

At the outset of "Let's Care for Greenery," (1945) Leonov noted that his direct appeal to popular action on behalf of trees was necessary only because the relevant "organizations" had failed in their "duty" to protect and grow the people's "green wealth." In a linked series of rhetorical claims, Leonov then seeks to persuade readers of the newspaper why they should be logically, morally, and ideologically motivated to care for urban green plantings. For one, he offers arguments based in local city pride, ambition, and heritage. "For us, the old, native Muscovites," the growing "green lacework" [*zelenoe kruzhevo*] within and around the city is

¹² Thomson, *The Art of Compromise: The Life and Work of Leonid Leonov*, x.. As glossed in the BSE 3rd Edition (1979) entry on Leonov, "In this multilayered novel, the long conflict among Russian forestry scientists and the portrayal of two types of scientists become a passionate confession of the author's ideas about life and art, particularly the concept of active and responsible patriotism based on a profound understanding of the national culture and strengthened by participation in the national life." [Entry by E. V. Starikova. Translatory unknown, Retrieved March 15 2017 from <http://encyclopedia2.thefreedictionary.com/Leonid+Leonov>]

¹³ Ibid., 218.

¹⁴ Ibid. This metric of the article's influence is widely used, perhaps because Leonov drew attention to it in a 1960 recollection published in *Literaturnaia gazeta*, 1960, 22 October. (Cited in the "Primecheniia" (Comments) by L.Polosnoi pp663–677 to the edited reissue of *Russkii Les*, Moscow: Khudozhesvennaia literatura, 1974.)

¹⁵ On Leonov and the Green Plantings Society, see Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 79-80. Other prominent supporters of the group, according to Weiner (p80) included "the Moscow city government" [...], the Main Botanical Garden, the Timiriazev Agricultural Academy, and other prominent institutions." Regarding the official process and chronology: "The chairman of the RSFSR Council of Ministers, Mikhail Rodionov, approved the charter of the urban greening society on June 23, 1948 and sent the materials to A. A. Kuznetsov of the Central Committee for final approval. The president of the organizational bureau was Nikolai Aleksandrovich Maksimov, director of the Academy's Institute of Plant Physiology, and Leonov, who was also a deputy to the USSR Supreme Soviet, became vice president."

“painfully exciting.” Leonov then foregrounds the productive benefits of urban greenery, claiming that Moscow’s enterprises will be better able to fulfill their production plans if greening and beautification of their sites is completed as needed. “In its essence, the greening of Moscow is the equipping of the ‘place of work’ of Muscovites.”¹⁶ Therefore, he concludes, all Muscovites should lend their assistance to the cause of protecting and maintaining the trees that, in many cases, they had also been responsible for planting in the first place. “Thousands of Muscovites ... [have worked] to give their beloved city an appearance [*vid*], deserved of the capital of the motherland [*rodina*].” Otherwise, without direct popular care, the time and labor that these thousands have given to planting seedlings—which Leonov refers to in economic terms as “people’s capital” [*narodnyi kapital*] and an “investment [*zalog*] in the health of citydwellers” would be wasted.¹⁷

Leonov’s text voices a generally held aspiration of Soviet urbanists of the time, in Moscow and elsewhere: to create urban living conditions befitting the greatness of the soon-to-be-victorious Soviet state. Amidst a context of war, urban filth, looming famine, popular exhaustion & disaffection, municipal authorities faced the urgent need to repair and improve seemingly “basic” urban infrastructure and services, from water supply and waste disposal to heating, transportation, and networks of distribution. In such conditions—especially given the associations between greening, productivity, and hygiene that were consolidated during the 1930s as part of the socialist Soviet approach to urban and industrial development (discussed in Chapter Three)—the agenda of beautification (*blagoustroistvo*) was both quite ambitious, and urgently needed. As such, its scope soon surpassed precedents set in the 1930s, establishing *blagoustroistvo* in the postwar period as a new “infrastructural” category of mediation between Soviet state and society, ideology and lived experience, urban imaginary and urban reality. These factors influenced Leonov’s cues to care. Woven into Leonov’s assertions of greening’s general value and general responsibility are a number of specific claims and rhetorical moves about the threats, benefits, and precedents associated with urban greening that connect his call to care to the specifics of postwar Stalinism.

The radiant promise of modern amenities was threatened on multiple fronts. Without being referenced directly, a specter of violence and official incapacity (or indifference) haunts

¹⁶ *delo ozeleneniia Moskvy—delo ustroistvo “rabochego mesta” Moskvicha* Leonov, “Pozabotimsiia” (Let’s Care) 1945

¹⁷ Leonov, “Pozabotimsiia” 1945

Leonov's description of the threats faced by trees and the morality of tree protection. When official attention and money wanders away from the investment already made in green plantings, warns Leonov, tree saplings are left vulnerable to children, hooligans, and unsupervised [*bezprizornye*] herds of goats.¹⁸ As a result,

The plantings are destroyed, the streets are made bald and become even more haggard [*bezobraznyi*], as on the sites of young trees remain only stumps [*kul'tiapki*]¹⁹—handmade monuments to Philistine lack of culture. Thus, every year thousands of beings perish, true friends of public health, large material means, the good intention of urban managers [*khoziaev*], and the ancient dream of Muscovites.²⁰

The association of damaged trees with undeserving war victims and maimed soldiers, all of whom deserved better than they got, was thus added to the mix of trees' other associations as "friends," investments, municipal utilities, and heritage. In his advocacy on behalf of trees, Leonov frequently associates them with youthfulness; saplings figure as youths who need protection from harm. Like children, plantings are to be properly cultured/cultivated with the necessary supervision, care, and respect for the rules (of tree cultivation).²¹ Adult and elderly trees similarly figure as deserving of great care and respect from the populace, particularly those who have served the common cause of urban environmental quality.

The task of protecting trees from the threats posed by neglect and disorder was a moral one, emphasized Leonov. "One wants to ask, in a ringing lawyerly voice, 'who is guilty?'" In a particularly caustic vignette, Leonov described how he "became a witness" to an instance of elite violence against greenery. One day, he came across a woman in a courtyard of a respectable house, one "free from billeteage" in a "historic corner" of the city, on Stankevich Street. He watched as

...calmly, as if it had to be so, she hacked a sawn-down poplar into firewood. He had grown many years, making this corner of such a quiet and so pleasant a street beautiful with his leaves [*ukrashaiia svoei listvoi*]. And this was his reward [*zagrada*]!

Such a betrayal in the face of long service was equally the fault of the community who stood by and did not intercede, according to Leonov. To his shock and dismay, "this act of destroying a mature tree was committed in broad daylight, before the eyes of numerous pedestrians and

¹⁸ In this period, the issue of orphaned and neglected children took on huge pragmatic and symbolic proportions. Fürst, "Between Salvation and Liquidation: Homeless and Vagrant Children and the Reconstruction of Soviet Society."

¹⁹ According to Multitran, a highly specific online dictionary that combines user contributions with an underlying basis of the Makarov scientific dictionary, a *kul'tiapka* is specifically the "stump of maimed or amputated limb."

²⁰ Leonov, 1945

²¹ [*nadzor, ukhod... pravil drevonasazhdeniia*]

militia-workers.”²² Not caring for urban trees and other plantings, in this context, rose from an issue of aesthetics and amenities to the realm of immorality, even criminality.

The need to care for trees was also an issue of metropolitan status protection. Regarding the same incident of poplar chopping and passerby indifference, Leonov rhetorically threw up his hands: “If this is done in the center of the city, what kinds of ‘timber processing’ must occur in the outskirts!” Operational here is the Soviet bedrock expectation that the central districts, like the capital city and its elites, ought to serve as a model or exemplar for the periphery—in the “cultured” care of trees, as in other areas of moral patriotic action. In the face of widespread postwar exhaustion and disillusionment, Leonov seemingly sought to leverage popular outrage regarding the effect of war and violence on humans (e.g. children wandering wild, the service of elders disrespected) to motivate popular participation in the installation and maintenance of urban plantings, which served simultaneously as symbolic and sanitary infrastructure.

Leonov called upon readers to emulate and be heartened by the precedent set at three high-profile sites that spanned the gamut of what was considered sacred in Soviet official culture and ideology. Each of these sites was simultaneously a model project of Soviet political-economy and of greening, thereby exemplifying the way urban greenery was imagined to function as aspirational infrastructure, supporting and enhancing the most important pillars of Soviet progress and identity. First, Leonov highlighted the physical and political concentration of power in the urban center.

After listing multiple sites within Moscow where poor conditions and lack of care kept trees “on the edge between life and death,” Leonov praised the garden-plaza [*skver*] by the Kremlin walls on Red Square “with its excellent spruce-trees.” This was the ultimate space of Soviet ceremony and power, adjacent to the wall of heroes where ordinary patriotic individuals were elevated to immortality through proximity to the eternal flame. The planting of spruce trees in this *skver* was cast by Leonov in cultural-aesthetic terms as a space of vegetative vigor and evocation of Northern climes. It was also a botanical statement of confidence. Spruce and pine trees, while aesthetically “rigorous and splendid,” were also more vulnerable to industrial byproducts and urban heat, as was mentioned by another pro-urban greening piece on the same page of the newspaper.²³

²² Leonov, 1945

²³ Other articles and authors published in *Vechernaia Moskva* on the same page as Leonov are discussed in the following section.

Leonov then reiterated the linkage between populism and productivity, now expanded from the scale of Moscow (and Muscovite pride/productivity) to the scale of the Soviet Union generally. At the All-Union Agricultural Exhibit [the VSKhV or AAE, after 1959, the VDNKh], he claimed, both the plant exhibits and the design of the grounds aroused “general delight and admiration” [*obshchie vostorg i voskhishchenie*] among visitors.²⁴ This fantastically fecund agricultural display had originally opened in 1939 and was expanded for re-opening in 1954.²⁵ In Leonov’s description it is unclear (and perhaps immaterial) whether he referred to the present experience or the collective touchstone of the exhibit’s remembered popularity.

The greening of the VSKhV grounds in particular was “done with great artistic taste” and, just as importantly according to Leonov, appropriate emotional commitment. “Every tree, every shrub was lovingly grown, planted by the great and unfortunately nameless masters of this work.” By implication, the success of the exhibit was equally an accomplishment of Soviet agriculture (instantiated in regional pavilions) and of the affective labor of local anonymous workers.²⁶ The trickle-down logic of caring for trees flowed from urban center to outskirts, and from formal exhibit display to formative emotional development. The significance of socialist greenery lay also in its capacity to expand across discrete categorical and chronological barriers, from past to present and the particular to universal.

A third sacred site whose greening was praised by Leonov lay further afield, at the Dnieper Hydro-Electric Station (also known as DneproGES and Dneprostoi). While this project was not physically central to the Soviet project in the same way as the Kremlin or other metropolitan sites, it was conceptually central to the industrialization campaigns of the mid-1930s. According to American journalist H.R. Knickerbocker, the DneproGES

was an object almost of worship to the Soviet people. Its destruction [by the retreating Red Army

²⁴ Quotes from Leonov 1945. The Exhibit is discussed in more detail below. See text of footnotes 132-135.

²⁵ On the exhibit’s longue durée evolution and “Potemkin Village”/kitsch tendencies, see 17 moments essay by Siegelbaum (<http://soviethistory.msu.edu/1939-2/all-union-agricultural-exhibition/>). The counter argument by Dobrenko is more focused on 1939-1954 versions. Sonja Schmid notes, with reference to later versions of the VDNKh, the Soviet exhibit tradition of treating visitors as learners rather than consumers/audience: “...the Soviet model of ‘disciplining the visitor’s gaze’ seems to have curtailed the relevance of aspects, such as entertainment or consumption, that started to dominate Western discussions. The prevalent model of visitors was that of enthusiastic learners, and of active contributors to the larger project of constructing a communist society.” Schmid, “Celebrating Tomorrow Today: The Peaceful Atom on Display in the Soviet Union.”

²⁶ The architect responsible for designing the greening of the Exhibit, A.S. Korobov, was known although perhaps not to Leonov. Leonov’s “masters” presumably referred to the workmen who installed and maintained the plants, thereby reinforcing the subtext that care for plants was the responsibility and honor of everyman. Environmental activist and writer V.A. Chivilikhin would later put the connection between affect and labor this way: “...Love of nature, like love for the Motherland, is not only in the sphere of feelings but in the sphere of deeds as well.” (Quoted by D.Weiner, *A Little Corner of Freedom*, 2002 p338 (Chapter on “Student Movements” specifically Kedrograd).

in 1941] demonstrates a will to resist which surpasses anything we had imagined. I know what that dam meant to the Bolsheviks ... It was the largest, most spectacular, and most popular of all the immense projects of the First Five-Year Plan ... The Dnieper dam when it was built was the biggest on earth and so it occupied a place in the imagination and affection of the Soviet people difficult for us to realize.²⁷

The dam and electric station were reconstructed between 1944 and 1949. Leonov focused on the past glory rather than contemporaneous recovery process.

Leonov, who was at the original opening, retrospectively complements the builders for giving care and attention to greening concurrent with construction of the dam and electro-station: “The turbines... had just done their first rotations, and nearby already rustled a mature, beautiful park!” The dynamic technological modernity of the hydroelectric turbines, which were celebrated for beginning to move, thus appears in fusion rather than opposition with the eternal leisurely present of the park. This bundling together of techno-scientific, cultural-ideological, and utility values under the banner of “the greening of towns and settlements” would prove a long-lasting characteristic, affording a broad range of professionals and specialists to lay claim to greening and its patriotic infrastructural capacity.

A Grove of Advocates

As shown in the preceding chapter, interwar greening and beautification promotion was a “big tent” production. Multiple agendas and participants from architecture, planning, and public health came together under a single cause—to beautify and healthify the cities. The unity of the cause was offset by internal contradictions and divergences similar to the pattern seen in any form of big tent politics, or a three-ring circus with multiple simultaneous events under one literal tent. This multiplicity of stake-holders, priorities, and methods continued to be true in the postwar period. The range of those who participated in promoting greening is perhaps best demonstrated by considering other articles on the same March 24, 1945 third page of *Vecherniaia Moskva* as Leonov’s “Let’s Care About Greenery.”²⁸ All were dedicated to some

²⁷ Knickerbocker, H. R. (1941). *Is Tomorrow Hitler's? 200 Questions On the Battle of Mankind*. Reynal & Hitchcock. pp. 107–108. (Reprinted by Kessinger Publishing, 2005). See also Rassweiler, *The Generation of Power: The History of Dneprostroy*.

²⁸ The complete list of articles published on March 24, 1945 in *Vecherniaia Moskva*, roughly from left to right and top to bottom, with author-identifiers as published: “We will dress Moscow in lacework of green” [*V kruzhevo zeleni odenem Moskvu*], no author given.; Matveev, S (engineer). “Flowers in the city” [*Tsvety v gorode*]; Zhukovskii, P. M (Botanist). “May Moscow become a garden-city!” [*Pust’ Moskva stanet gorodom-sadom!*]; Shchusev, A.V. (architect) “Adornment of the Capital” [*Ukrashenie Stolitsy*]; “Pine-trees as high as 40 meters” [*Sosny vysotoiu v 40 metrov*], with photo by K. Langman; Tsitsin, N.V. (Agronomist) “Forgotten Breeds” [*Zabytye Porody*]; Zuev, Dm. “In the Shade of Age-Old Groves” [*Pod sen’iu vekovykh roshch*]; Ivanov, L. (Forester) “For the Health of Muscovites” [*Dlia zdorov’ia Moskvichei*]; “Which tree grows fastest” [*Kakoe*

aspect of urban trees and greening. Leonov's piece, located in the bottom left corner, was by far the longest of the fourteen items and four photographs on the page. The other contributors represented the perhaps more formal commitments of some of the period's weightiest institutions of the period. So who was literally, if not conceptually, on the same page when it came to "our green friends?"

The same-page human stakeholders who sought to "dress Moscow in a green lacework" can be divided roughly between notables and archetypes.²⁹ (The pines, lindens, birches, oaks, and other trees profiled on the page, by contrast, were all identified by some kind of superlative quality: e.g., their age, size, beauty, quick growth, or historical significance i.e., planted by Peter the Great, sat beneath by Napoleon.³⁰) Human notables included "botanist" and Academician Pyotr Zhukovskii,³¹ "architect" urbanist, and Academician Aleksei Shchusev;³² "botanist," bureaucrat and Academician Nikolai Tsitsin,³³ and "forester" and corresponding member of the Academy Leonid Ivanov.³⁴ Their testimonials and recommendations to the capacity of greenery

derevo rastet bystree], no author given; "The long-lived" [*Starozhil*], no author given; "Lindens, planted by Peter the Great" [*Lipy, posazhennye Petrom I*], no author given; "Birch with lacework leaves" [*Bereza s azhurnymi list'iami*], no author given; Leonov, L.M. (Writer) "Let's care for greenery" [*Pozabotimsia o zeleni*]; "Giant" [*Gigant*], no author given, With photo by O. Larichev.

²⁹ The lead article, or slogan: "We will dress Moscow in lacework of green" [V kruzhevo zeleni odenem Moskvu], *Vecherniaia Moskva* 24 March 1945, no author given.

³⁰ Additional species were discussed in the texts, or pictured.

³¹ Pyotr Mikhailovich Zhukovskii, 1888–1975. "May Moscow become a garden-city!" [Pust' Moskva stanet gorodom-sadom!], *Vecherniaia Moskva*, 24 March 1945. Zhukovskii was a member of the All-Union Academy of Agricultural Sciences from 1935, member of the CPSU since 1940. In 1945, worked as chair of botany at the Moscow Timiriazev Academy of Agriculture, where he taught from 1934 to 1952. Director (1951-1961) of the Institute of Plant Industry, aka Vavilov Institute of Plant Industry or All-Russian Research Institute of Plant Industry in Leningrad (now St. Petersburg). Recipient in 1943 of the State Prize of the USSR. Cf. "Pyotr Mikhailovich Zhukovskii: A Distinguished Soviet Scholar and Plant Scientist" Doctor G. Davidian, Doctor N. Ivanov and Doctor V. Lekhnovich, *Economic Botany* Vol. 31, No. 4 (Oct. - Dec., 1977), pp. 432-435; *The Great Soviet Encyclopedia*, 3rd Edition (1970-1979). [English version accessed online 6-22-2017, <http://encyclopedia2.thefreedictionary.com/Petr+Mikhailovich+Zhukovskii>].

³² Aleksei Viktorovich Shchusev (1873–1949). "Adornment of the Capital" [Ukrashenie Stolitsy], *Vecherniaia Moskva* 24 March 1945. Member of the Academy of Sciences (1943). In 1945, active in organization of the Moscow Museum of Architecture (established in 1946, with Shchusev as Director).

³³ Nikolai Vasilevich Tsitsin, 1898-1980. Botanist, agronomist and geneticist. Member of the CPSU since 1938, member of the USSR Academy of Sciences from 1939. In 1945, worked as Director of the Academy's Central Botanical Garden of the Academy of Agricultural Sciences (VASKhNIL, where Tsitsin served in the 1930s as "Lysenko's deputy... and close partner") and in the Soviet Ministry of Agriculture, as the chairman of the State Varietal Testing Commission. In 1947, Tsitsin was elected President of the All-Union Organization for the Protection of Nature (VOOP). Tsitsin's career included a stint in Siberia, before returning to Moscow: from 1932, he worked at the Omsk Regional Experimental Station (later the Siberian Scientific Research Institute of Agriculture) and from 1936 to 1938 was the Director. In 1938-1949 and 1954-1957 Tsitsin was Director of the All-Union Agricultural Exhibit in Moscow. For his role at VOOP, see Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 73-74.. For general biographic and career information, see Turkevich, *Soviet Men of Science; Academicians and Corresponding Members of the Academy of Sciences of the USSR*, 400-01. Krementosov, *Stalinist Science*, 41.

³⁴ Leonid Aleksandrovich Ivanov, (1871-1962). "For the Health of Muscovites" [Dlia zdorov'ia Moskvichei] *Vecherniaia Moskva*, 24 March 1945. Bio from Turkevich, *Soviet Men of Science; Academicians and Corresponding Members of the*

to improve a variety of areas were interspersed with texts by individuals who seem to have left a much smaller historiographic footprint: S. Matveev, “engineer”, and “Dm. Zuev.”³⁵ While the themes raised on this one page were thick with historic and ideological references, they did not diverge markedly from the discourse usually associated with city greening by its architectural and hygienist proponents.

For architects, the idea that trees, shrubs, and other forms of greenery belonged in cities and on factory territories as a kind of multi-purpose infrastructure was established from the interwar period, if not yet widespread in implementation, as discussed in Chapter Two. In the years leading up to the first Congress of the Union of Architects in 1938, greening or “green construction” had been developed primarily by garden-park and/or hygiene specialists. Their efforts then were largely occupied with projective design-plans for select prototype sites (including major factories in Moscow, Tashkent, Stalingrad and other cities). What was new over the course of the 1940s, however, was the degree of high-level institutional support and normative systemization extended to the idea of urban and factory greening.

During the war, many central institutes and specialists were evacuated from Leningrad, Moscow, and Kiev to locations in Siberia and Central Asia.³⁶ Even so, urban greening was discussed in Moscow at dedicated conferences and in specialist publications in 1941 and 1946, and more regularly thereafter.³⁷ These events drew participation from a broad cross-section of Moscow and All-Union supporters, as seen in the scope and diverse authors of the March *Vecherniaia Moskva* feature on greening.

Academy of Sciences of the USSR, 140-41.: “Ivanov was born February 24, 1871. He graduated from Moscow University in 1895. From 1904 to 1941, he was professor at the Institute of Forestry (now the S. M. Korov Forest-Technical Academy). From 1938 to 1947, he headed the photosynthesis laboratory of the Institute of Plant Physiology of the U.S.S.R. Academy of Sciences. Since 1944, he has been the chief of the Laboratory on the Physiology and Ecology of Wood Strains of the U.S.S.R. Academy of Sciences Institute of Forests. He became a Corresponding Member of the U.S.S.R. Academy of Sciences in 1922.”

³⁵ Matveev, S (engineer). “Flowers in the city” [Tsvety v gorode], , *Vecherniaia Moskva*, 24 March 1945. Zuev, Dm. “In the Shade of Age-Old Groves” [Pod sen’iu vekovykh roshch]” *Vecherniaia Moskva*, 24 March 1945.

³⁶ Some architects were sent to cities and towns in Uzbekistan, including Tashkent; others were sent to live in small villages in the North and East of European Russia. The effects of this exposure on largely urbane professionals deserves further study.

³⁷ Prewar: 1941 “Khronika-Arkhitectura zelykh Nasazhdenii” *Arkhitectura SSSR* no5 [p71-72]: mentions March 1941 All-Union conference of SSA on “architecture of green planings in cities,” attended by “architects, tree specialists [dendrolog]s and communal economy workers.” Cities represented at this conference include “Moscow, Leningrad, Kiev, Tashkent, Tbilisi, Erevan, Tiba, Odessa, Khar’kov, and Minsk. In 1946: Postwar: In January 1946, the results of two closed competitions were announced in *Arkhitectura i Stroitel’stvo* no2 p24 for “the design of elements of city greening” with prizes awarded to M.I. Prokhorova, O.A. Ivanova, and others. [summary in Khazanova]; in Dec. 1946: All-Russian Conference on Green Construction, 10-15 December 1946; Conference material published by MinKomKhoz 1947. Described in “Khronika: Arkhitectura zelykh Nasazhdenii” *Arkhitectura SSSR* no5 (1946): 71-72.

Beautification: Beyond Beauty, Past Parks

To understand the status and consequences of urban greening as it developed in the USSR during this period requires brief consideration of how *blagoustroistvo* (roughly, the improvement of public services) was envisioned by its practitioners, advocates, and patrons. The very word *blagoustroistvo* can and is translated variously into English, at times appearing as “public works,” “sanitary engineering,” “amenity improvement” etc., indicating its scope as a realm of activity. The term—based in the root words for goodness/amenities [*blago-*] and construction [*stroï*—does not have a direct equivalent in English planning and design terminology. Or rather, it has many, complicating translation efforts. It is telling that Catherine Cooke, who frames *beautification* (*blagoustroistvo*) as a emergent area of professional practice around the time of the Russian Revolution, cannot discuss the activity without discussing a blurred mosaic of terminology:

Only on the eve of the War had courses in ‘town building’ been launched in the Academy School of Architecture in Petersburg and in Kiev. There was not even a consistent name for the activity which integrated social and technical concerns of ‘public utilities engineering’ —literally the ‘arrangements for well-being’ (*blagoustroistvo*) with the formal or aesthetic concerns on which historical towns had developed as compositional ‘ensembles’. Only slowly did the eventual term *gradostroitelstvo*, literally ‘town-building’ become standard vocabulary. [...] Thus ‘the city’ was a highly conflictual territory, and the profession of town planning as Europe or North America already understood it was so under-developed when tsarism collapsed that the young Soviet Union inherited hardly more than a handful of specialists capable of looking at urban form as a whole.³⁸

One of those specialists was architect-planner Vladimir Semenov, who Cooke notes had “by the mid-1920s become the USSR’s most senior city-planner and remained so throughout the Stalin era.”³⁹

Urban historians of the USSR have, for their part, often emphasized a divide between *blagoustroistvo* (improvements) and *ozelenenie* (greening), associating the former with technogenic communal utilities and sanitation-hygiene concerns, and the latter with aesthetics, leisure, and public opinion.⁴⁰ In this work, I contend that interventions in the Soviet urban

³⁸ Cooke, *Russian Avant-Garde Theories of Art, Architecture and the City*. London: Academy Editions, 1995. p189

³⁹ Cooke writes “Semionov” instead of Semenov. Of his 1912 book, *Blagoustroistvo Gorodov*, Cooke writes that “Semionov’s pioneering book of 1912 provided Russia with her first indigenous town planning text, and the word in its title which English renders as ‘town planning’ was characteristically the socially and technically rooted term *blagoustroistvo*.” p190

⁴⁰ For instance, in his study of the postwar reconstruction of Sebastopol, Karl Qualls assigns greening to the cosmetic and affective and ‘blagoustroistvo’ to the utilitarian: “After a devastating and exhausting war, most people hoped for a few minutes of peace and perhaps some entertainment to escape into a forgotten life. To this end, local urban planners, most often with the encouragement and aid of the local population, sought to rebuild and improve on the network of entertainment and leisure opportunities in the city. ***Blagoustroistvo* (the improvement of public services from utilities to transportation to street lights) and *ozelenenie* (greening the city with trees, shrubs, and flowers) served as the foundation of beautification efforts.** In many ways *blagoustroistvo* went hand in hand with improvements in housing stock and sanitation. Water and sewer systems

landscape (specifically its planted or unbuilt green areas) should properly be understood as a form of *blagoustroistvo*, i.e. as a form of utility and public service to be improved, carrying with it the same aspirations for modernity, hygiene, and comfort. While I translate *blagoustroistvo* as beautification, I desire to maintain the archaic connotations of the City Beautiful movement of urban form, with its comingled agenda of aesthetic-spatial, hygienic-functional, and social-behavioral interventions.⁴¹

Maurice Parkins, one of the most attentive, although not omniscient, contemporaneous foreign observers of Stalinist urban planning, included *blagoustroistvo* [beautification] as the ninth of 15 directives that planners were expected to follow according to the Fourth Five-Year Plan (1946-1950), after Number 8, “Artistic heritage and national tradition are to be preserved.” “The Russian word *blagoustroistvo*,” writes Parkins,

has become synonymous with planning and construction; it means providing communal services to the people. By “communal services” is implied not only the supply of water, electricity, gas, sewage disposal, and public transportation but also the concern for the welfare of the people and favorable living conditions. The extent of *blagoustroistvo* applied depends on the importance of the project, the interest of the authority in charge, and the competency of planning and building control agencies.⁴²

The arc of official Soviet discourse on urban greening from 1939 to 1954 shows that greening was considered a key form of beautification applicable to all types of settlements and parts of a city (not just the central parks or factory grounds). For reasons benefiting many distinct groups or stakeholders, greening was increasingly “normed” as a necessary and distinctive quality of the socialist postwar urban environment. At the same time, architectural practice as a whole was challenged in this period to move from “creative experiment to practical building,”⁴³ a move that withdrew praxis further from the concerns of architecture-as-art/innovation, doubly obscuring the Soviet architectural production of urban greening from Western historiography.

There were, however, more meaningful transdisciplinary patterns, that give evidence of

were key to maintaining sanitation and health. **But other forms of *blagoustroistvo* offered aesthetic pleasure and converged with *ozelenenie*.** Tree-lined streets and boulevards provided a much-needed sense of life in a city that had been without meaningful life for so long.” Qualls, *From Ruins to Reconstruction: Urban Identity in Soviet Sevastopol after World War II*, 111. Emphasis added. As should be clear by now, Soviet urban planners intended those tree-lined boulevards to also contribute directly to sanitation and health.

⁴¹ A basic overview can be found in Hall, *Cities of Tomorrow: An Intellectual History of Urban Planning and Design in the Twentieth Century*. See also Peterson, “The City Beautiful Movement: Forgotten Origins and Lost Meanings.”; Daniels, “A Trail across Time: American Environmental Planning from City Beautiful to Sustainability.”; Freestone, “Reconciling Beauty and Utility in Early City Planning: The Contribution of John Nolen.”

⁴² Parkins, *City Planning in Soviet Russia*, 65.

⁴³ Kosenkova, *Sovetskii Gorod 1940-Kh-Pervoi Poloviny 1950-Kh Godov: Ot Tvorcheskikh Poiskov K Praktike Stroitel'stva*.

greening as something more than a political slogan. In practice, “urban greening,” “green construction,” and, to a lesser extent, “garden-park art” functioned as a capacious container for long-running collaboration between architect-planners, forestry experts/advocates, and public health specialists in Moscow and other cities.⁴⁴ Demonstration of greening’s postwar interdisciplinarity can also be seen in the history of professional conferences and publications.⁴⁵ Another, the All-Russian Conference on Green Construction, December 10-15 1946, had its proceedings published by the press of the Ministry of Communal Economy [MinKomKhoz], a frequent sponsor for work on greening in its utilitarian guises.

Finally, to understand what was meant at the time by the “greening” and “beautification” of cities, it is worth considering the extended definition given by one of the USSR’s most influential urbanists, Vladimir Semenov. At the war’s close, he was a “Doctor” of architectural science and active member of the academy of architecture of the USSR. Rather than the cosmetic, or even infrastructural, improvement of urban environments, Semenov urged Soviet architects and allied specialists to understand beautification “more broadly.” His mission statement for the Soviet Union’s postwar urban recovery and reconstruction, published in 1947 as “Spatial Planning Fundamentals for Cities Being Restored” (*Osnovy planirovki Vosstanivliavaemykh gorodov*),⁴⁶ included the following assertions:

The issue of restorative construction is now being given enormous attention in our country [v *nashei strane*]. [...] Restorative building must necessarily be realized on a high level of quality, the reborn cities must be bright and beautiful in appearance [*byt iarkimi i krasochnymi v svoem oblike*], must give maximal comfort and coziness to the peoples of the Soviet countries.⁴⁶

After discussing other architectural and layout-planning aspects of the task, Semenov turned to

⁴⁴ In addition to being claimed by the Academy of Architecture’s Citybuilding Institute/Sector, the Ministry of Municipal Economy (MinKomKhoz) was deeply involved in sponsoring greening work. In contrast, the merger of the scientific Nature Protection Society [VOOP] with the populist Green Plantings Society [VOSSiOZN] in 1953 is portrayed by Weiner, despite being long anticipated and mutually desired, as bringing about a significant cultural shift in the former. e.g. “The influx of pragmatic planters, foresters, and horticulturists into the reorganized VOOP through its merger with the Green Plantings Society, combined with closer monitoring of the Society’s activities by the RSFSR Council of Ministers, however, created the preconditions for major shifts in the Society’s direction and operations. [...] The period 1953–1955 was an interregnum for VOOP as well as for Soviet society as a whole. In contrast to the thrust of the liberalizing changes in Soviet society, however, the interregnum in VOOP ultimately led to the / suppression of the autonomous ethos of scientific public opinion within the Society and to its takeover by corrupt Communist time-servers.” Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 183-84.

⁴⁵ See bibliography, also footnote 37

⁴⁶ V.N. Semenov, “Osnovy planirovki Vosstanivliavaemykh gorodov” in *Problemy Sovetskogo Gradostroitel'stvo (Problems of Soviet City-building)* no1, pp3-9 [assembled Jan.25, 1946, sent to press more than a year later, March 28, 1947; print run 5000.] [p3] “Brightness” “beauty” “comfort” and “coziness” [*uiut*] were key words for Stalinist aesthetics and architectural practice, above and beyond their seeming superficial positivity. See Cooke, “Beauty as a Route to ‘the Radiant Future’: Responses of Soviet Architecture.” On the study of design through keywords, see Forty, “Words and Buildings: A Vocabulary of Modern Architecture.”; O'Malley et al., *Keywords in American Landscape Design*.

blagoustroistvo, the provision of public amenities:

And, finally, **on beautification** [*o blagoustroistvo*, emphasis in original.] By beautification we usually mean the provision of water systems, sewerage and so forth. But this, logically, is not everything.

We must understand beautification more broadly. The culture of settlements in the land of Soviets this is, first of all, care for persons, for his coziness, comfort and conveniences. We consider a city to be beautified [*blagoustroitennym*], [that is] characterized by a plentitude of light, air, and greenery, which gives a person maximal convenience [*udobstva*] for work, for circulation, for rest and entertainment.⁴⁷

This defines our relations to greenery, and to transport, and to the organization of the residential block. Greenery is conceived by us not as decorative islets or flowerbeds scattered hither and yon [*razbrosannye tam i siam klumby*] but as large green masses of gardens, boulevards and parks, comprehensively covering the entire urban territory and incorporated into the architecture of the city as a fundamental. It can be said without exaggeration that in recent times not one design-plan has been created for the restoration of a city, in which nature [and] greenery has not played a significant role in urban spatial planning.⁴⁸

Significant here is Semenov's insistence on the ubiquity and distribution of greenspace within cities, "comprehensively covering" the urban realm. This biotic, or plant-based infrastructure system is envisioned to be an influence in the design of various technological systems, such as transportation. Moreover, when specialists asserted that "greening was the leading, or most important, aspect of beautification" they could lean on Semenov's assertions that a 'beautified' urban environment was intrinsic to the "Stalinist care for persons" and, second, inalienable to the process of urban spatial planning, *planirovka*.

The foundational principles of the post-war city reconstruction and restoration campaign as articulated by Semenov prioritized compositional aspects of citybuilding, infused with a patriotic rhetoric of sacrifice and deserved rewards. Aesthetic-spatial qualities such as harmony, boundedness, abundance of greenspace, and the unification of appearance were taken as necessary preconditions for achieving the desired experiential-social qualities of cities "bright and colorful [*krasochnymi*] in their appearance... [giving] maximal comfort and coziness [*komfort i uiut*] to the peoples of Soviet countries, who with their blood have defended the honor

⁴⁷ Again, these statements were packed with resonant phrases of Soviet architectural discourse, indicating that *blagoustroistvo* was as important ideologically and experientially as the monumental high-buildings or Metro stations that are today better known. e.g. "*zabota o cheloveke, ob ego uiute, komforte i udobstvakh*" Phrases like light, air, and greenery, meanwhile (*obiliem sveta, vozdukh i zeleni*) were slogans of international modernism of the 1920s. Semenov, rather than being associated at that time with either the Urbanist or Disurbanist camps, had gained stature through his connections to the British Garden-City movements of Parker and Unwin, with whom he may even have worked. Cooke, "Russian Responses to the Garden City."; Miller, "Garden Cities and Suburbs: At Home and Abroad."; Richard, "The Garden City in Russian Urbanism."; Starr, "The Revival and Schism of Urban Planning in Twentieth-Century Russia." See also Evgeny Dobrenko, "Sady Sotsrealizma: K kul'turnoi topografii stalinskoi epokhi" *Revue Des études Slaves* 70, no. 4 (1998): 889-908. <http://www.jstor.org.proxy.lib.umich.edu/stable/43271212>.

⁴⁸ Semenov, "Osnovy planirovki", 1947, p9.

and independence of the Motherland.”⁴⁹ The opposite, a city lacking in greenery, was directly criticized for creating negative feelings in residents. “As part of the fourth Five Year Plan,” stated the May 1946 lead article of *Arkhitektura i Stroitel'stvo* (the official organ of the State Committee on Architectural Affairs), “it is necessary to strive in order that squares [*ploshchadi*], streets, embankments, [and] blocks are beautiful, and so that a person in a city does not feel themselves to be trapped in an stony oubliette.”⁵⁰

The principles of urban reconstruction articulated by Semenov in 1946 (published in 1947) included a repeated emphasis on “expressivity” and “individuality” — not necessarily of buildings or ensembles, but of cities. “Each city must above all possess its own individual identity [*svoe individual'noe litso*].”⁵¹ The design of residential and civic buildings was increasingly standardized in these years, leading up to the requirement in 1948 that all such buildings be built according to *tipologicheskii* [standardized] designs, part of that year’s advent of a mass housing campaign.⁵² Architect-planners working at the urban scale were encouraged (or directed) to orient their urban “compositions” around features of the natural environment: riverbanks and seashores, topography [“relief”], local climate and vegetation.⁵³ Attention to local history and environmental context—what might in other contexts be called the classical *genus loci* or spirit of the place—was to guide the reconstruction of Soviet cities, even as architects are instructed to improve “obvious mistakes” of past plans and other urban infelicities.

It was generally agreed that the Soviet Union’s restored and reconstructed cities should

⁴⁹ Semenov, “Osnovy planirovki”, 1947: 3

⁵⁰ Literally, in a stony sack, *v kamennom meshke*. “Ozelenenie gorodov [Greening of cities]” *Arkhitektura i Stroitel'stvo* no 10 (May 1946) pp1-2. The article is unsigned, but probably written by L.B. Lunts or cribbed from his works. Lunts was a *kandidat arkhitekturnykh nauk*, who worked at the Institute of General and Communal Hygiene of the Academy of Medical Science of the USSR. Many of the passages found in the *Arkhitektura i Stroitel'stvo* article are identical or similar to those in a signed February 1946 article in the periodical *Gigiena i Sanitariia*, titled “Ocherednye voprosy ozeleneniia gorodov” (1946 no3 pp7–17; Print run 8,600; Sent to print Feb.30, 1946). Additionally, the two book reviews (both on books on “green construction”) in that issue of *Arkhitektura i Stroitel'stvo* are signed L.L.

⁵¹ Semenov “Osnovy Planirovki” 1947: 3.

⁵² Detailed discussion of the periodization of Soviet mass housing can be found in Smith, *Property of Communists: The Urban Housing Program from Stalin to Khrushchev*.

⁵³ In 1948, a separate decree required preservation of urban national heritage Anderson, “The Ussr's 1948 Instructions for the Identification, Registration, Maintenance, and Restoration of Architectural Monuments under State Protection.”. The preservation of architectural heritage, along with environmental and other “place-based” concerns, has been identified as an area of unexpectedly “legitimate” social mobilization in the late Soviet period, perhaps one contributing to the collapse of the Soviet Union and other authoritarian regimes Czaplicka, Ruble, and Crabtree, *Composing Urban History and the Constitution of Civic Identities*, 4. On the Soviet turn to architectural preservation, see Maddox, “These Monuments Must Be Protected! The Stalinist Turn to the Past and Historic Preservation During the Blockade of Leningrad.”; Kelly, “The Shock of the Old: Architectural Preservation in Soviet Russia.”. Present-day issues related to preservation are also discussed in *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism*, Vol. 5, No. 1, Special Issue on the Preservation of Soviet Heritage (Summer 2008).

be “beautiful, healthy and convenient.”⁵⁴ The orderly boundaries and discipline aspired to in the urban environment existed in stark contrast to the dissolved disciplinary boundaries and shared responsibility required to realize it. Writing in February 1946 to an audience of public health specialists, L.B. Lunts cautioned that success would depend on inter-disciplinary collaboration, attention to place specificity, and reasonable expectations.

This noble task [of urban reconstruction and redevelopment] is entrusted first of all to architects, hygienists and engineer-planners [*ingenerov-gradostroitelei*], and to workers of local city councils. Success to a significant degree will depend on how well thought-out are the plans developed for the restoration and reconstruction of cities, to what extent [*naskol'ko*] these projects take into account the natural-climatic and related specificities of each city, and to what extent the proposals of the designers [*proektirovshchiki*] are realistic and true-to-life [*real'nyi, zhiznenny*].⁵⁵

The architect-planners responsible for planning the restoration and recovery of war-damaged cities, implied Lunts, would be held accountable in moral and patriotic terms for their relationship to urban greening, as well as according to professional standards of aesthetic and technical expertise.

Architecture-planning theory under Semenov's direction prioritized a conception of cities as “essential living organisms” [*tselostnym zhiznennym organizm*]. Since 1935, according to Semenov, “[o]ur best architect-planners” have been thinking about the city “as a whole” [*v tselom*],

...they comprehend, that the expressivity and beauty [*vyrazitel'nost i krasotu*] of a city or an avenue [*magistral*] is produced not by buildings, but by the correct interrelation of component elements, a unified scale for the whole and the parts, [the] rhythmic organization of urban space, the harmonious alternation of accents, green intervals [*razryvy*], lesser architectural forms etc.⁵⁶

The design and planning of urban greenspace was thus imbued with city-wide, even societal, significance. The spaces between buildings were expected to provide aesthetic pleasure, comfort, and convenience to the deserving post-war populace, with the added benefit of thereby improving their health and avoiding the negative qualities attributed to “bourgeois” and “decadent” Western urbanism with its stony oubliettes.

Density and stone-construction were qualities typically associated with European urbanism; chaos and inequality among districts were charges leveled at “un-planned” American

⁵⁴ Lunts “Ocherednye voprosy” 1946 p8: “All achievements of scholarship, technology, and the arts [*nauki, tekhniki i iskusstva*] must be used in the realization of this grandiose program. In our cities live tens of millions of soviet people, and we are duty-bound to provide them [*obiazany sozdat' im*] with a beautiful, healthful, and convenient environment [*krasivuiu, zdorovuiu i udobnuiu obstanovku*].”

⁵⁵ Lunts “Ocherednye voprosy”, 1946: 8.

⁵⁶ Semenov, V.N. “Osnovy planirovki” 1947: 4

cities.) Overall efforts within the Soviet architecture community to distance themselves from American forms of practice led to the elevation of urban-scale interventions. Spatial planning, especially at larger city and regional scales, was a field in which the Soviet practitioners might feel safely inured from “decadent” Western influence. As told by architectural historian Richard Anderson, Soviet architects under threat sought

to underline the importance of urban planning as the defining characteristic of socialist architecture. “One of the most important qualities which differentiates Soviet architecture from the architecture of the past and from the architecture of the contemporary West,” read an 1947 editorial in *Arkhitektura SSSR*, “is the leading role of the urbanist basis in all fields of architectural activity.” [...] American urbanism was recast as the negative projection of Soviet practice.⁵⁷

It was a particularity of the Soviet system that the emphasis placed on planning as a defining element of socialist society did not actually require the implementation of the plan. To have, and publicize, comprehensive intentions took on outsize importance in this system.⁵⁸ With regard to greening, the timescale of this aspirational transformation could be enhanced by evocations of the plants’ eventual maturity, or even by the transplantation of mature trees “to give the necessary effect” more immediately. (On the occasion of the 800th Anniversary of Moscow, which was celebrated in 1947, the latter approach was used widely on major streets and in public areas.)

A Gathering Storm

The 1946-1947 habit evinced by Semenov and others to include “green intervals” as functional and compositional elements built on the advocacy for urban “green friends” as emblems of heritage, honor, and health that had been voiced by Leonov and others in 1945. Given the context of labor and material shortage with which postwar reconstruction had to

⁵⁷ Anderson, “USA/USSR: Architecture and War,” 95. Here Anderson (fn 72) cites “Gradostroitel’naia osnova sovetskoi arkhitektury,” *Arkhitektura SSSR*, Vypusk 15 (1947): 1. See also N. Bylinkin, “Gradostroitel’nye utopii zapadnykh arkhitektorov,” *Arkhitektura i stroitel’stvo* 2, no. 1 (1947): 14–16. Specifically, Anderson mentions that “This new emphasis on the superiority of Soviet urban planning led to the public criticism of the urban theories advanced by Frank Lloyd Wright, Eliel Saarinen, and José Luis Sert. The following books of theirs were criticized for their “utopian” content in the Soviet press: Frank Lloyd Wright, *The Disappearing City* (New York: W.F. Payson, 1932); Eliel Saarinen, *The City, Its Growth, Its Decay, Its Future* (New York: Reinhold Publishing Corporation, 1943); and José Luis Sert, *Can Our Cities Survive? An ABC of Urban Problems, Their Analysis, Their Solutions* (Cambridge: Harvard University Press, 1942).

⁵⁸ See Day, “Building Socialism: The Politics of the Soviet Cityscape in the Stalin Era,” 29. “...great faith was placed in [the plan’s] ability to transform the city. This can only be explained, I argue, with reference to a peculiarity of Stalin-era political culture: a tendency to ascribe demiurgic powers to total, centralized administrative authority, of which economic and now city plans alike were considered to be the ultimate embodiment. The very existence of a city general plan, in short, was seen to be enough to ensure that it would be carried out. The consequences of this assumption—which, with the publication of the Me-scow plan, effectively became an axiom of Soviet urbanism—were enormous, and are a key focus of the succeeding chapters.”

contend—technogenic building materials and specialists were in short supply, but plants grew themselves—it is little wonder that “urban greening and beautification” efforts appear and reappear in mainstream architecture-planning discourse of the time. Eventually, in December 1947, Leonov’s advocacy in defense of urban trees reached an increasingly inter-disciplinary national audience. It did so in an increasingly repressive context of Party and State interventions in the arts, sciences, and applied fields of production, including green construction. After establishing the character of that repressive context, known as the *Zhdanovshchina* after its main official instigator, we will return to Leonov’s defense of the Great Green Friendship, and the response it found in the Moscow architectural community.

In 1947, the city of Moscow celebrated the 800th anniversary of its founding by Iurii Dolgorukii. “Moscow is the standard bearer of the new, Soviet epoch,” stated Joseph Stalin.⁵⁹ Various elements of the city and its tangible *obraz* [image, identity] were revamped. Among the more prominent urban greenspaces enrolled in this highly public fusion of urban redevelopment and political posturing was the Moscow Botanical Garden, established in 1945 (discussed below). Less often remembered today, but no less typical, was the redevelopment of sites such as the Kalibr Factory grounds (discussed in Chapter Two), which established a small garden or *skver* in honor of the occasion.⁶⁰ This process of renewal and reconstruction also included changes to such venerable institutions as the Academy of Sciences and the Academy of Architecture.

The Anniversary’s celebration of heritage, and other interventions in the physical and professional environment(s) of Moscow took place amidst a stormy atmosphere of domestic and international antagonism. A gale of nationalism, patriotic rhetoric, and official *kritika* blew at the Soviet cultural and scientific elites, while antagonistic rhetoric from the “two camps” of what would become known as the Cold War flew back and forth across the newly declared ‘Iron Curtain.’⁶¹ Directing the stormwinds in both directions was Andrei Zhdanov, one of the period’s

⁵⁹ Quoted in Colton, *Moscow: Governing the Socialist Metropolis*, 2..

⁶⁰ As photographed in Usov, *Zavod-Sad*, 1954, p163}, the *skver im. vosmisotletiiia Moskvyy* included benches, a central convergence of paths, and a round ornamental parterre with central statue of two healthy youths tossing a ball. The layout was formal, the planted areas surrounding the central space were decidedly exuberant rather than manicured.

⁶¹ The Cold War continues to be an influential analytic framework for English-language studies of architecture, design, and technology. Relevant works include Åman, *Architecture and Ideology in Eastern Europe During the Stalin Era: An Aspect of Cold War History*; Brain, "The Appeal of Appearing Green: Soviet-American Ideological Competition and Cold War Environmental Diplomacy."; Castillo, *Cold War on the Home Front: The Soft Power of Midcentury Design*; Hecht and Edwards, *The Technopolitics of Cold War: Toward a Transregional Perspective*; Josephson, "War on Nature as Part of the Cold War.";

most powerful figures. Zhdanov (1896-1948) was the progenitor of the “two camps” doctrine of the Cold War and one of Stalin’s chief lieutenants, most actively in the areas of international relations and cultural affairs.⁶² The *zhdanovshchina* that bears his name began as a “patriotic and anti-bourgeois campaign in the cultural sphere” and transitioned into the more explicitly anti-Semitic “anti-cosmopolitan” campaign of 1948-49 after Zhdanov’s death. The initial campaign offensive was a 1946 decree aimed at ensuring correct ideological content in literature.⁶³ The “Zvezda” affair, as it was known, was aimed primarily against writers Mikhail Zoshchenko and Anna Akhmatova, so-called after the Leningrad journals that had had the misfortune or daring to publish their work.

By 1947, Zhdanov’s “fierce hold” on the Soviet world of culture coincided with his creation of the Cominform, which attempted “to impose similar discipline” on the new-formed eastern bloc of countries.⁶⁴ The attack on Zoshchenko and Akhmatova was followed by a broader intervention into Soviet literature. In May 1947, Stalin, Zhdanov and then foreign minister Vyacheslav Molotov (1890–1986) met in the Kremlin with leaders of the Soviet Writers' Union, at which the latter were warned against “self-abasement, feelings of inadequacy, and unwarranted groveling before foreign culture.”⁶⁵ Musicians, similarly, were criticized for their “formalism.” All told, the fields of artistic and cultural production targeted most directly in the *Zhdanovshchina* and anti-cosmopolitan campaigns were literature, music, theatre, and philology.⁶⁶ Zhdanov himself died in 1948, but the storm continued to blow. The campaign to instill or re-instill socialist realist norms and “ideological content” in the arts was followed, in the

Laakkonen, Pál, and Tucker, "The Cold War and Environmental History: Complementary Fields."; Reid, "Cold War in the Kitchen: Gender and the De-Stalinization of Consumer Taste in the Soviet Union under Khrushchev."; Vronskaya, "Deconstructing Constructivism."

⁶² The decree in question is "Postanovlenie TsK VKP(b) o zhurnalakh 'Zvezda' i 'Leningrad,'" *Pravda* (Moscow), 14 August 1946, p. 1. Regarding Zhdanov and his influence, James von Geldern writes on the 17 Moments website that “The somber name *zhdanovshchina* has become associated with the three years of his greatest power, 1946-1948, when he severely tightened ideological guidelines. He was behind the August 1946 attack on the literary journals *Zvezda* and *Leningrad*, based in his home city, for publishing the allegedly anti-social works of the satirist Mikhail Zoshchenko and the poet Anna Akhmatova. It was an attack by implication on all such cultural leanings, and led to an assault on “cosmopolitanism,” that left the cultural world in shambles. Whether out of fright or cowardice, artists competed to appear most servile to the party; and those who did not fell silent.” <http://soviethistory.msu.edu/1947-2/zhdanov/> [Accessed 01/2019]

⁶³ The political-cultural sin of "groveling before the West" was a particular target. On the evolution of these campaigns and their overlap with the increasing “Great Russian” nationalism of the time see Azadovskii and Egorov, "From Anti-Westernism to Anti-Semitism: Stalin and the Impact of the "Anti-Cosmopolitan" Campaigns on Soviet Culture."

⁶⁴ von Geldern, “Zhdanov” <http://soviethistory.msu.edu/1947-2/zhdanov/>

⁶⁵ Azadovskii and Egorov, "From Anti-Westernism to Anti-Semitism: Stalin and the Impact of the "Anti-Cosmopolitan" Campaigns on Soviet Culture," 67-68.

⁶⁶ Clark et al., *Soviet Culture and Power: A History in Documents, 1917-1953.*

late 1940s and early 1950s, by a series of Communist Party interventions in the sciences.⁶⁷

All told, the period immediately following the war saw attacks on elites in multiple fields. In the early Cold War “atmosphere of ideological polarization and anti-Americanism,” Soviet architecture experienced its own waves of repression and *kritika*, directed at its elites and described at the time as a purge, at least by outside commentators.⁶⁸ Given that these targeted both the USSR’s cultural intelligentsia (writers, artists, musicians), its technical-professional elites (natural scientists, public health experts, foresters etc.), and the less than exemplary existing living conditions, architect-planners were buffeted from three sides—the orientation of their work being simultaneously artistic, scientific, and “everyday” [*bytovye*].

While architecture and city-building were not specifically targeted in the *zhdanovshchina*’s cultural interventions, the internationalism of these fields also placed them squarely athwart the “ideological realignment” triggered by Zhdanov’s Cold War division of the world into two, opposing, “imperialist” and “anti-imperialist” camps.⁶⁹ Architecture’s vulnerability to charges of “groveling before the West” could be seen in the changing fortunes of such prominent architecture professors as David Arkin, Andrei Burov, A.V. Bunin and other field leaders, who were denounced in July 1947 and again in December 1947, at the 8th session of the Academy of Architecture of the USSR.⁷⁰ By 1948, the “rejection of [ideas such as the neighborhood unit] and castigation of leading Western specialists in a conspiracy against

⁶⁷ As described in L.Siegelbaum essay on Lysenko (17Moments): among the “scientific disputes settled by party intervention” in this period were: biology (1948), philosophy (1947), linguistics (1950), physiology (1950), and political economy (1951). Siegelbaum: “What was characteristic of all five discussions was the transfer of the rites of Communist political culture to academic life in which the operational procedures and rhetorical vocabularies were stable, but the experts could not know in advance which competing faction would win the party’s imprimatur.” <http://soviethistory.msu.edu/1947-2/triumph-of-t-d-lysenko/> Accessed July 7, 2017.

⁶⁸ Anderson cites Peter Blake, “The Soviet Architecture Purge,” *Architectural Record* 106, no. 9 (1949): 127. Anderson notes however, that all “purges” were not equal. To wit: “The campaign against allegedly “pro-Western” sentiments had significant effects on Soviet architectural culture. Administrative positions within the Union of Soviet Architects were redistributed, and the academy’s leadership was reshuffled. But, as Elena Zubkova has pointed out, purges in the postwar era cannot be equated with the public violence of the Great Terror of 1937–38, when hundreds of thousands of Soviet citizens were summarily sentenced for political crimes. Repression in the late 1940s targeted the elite.(80) In the field of architecture, only the most prominent members of the profession were accused of cosmopolitanism and of “bowing to the bourgeois West.” Others, who had expressed similar “pro-Western” sympathies, continued to work effectively within the profession.” {Anderson 2009 @96, citing Zubkova, *Russia after the War: Hopes, Illusions, and Disappointments, 1945-1957*, 131..

⁶⁹ Specifically, Zhdanov’s speech in September 1947. See {Anderson, 2009 #2795 @94-95.

⁷⁰ Here I draw from the archival research and reproduction by Iu.L. Kosenkova and Iu.P.Volchok of “Chronicle of architectural-citybuilding process in the USSR postwar period (1945–1955)” available online for download (not paginated) from NIITIAG (Scientific Research Institute of the Theory and History of Architecture and Citybuilding). Pages given here refer to the pdf version.

http://www.niitiag.ru/pub/pub_cat/khronika_arkhitekturno_gradostroitel'nogo_protssessa_v_sssr_poslevoennogo_perioda.”

socialistic architecture had reached a thoroughly apocalyptic incandescence.”⁷¹ Besides those accused of being too influenced by “Western” traditions and individual expression, others faced criticism for being too close to the nominally domestic but equally taboo practices of Constructivism.⁷² The greening of towns and settlements, being one of the most publically visible and seemingly “bourgeois/modernist” aspects of municipal infrastructure, would have been particularly exposed to the convergence of these campaigns.

1948 – Green Friends in the Gale

Following the “Zvezda” affair, a 10 February 1948 decree critical of the opera “The Great Friendship [*Velikaia Druzhiba*]” by Georgian composer Vano Muradeli spread further waves of fear and response throughout the Soviet arts.⁷³ Architecture—Goethe’s “frozen music”—was traditionally included as one of the arts, at least by its practitioners.⁷⁴ While neither the February decree nor other similar ones were directed explicitly at architecture-planning practices, the architectural community was quick to perform their own “ritual of self-criticism” in response. The new party directive on musical production, and the architects reaction, was vitriolic in comparison with the previous year’s relatively “objective” critiques of architects who published in foreign journals or advocated the idea of the *mikroraion* [neighborhood unit]. In Moscow, architects’ discussion of the “Great Friendship” decree occurred on March 16-19, 1948 and focused on the “formalist” tendencies of Zholtovskii and his “school” of adherents.⁷⁵ (In Krasnoyarsk, as discussed in the next chapter, the local division of the Union of Soviet Architects met on March 10, 1948 in reaction to the “Great Friendship” decree.)

Although the socialist commitment to urban planning and centrally-controlled city-

⁷¹ Kosenkova and Volchok, NIITIAG Chronicle, np 36

⁷² Kosenkova and Volchok, NIITIAG Chronicle, np 36; see also Anderson, “USA/USSR: Architecture and War.”

⁷³ Text of the decree found in *Soviet Culture and Power*, also on 17 Moments : “Against Formalistic Tendencies in Soviet Music” Central Committee of the All-Union Communist Party. February 10, 1948 — Original Source: *Sovetskaia muzyka*, No. 1 (1948), pp. 3-8. The decree begins by stating that the Central Committee finds the opera “vicious and inartistic in both its music and its subject matter” and goes on from there in criticizing the “formalism” of Muradeli and other Soviet composers. [Translation from 17 moments: <http://soviethistory.msu.edu/1947-2/zhdanov/zhdanov-texts/against-formalistic-tendencies-in-soviet-music/>] See also Mileeva, “Utopia in Retreat: The Closure of the State Museum of New Western Art in 1948,” 203; Tomoff, *Creative Union: The Professional Organization of Soviet Composers, 1939-1953*.

⁷⁴ Histories of Soviet political interventions in the sphere of “culture” do not always necessarily include architecture, focusing instead on the other creative Unions: Writers, Theatre, Art and Musicians. For instance, architecture is mentioned only incidentally in Clark et al., *Soviet Culture and Power: A History in Documents, 1917-1953*. (and greening not at all).

⁷⁵ Dates and brief description given in Kosenkova and Volchok, NIITIAG Chronicle, np, citing RGALI, fond. 674, op.. 2, del. 54, 278. Additional discussion in Anderson, *Russia*, 198-201..

building (*gradostroitel'stvo*) were used by Soviet architects to distance themselves from American practitioners, involvement in this subfield also entailed its own risks. A few weeks prior, a February 25 – March 1st meeting featured critical discussion of a premier text of Soviet citybuilding, the 1945 book *Citybuilding* [*Gradostroitel'stvo*], collectively authored by leading arch-planning scholars V. Shkvarikov, L. Il'in, A. Bunin, and N. Poliakov. The sumptuous book had been broadly acclaimed when originally released, but was thoroughly criticized in the spring of 1948 following an editorial in *Sovetskoe Iskusstvo* “On the false concepts of the book ‘Citybuilding’ (*O lozhnoi kontseptsii knigi ‘Gradostroitel’stvo’*). The book and its authors were faulted for allusions to Soviet citybuilding practices of the 1920s and 1930s, and for overemphasizing foreign precedents at the expense of precedents drawn from domestic or Russian urban planning history.⁷⁶

While Anderson’s assessment of worsening architectural-political relations at this time focuses on the small mass-produced house as the primary locus of initial collaboration and subsequent distancing, the 1945 book *Gradostroitel'stvo* also praised American precedents of city greening. Despite the risk such praise might have carried for the field of Soviet greening, practitioners of *ozelenenie* appear to have proved adroit in re-framing greening as intrinsically socialist, similar to architects’ redefinition of the mass-produced small home as a Soviet triumph.⁷⁷

The March 16-19th meeting concluded with the drafting of a letter to Stalin. Pragmatically, and self-assertively, the writers noted that “all our creative, social, scientific and public activities” would henceforth be guided by two guiding principles. First, “the struggle for economy of national resources [*ekonomiiu narodnykh sredstv*]” and second, “constant concern for beauty.” Synthesis of these goals would manifest in architects’ provision of

the conveniences [*udobstvakh*] of soviet housing, childcare and kindergartens, schools, clubs, theatres and other facilities, in the economical use of territory, the amenities and beauty [*blagoustroistva i krasoty*] in the streets and squares of our cities, settlements, and kolkhoz, in furthering new advanced industrial technologies, shortening construction deadlines, in the creation of advanced and party-minded [*partiinoi*] soviet architectural science, capable of illuminating the path of our practice...⁷⁸

⁷⁶ {Kosenkova NIITIAG Chronicle, np 36 citing RGALI f674, op2, d276 ll7-8. ; see also *Architecture books of the last 15 Years* (*Arkhitekturnaia kniga za XV let*), edited by A. Vladimirkii, izd-vo Akademii Arkhitektury SSSR, Moscow 1949. Print run 3500.

⁷⁷ Anderson, "USA/USSR: Architecture and War."

⁷⁸ The letter was sent from the meeting of the architectural *aktiv* at the Moscow Central House of Architects to Stalin on March 19th. For Alabian and others’ denunciations of Zholtovskii and his students, Kosenkova and Volchok, NIITIAG Chronicle cites RGALI fond. 674, op.. 2, del. 54, various listy.

In closing, the architectural community collectively pledged to re-orient architecture to the true path, the “path of socialist realism, of creative work [*tvorchestvo*] for the people and in the name of the people, the path of our teacher Stalin’s great wisdom!”⁷⁹

For the most part, the central architecture-planning community responded to the increased demands for “ideological content” and antipathy toward “groveling” by denouncing specific texts as contaminated by undesirable influences and criticizing the design plans of specific cities or regions (including their greening) as insufficiently “plan-following” or systematic (*planomerno*).⁸⁰ Architect-planners, perhaps to a greater extent than other creative professions, were exhorted to produce lasting applied results “on a scientific basis” and consistent with the “national inheritance” rather than as expressions of individual artistic expression or innovation.⁸¹ Architecture, in addition to being a creative artform, was promoted as an applied science oriented to improving everyday public welfare.

Late Stalinist architecture-planning discourse prioritized intervention at the urban scale, or concentrated in the central districts, rather than the design of individual “one-off” buildings. Consistent with this was the prominent celebration of one of Moscow’s seemingly most architectural projects: the “high buildings” [*vysokie zdanie*], which were several rather than separate, and as important for their relationship to each other and to the city as for their individual designs.⁸² The focus of the urban restoration and reconstruction campaign began to shift, around 1948, from the restoration and use of surviving architectural objects as the seeds of a general postwar flowering to a more quantitative and “systematic” [*kompleksnoe*] organization of resources and efforts to create a most concentrated and finished “effect,” in which the city as a whole (or at least its core) was treated as an ensemble. Such an approach to the city as a planned-for ensemble was again promoted as directly opposed and superior to Western approaches. Greening, accordingly, also shifted from emphasizing the design of individual sites, even large ones like the Central Parks of Culture and Rest. Instead, a “system” of greenspaces of various use-types, connected by a network of green streets, was promoted.

⁷⁹ quoted in Kosenkova np Chronicle of NIITIAG events, 1948. She cites RGAE, fond 293, op.1, del.279, listy 2-4.

⁸⁰ A.S. Korobov, A.S. “Ozelenenie gorodov RSFSR” *Arkhitektura i Stroitel'stvo*, no.8 (June, 1947): 9

⁸¹ V. Shkvarikov, “Borba za kachestvo stroitel'stva i zadachi organov po delam arkhitektury” *Arkhitektura i Stroitel'stvo* (Organ komiteta po delam arkhitektury pri sovete ministrov SSSR) No.10 (October, 1948): 1–4. On the transition from “utopian socialism” to “scientific communism” see Dobrenko, “Socialist Realism and Stasis.”

⁸² Hoisington, “Soviet Schizophrenia and the American Skyscraper.” see also Anderson, *Russia*.

This elevation of “holistic” approaches to urban planning over “chaotic” Western variants had a long history. As expressed by architect-planner Vladimir Semenov (1874–1960), the design of “capitalistic cities” was “merely the sum of separate [otdel’nykh] architectural and technical projects, not connected between themselves into one organic whole and frequently contradicting each other.”⁸³ Semenov’s elite credentials included having served as chief architect of Moscow in the early 1930s where he oversaw the development and implementation of the 1935 General Plan for the Reconstruction of Moscow, and as head of the Academy of Architecture “cabinet” of spatial planning and garden-park architecture from 1934.

Cities under capitalism, according to Semenov, were indelibly shaped in their growth by

the chaotic play of private interests, in conditions of private ownership of land, which defines their particularity: un-bounded, un-systematic growth, crowding and the lack in the city of open spaces and greenery due to land speculation, the mixing of all kinds of construction, the concentration of buildings, irresponsive of contemporary conditions of circulation, the differentiation of districts into rich and poor, and the neglect [or disregard, *prenebrezhenie*] of the appearance of the city as a whole.⁸⁴

Many of these accusations leveled by Semenov in 1935 at cities under capitalism became, in their reverse, axiomatic principles of post-war Soviet city design and restoration.

Green Defenders, Unite!

The prominence of urban greening and other issues of public sphere environmental quality within the specialist spheres of architecture-planning and communal health during the *zhdanovshchina* reflected and drew on concerns regarding these topics in Soviet society generally. The social relevance of “green construction” to building socialism had advantages, as seen above. It also carried risks, different than those faced by the architects of buildings or builders of bridges and streets. The portrayal of trees and forests as “green friends” made

⁸³ quoted in Belousov and Smirnova, *V.N. Semenov*. From a 1935 article, “Issues of spatial planning (*Voprosy planirovki*),” published in a collection *Akademiia arkhitektury*. Semenov graduated in 1898 from the St. Petersburg Institute of Civil Engineering. He worked in England from 1908–1912, where he was involved with the Garden City movement if not directly employed therein. Following his return to Russia/ the USSR, Semenov continued to advocate what amounted to Garden City principles, from a series of positions of authority including chief of the City Planning Institute within the Academy of Architecture. In the immediate post-war period, Semenov led the Academy’s studio [*masterskaia*] in charge of reconstruction planning for Rostov-na-Donu, and participated in the re-planning of others e.g. Minsk. During this period he was the editor of many substantive urban planning works produced at the Academy, including the 1944 *Architecture-Planning Regulations for City-type Settlements*.

⁸⁴ Belousov and Smirnova, who describe Semenov’s theses in this article as “sufficiently laconic, and the presented propositions sufficiently fundamental in establishing the theory of Soviet citybuilding” that they are worth “quoting in full.” Which they do. Parkins also draws heavily on a text of Semenov’s titled “Principles of Soviet Citybuilding” [*Printsipy Sovetskogo gradostroitel’stvo*, pp3-6], published in 1945 by the Soviet foreign outreach publisher VOKS, in his description of the “Basic Principles of City Planning in Soviet Russia (1944).” [pp51–55]. *Ibid.*; Parkins, *City Planning in Soviet Russia*.

qualities of popular well-being, patriotism and national self-identity available to those who planned and planted street trees. The bundling of patriotism to plants also rendered greening specialists potentially vulnerable to critiques based in popular reception.

The most famous postwar critique of Soviet urban greening, mentioned at the outset of this chapter, was writer Leonid Leonov's December 1947 polemic, "In Defense of a Friend" [*V zashchita druga*]. It was published in *Izvestiia*, a national scale publication of record, and therefore read more widely than his earlier 1945 piece in *Vecherniaia Moskva*. The December 1948 article provoked an outpouring of positive responses from readers.⁸⁵ While Leonov's 1953/54 novel, *Russkii Les* was equally influential (and widely debated) at the time, it was Leonov's defense of greenery that has kept his name prominent in histories of Soviet environmentalism and nature writing.⁸⁶

This specific article is frequently credited with provoking official recognition, and official approval, for the Soviet nature protection movement, in the form of the All-Union Society for the Promotion of the Construction and Protection of Green Plantings [VOSSiOZN] known also as the "Green Plantings Society" or "Society of Green Friends." This community organization had formed in 1947, with mass enrollment especially by students. It enjoyed diverse institutional support from the Moscow city government, RSFSR leadership, Main Botanical Garden Garden, Timiriazev Agricultural Academy and others Its charter was approved in June 1948, with Leonov as Vice President.⁸⁷

Leonov's "defense" used references to Russian political and cultural traditions, such as the pre-Soviet town assembly or *veche*, to urge the patriotic mobilization of the population in the cause of tree protection and urban forest production. Against a background of political-architectural rhetoric that urged popular participation in the postwar restoration and reconstruction of (predominantly Russian) cities, Leonov framed care for urban trees as deeply

⁸⁵ It should be noted that the 'authenticity' and 'spontaneity' of letters to editors and other interactions between the Soviet press and the Soviet public can be difficult to assess. This issue is discussed by Varga-Harris, *Stories of House and Home: Soviet Apartment Life During the Khrushchev Years.*, which relies in large part on newspaper's archival material, as well as what they published. See also Rassweiler, "The Local Press as a Source: Dneprostroi Newspapers, 1927-33."

⁸⁶ The novel was first published in installments in the last months of 1953, then in book form in early 1954. "In Defense of a Friend" was republished in 1948 as a pamphlet and included in a longer 1948 volume profiling the activities and goals of the Green Plantings Society (This book shows up in the Russian State Library catalogue, but appears unavailable in Worldcat libraries.

⁸⁷ See Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev.* @80} also VOO history website, available as of 01/2019 at <http://www.priroda.ru/news/detail.php?ID=10902>

patriotic, culturally appropriate, aesthetically desirable and broadly beneficial.⁸⁸

Leonov's main villains were not architects. Instead, he attacked city officials and bureaucrats who, despite "sturdy paragraphs" describing the number and cost of saplings planted, would be hard pressed to find their "green friends" in reality. Leonov's heroes were those "Michurnists" and other horticultural amateurs who, regardless of official structure, were moved by passion to contribute to the cause of plant wealth and diversity. He urged the general populace to take up their part in the defense effort, out of love for nature and country.

"The adornment of the motherland [*ukrashenie rodiny*] is the affair of all our hands, comrades! As everyone knows, greater patriotism begins from lesser—with love for the locale [*mesto*] in which you live. From such local patriots in their time emerge excellent regional specialists [*kraevdy*]...

Granted, such mass enthusiasm required direction from above. In keeping with the continued mobilization of post-war Soviet society, Leonov makes this point using military imagery:

One has only to raise the cry a bit louder, and the people [*narod*] will put forth an army of volunteers of all professions and ages, enthusiasts of native nature [*rodnaiia priroda*], ready to labor for the sake of augmenting her beauty [*priumnozheniia ee krasny*]: for this too is included in our concept of transforming the world [*preobrazhen'ia mira*].⁸⁹

This new socialist army of volunteers, as imagined by Leonov, would not be involved in the patriotic defense of the motherland against foreign invaders. Instead, they would rise up in patriotic defense of the motherland's trees against official indifference or incompetence; the same trees were, by long-standing Russian cultural convention, symbolic surrogates for the Russian people.⁹⁰ In calling for expanded official approval, youth participation, and mass support for populist "Societies of Friends of Greening" [*Obshchestva druzei ozeleneniia*], Leonov brought the task full circle. Defense for "our green friend, the trees" against the indifference of officials was also a call to support the organization of greenery's human friends, the *narod*.

⁸⁸ Leonov's argument, grounded in a reference to a durable combination of national identity and emotional passion, has echoes in the rhetoric used today to encourage Russian citizens to appreciate and protect their national parks. May, *Environmental Nationalism and Russia's Conservation Movement: Ideals of Nature and the National Parks*. May notes that these appeals are in contrast to the rhetoric connected with American national parks, where the guiding values are civic responsibility and universal heritage.

⁸⁹ Leonov, Leonid "V zashchitu druga" *Izvestiia*, Dec.28, 1947 (re-published in *Sobranie Sochinenii Tome 10: Publitsistika*, pp185–195. Moscow: izdat. Khudozhestvennaia Literatura, 1972: 191

⁹⁰ One of the best known examples of this is Chekhov's incorporation of trees as doubles for the nation in his work. Much has been written on Chekhov's environmentalism, and his connection to late Soviet ecowriting. See Baehr, "The Machine in Chekhov's Garden: Progress and Pastoral in the Cherry Orchard."; Matley, "Chekhov and Geography."; McMillin, "Chekhov and the Soviet Village Prose Writers: Affinities of Fact and Fiction."; Quinault, "Chekhov and Conservation." On the Russian relationship to forests, see Isaev and Korovin, "Forests as a National Treasure of Russia." also works cited in footnotes 5, 6.

Architects' Response to Leonov

Whereas the “Great Friendship” of Muradeli’s opera was the friendship between Russians and other Soviet peoples or *druzhiba narodov*, Leonov had in mind the long-imagined friendship of the Soviet peoples (especially Russians) with trees. In short, Leonov argued that the lack of care or indifferent defense of urban trees by municipal authorities was unpatriotic and immoral, as well as unbecoming of scientific communism and citybuilding grounded by a “scientific-technological basis.” Like the February 1948 Central Committee decree against “formalism” in music, Leonov’s public intervention produced a rapid response among architect-planners.

On April 18, 1948, *Izvestiia* announced on page 3 that the House of Architects had hosted a discussion of Leonov’s article, “in which was posed the question of the role of the community [*obshchestvennosti*] in the protection of forest plantings and nature as a whole.”⁹¹ It was exactly one month after the House of Architects had rung with architectural leaders G.A. Simonov, K. S. Alabian and others’ criticisms of the “formalistic direction” of Zholtovskii and his students (March 16-19). Elsewhere in Moscow, last-minute preparations were underway for the First Congress of Soviet Musicians (April 19-25).⁹² Leonov’s “defense” of green plantings had already been discussed by the Writers’ Union, now it was time for those with a more direct professional interest in the “green construction” of the Motherland’s cities.⁹³

The Architects’ meeting, described as a “expanded gathering of the citybuilding section of the Union of Architects of the USSR,” featured speeches by “scholars, scientific workers, architects, artists, [and] members of the Society for the Promotion of the Construction and Protection of Green Plantings [VOSSiOZN].”⁹⁴ This gathering this represented a much broader cross-section of society than at the December 1941 All-Union Architects’ Union conference on the architecture of green plantings in cities”, for example, which had been “attended by

⁹¹ *Izvestiia* was the official newspaper of the USSR Council of Workers’ Deputies. Adjacent articles included “30 Years of Soviet Fire Protection” “Discussion of the new constitution of Czechoslovakia” and “Great traditions and contemporaneity: Toward the First All-Union Congress of Composers” by Iu. Shaporin.

⁹² Announced in *Izvestiia* on the same page. For more on the Soviet musicians relationship to the *zhdanovshchina*, see Tomoff, Kiril. *Creative Union: The Professional Organization of Soviet Composers, 1939-1953*. Ithaca, N.Y.: Cornell University Press, 2006.

⁹³ Mentioned in editors notes to *Russkii Les* 1974 edition

⁹⁴ Gloss on Leonov’s article and other quotes from Kosenkova, NIITIAG Chronicle, n.p., she cites *Izvestiia*, 1948, 18 April., p.3., and *Kul’turnaia zhizn’ v SSSR, 1941-1950*. Khronika, M., 1977, p.356. This particular description of Leonov’s focus comes from the latter as quoted by Kosenkova; it does not appear in the original *Izvestiia* piece. Also in Kosenkova: March 1948 discussion among architects in Leningrad of Muradeli opera decree with Alabian and Shkvarikov.

architects, tree specialists (*dendrologs*) and communal economy workers.”⁹⁵ All participants at the 1948 gathering, according to the notice, were “warmly supportive and approving of the proposal by writer Leonov.”

In his opening remarks to the April 1948 meeting, A.M. Zaslavskii, a corresponding member of the Academy of Architecture and “director of the citybuilding section,” was careful to position architects as friends not foes of greenery. His remarks asserted a certain measure of professional distance from Leonov’s critiques.

“For us, architects, green construction has become a task of citybuilding [*gradostroitel'naia zadacha*]. Architects already conduct major work on the greening of our country. It is proposed [*namecheno*] to organize in all cities a green construction section in the Union of Soviet Architects. Such a section is already established in Moscow.”

A similar “Green Plantings Section” had already been established in the course of 1946 at the Academy of Architecture, as part of the City-building Scientific-Research Institute (*Nauchno-Issledovatel'skii Institut Gradostroitel'stva*), directed by V.N. Semenov. In his review of the Institute’s work in 1946, [p32-33], architect-historian I. N. Magidin wrote that “the primary work of this Section in 1946 was the study of Russian park-building.”⁹⁶ A Moscow-based voluntary organization, DOSOM also formed in 1947, in addition to this specialist group. Leonov’s defense of greenery, and green friend organizations, was aimed at the audience above and beyond Moscow’s municipal or professional spheres.

In his remarks at the House of Architects, Leonov commented that “greening adorns [*ukrashaet*] the city and for this reason, understandably, [it] must be close to architecture. In the planning of cities, and the construction of buildings, an architect must always think of greening.”⁹⁷ Presumably Leonov also spoke of the health benefits of urban trees to workers and children, which he had lauded in the second to last paragraph of “In Defense of a Friend,” after reminding readers what a city tree was not:

It must be said publicly and, if possible, with bass [*vo vseuslyshaniye i po vozmozhnosti basom*], that a tree in the city—it is not cord-wood with leaves, nor a strength-tester for roaming thugs [*ne poleno s list'iami i ne silomer dlia razguliavshegosia stervetsa*].

Given the current overcrowding of the population and the smokiness of industrial centers, all the living green inventory of a city is a huge ozonator, a hygienic air-filter [*fil'tr-ulovitel' iz vozdukha*]

⁹⁵ Mentioned in “*Khronika-Arkhitektura zelnykh Nasazhdenii*” *Arkhitectura SSSR* no5 [p71-72] 1941

⁹⁶ According to the published proceedings of the VII Session of the Academy of Architecture, which occurred 25 Nov. 1946, and were published late in 1947. *Akademiiia Arkhitektury SSSR. Osnovnye Arkhitekturnye Problemy Piatiletnego Plana: Nauchno-Issledovatel'skikh Rabot. Materialy VII Sessii Akademii Arkhitektury SSSR* (opened 25 Nov. 1946). Moscow: Izdat. Akademii Arkh. SSSR, (1947): p32.

⁹⁷ “In defense of a Friend: Discussion of article by Leonid Leonov.” *Izvestiia* Sunday, 18 April 1948, p3.

for gases, soot and other impurities, that are harmful to public health; it follows, that [trees] are an additional source of creative energy and enthusiasm in overcoming the Five Year Plan. Moreover, it must be remembered that not all children leave the city during the summer.”⁹⁸

Leonov’s bundling of patriotism, health concerns, and the rhetoric of socialist productivity in his entreaty against the indifference of Soviet officialdom—which he posed as the most significant threat to tree health and longevity—was typical of the new rhetoric of urban greening and nature protection.

As evidenced in this admittedly brief record of Leonov’s direct interaction with the Moscow architecture-planning community, their reaction was his “cues to care” and defense of trees was, first, to acknowledge a shared cause. The architects noted that city greening was already established as an area of disciplinary concern, while welcoming the additional labor, enthusiasm, and political capital afforded by mass enrollment in the Great Green Friendship. Although architecture specialists in the area might have been made vulnerable to “anti-cosmopolitan” attacks due to their earlier lauding of American city greening practices, such as that found in the 1945 *Gradostroitel’stvo* textbook by Shkvarikov, Bunin and others, there is no sign of vulnerability or *kritika* in the newspaper’s coverage of this event.

The logic of alliance and mutual support between professional and populist friends of urban greenery was simple, even overdetermined. Urban greenspace was public space; improvements to public space and public behavior (e.g. caring for those greenspaces as for the nation) would effect better, more socialist publics. Both architecture-planning and environmental activism were saturated with a recognizably late Stalinist discourse of nationalist-patriotism and populist “concern for persons.” These ambient rhetorics did not distinguish these fields from late Stalinist culture at large nor create a unique connection between them; overtly Russian patriotism and ostentatious pragmatism were all-pervasive official values of the period.⁹⁹ Similarly, the urban and urban-scale focus that characterized both professional city design and populist city greening is consistent with the general emphasis in the postwar period on cities as the vehicle and stage for reaching the shining future. Architects of the period, finally, reached defensively both upward to the authorities and downward to the people, consistent with their attempt in other ares to occupy to a mutually beneficial middle ground between the demands of

⁹⁸ Leonov, Leonid “V zashchitu druga” *Izvestiia*, Dec.28, 1947 (re-published in *Sobranie Sochinenii*, 1972): 194.

⁹⁹ This theme is explored for the post-Stalinist period by Brudny, *Reinventing Russia*, Cambridge, Mass. .:

political ideology, professional standards/aesthetics and popular well-being.¹⁰⁰

From this perspective, the apparently seamless incorporation of Leonov's intercession on behalf of trees into architecture-planning circles appears plausibly sincere, and somewhat unsurprising. Indeed, the evidence suggests that "urban greenery" functioned conceptually as a Stalinist social condenser par excellence. This reflected the role of cities such as Moscow as "the repository of [a] shared image of the good community;" the expectations that community life should occur in public, frequently in parks; and the habitual bundling of nature and nation under the concept of Motherland [*rodina*].¹⁰¹ As Leonov had observed, small patriotisms linked to larger ones. Moscow greenspace, especially when planted with the kinds of emblematic tree species profiled in the 1945 *Vecherniaia Moskva* articles, represented at once national identity and anti-capitalist urbanism. Advocates for greenery hoped that the All-Union celebration of and care for urban green plantings would index, even induce, the behaviors and attitudes expected of the Soviet "good community."

National in Form, Socialist in Content

By October 1948, evaluation according to professional or disciplinary criteria of a city's form and experiential-spatial qualities was replaced by concern with the "ideo-political content" of architectural and city design work. Whereas Semenov had made an aesthetic and functional

¹⁰⁰ This point is akin to arguments made by Catherine Cooke on "radiance" as an architectural objective, Heather DeHaan on center-local dynamics in 1930s planning, and by Steven Harris with regard to the 1950s design of the small-measured apartment. It diverges from positions taken by other scholars such as Hudson, who emphasizes the total dominance of political concerns and "engineers" over architects and architectural interests. It may also be that this was a difference between the 1930s and late Stalinism. DeHaan argues, with respect to beautification campaigns in 1930s Nizhnyi Novgorod, that local planners were desirous of the improvements potentially enacted through popular involvement, but nervous about losing control of the people's potentially chaotic and disruptive energy. Thanks to victory in WWII, according to Sheila Fitzpatrick, Amir Weiner, Elena Zubkova and others, the regime felt more secure (and was therefore more willing to publically enact its repressive controls). An alternate interpretation, which gives more weight to the failures in implementation, follows Leonov's line of attack on the authorities as indifferent but includes all "Soviet planners" including regional and city planners, in that position of indifference. This argument can be found in Douglas Weiner and Christine Varga-Harris, who characterize urban greening as a "patriotic and trivial veneer" and "green-washing" respectively. In their tellings, even if the masses were truly and deeply concerned about the state of their courtyards, the authorities were not. The extension of these assertions to the case of Soviet citybuilding depends on whether architect-planners are cast as "authorities" or as vulnerable professionals, their well-intentioned environmental health measures fallen victim to bureaucratic indifference.

¹⁰¹ Colton, *Moscow: Governing the Socialist Metropolis*, 2; Dobrenko and Naiman, *The Landscape of Stalinism: The Art and Ideology of Soviet Space*. Colton, in introducing the role played by Moscow as hub and "quintessence" of Russian/Soviet-ness, notes that Moscow was "[t]he venue in which Soviet leaders from Lenin to Gorbachev resided, worked, and played . . . the repository of their shared image of the good community." On occasions such as Moscow's 800th Anniversary in 1947, architects and other urban authorities were expected to minimize the gap between that shared ideal image and the lived experience of the city. Using urbanism to represent national power and character did not automatically mean that urbanists were totally subsumed within the official national projects of ideology and authority.

argument in 1946-47 for urban design-planning decisions, an October 1948 article by V. Shkvarikov, head of the Architectural Affairs Administration, adopted the following, more blatantly “Stalinist” rhetoric of ideological content and state service:

“In the country of Soviets, an architect is a state actor, representing the interests of the people. In their creative work Soviet architects are guided by state interests, ideas and principles of socialistic society. The most important criteria of work for Soviet builders is ideological service to the people [*ideinoe sluzhenie narodu*], inspired by comrade Stalin’s concern for the satisfaction of the cultural, daily, and aesthetic needs of the Soviet people, and the Party’s intolerance of and sustained struggle against bourgeois and anti-popular [*antinarodnykh*] influences in architecture.¹⁰²

Shkvarikov had been among those denounced for excessive “groveling before the West” earlier that year, in particular at a Feb. 25-March 1 meeting, with evidence including his contributions to the 1945 book *Gradostroitel’stvo*. This article, published at the annual October height of State and Party pageantry, was no doubt intended in part as a statement of contrition and redemption.

In his October 1948 article, Shkvarikov proceeds to discuss a number of specifically spatial and technical changes to be made in contemporary architecture-planning practice. These included greater attention to the “concentrated” redevelopment of central areas, and the prioritization in beautification and greening work of high-profile sites such as river embankments and other urban “edges.” (Embankment reconstruction and modernization, while prominently associated with Moscow’s 1935 reconstruction, was also an area of urban design applicable to many Soviet cities, from Kiev to Krasnoyarsk.¹⁰³) With regard to urban greenspace production, Shkvarikov states that

the successful completion of work on beautification and greening of cities drastically [*korennyim obrazom*] improves their sanitary-hygienic and everyday conditions. [...] The external beautification of many cities is conducted on a high technical and artistic level. The assortment of green plantings is improved; fencing, borders, and street lights, curb stones are in many cities built sturdily [*kapital’nyi*] and from long-lasting materials.¹⁰⁴

Many of the measures Shkvarikov describes might be termed “cosmetic” improvements to the external appearance of cities, contributing to the reputation of *ozelenenie i blagoustroistvo gorodov* (the greening and beautification of cities) as primarily an aesthetic, even “trivial” intervention. A number of factors push us to go past this interpretation, however. First, greening is included as a taken-for-granted element among many improvements to the hard, or

¹⁰² *Arkhitektura i Stroitelstvo* no10 (October 1948), p1] title: “Struggle for quality of construction and the task of organs of architectural affairs” (“Borba za kachestvo stroitel’stva i zadachi organov po delam arkhitektury”)

¹⁰³ Gol’denberg, P. I. and L. S. Aksel’rod. *Naberezhnye Moskvy: Arkhitektura i Konstruktsiia*. Akademiia Arkhitektury SSSR, Kabinet Gradostroitel’stva. Moscow: Gos. Arkhitekturnoe Izdatel’stvo Akademii Arkhitektury SSSR, 1940; and M.S. Elenskii, *Arkhitektura Rechnykh Passazhirskikh Zdanii*. Kiev: Izd-vo Akademii arkhitektury Ukrainskoi SSR, 1954.

¹⁰⁴ Shkvarikov, “Borba za kachestvo” 1948: 2.

technogenic, infrastructure of urban environments. These were sanitary and ideological interventions, aimed at demonstrating Stalinist “care for persons” in a vivid and tangible manner. Second, to the extent that greater species diversity in urban plantings and better street paving *were* visual, aesthetic improvements, it is worth remembering the high, even existential, value placed on “beauty” and “culture” in the Stalinist period.¹⁰⁵

At the same time, there was a shift in how “beauty” was framed. Architects, planners, and other municipal authorities in 1948 and after often choose to emphasize, as Shkvarikov did, the popular and utilitarian benefits to be produced through their work. Under socialism, the task of architecture and its organs was to serve state- and popular interests, to train new cadres of work supervisors, “to raise their creative skills [*tvorcheskije kvalifikatsii*] and ideo-political level.”¹⁰⁶ In their reaction to the *zhdanovshchina* and subsequent anti-cosmopolitan campaigns to direct and control artistic expression from above, it seems that architect-planners attempted to re-position architecture relative to its traditional field-defining poles of art, science, and public welfare. To foreground “utilitarian” rather than “utopian” aspirations was to access the seemingly safe zone of technical-scientific expertise and applied quality control, demonstrating the concern for economy and service that the moment demanded. This realm was perhaps more readily available to architects than was possible for (other) artistic professions such as music or literature, for whom the “daily needs of the people” were issues of culture not community hygiene and sanitation.

The aspirations and ambient feel of the built environment “as a whole” were more important than the application of specific design choices to a given architectural object or urban space, as can be seen in Shkvarikov’s closing exhortations.

... The triumphant progress of construction of a communist society requires architects to provide millions of Soviet persons with housing that is convenient, beautiful, and fully-furnished [with all the amenities, *blagoustroennymi domami*], and to build cities that are healthy, convenient and beautiful, which will be a powerful factor in the flourishing of our Soviet Motherland.

The architecture of our cities, as with all our Soviet culture, must be socialistic in content i.e. express the ideals [*ideinost'*] and purposefulness of the socialistic worldview, and national, artistically-heterogenous in form.¹⁰⁷

Shkvarikov succeeded in rhetorically placing city-building at the forefront of tasks both political

¹⁰⁵ Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*; Cooke, "Beauty as a Route to 'the Radiant Future': Responses of Soviet Architecture."

¹⁰⁶ Shkvarikov “Borba za kachestvo” 1948: 4

¹⁰⁷ *Ibid.*

and patriotic, equally benefiting the state, Party and Motherland.

What did the rhetoric of socialist realist urbanism produce in practice? Much of the historiography has focused on how Soviet architect-planners fulfilled (or failed to fulfill) late Stalinism's more "architectural" objectives e.g. with respect to housing, ideology, and nationalist form. Architects were indeed intent on demonstrating their commitment to these objectives, even if doing so via standardization of building plans ceded disciplinary territory to builders and engineers. Equally challenging, and less studied, was architect-planners response with regard to Shkvarikov's second task: to build healthy, convenient and beautiful cities, on limited means and en masse. Substandard housing conditions and communal apartments could be hidden behind an impressive building façade or atrium; the state of a city was always and necessarily in the public sphere.

The Politics and Poetics of Urban Plantings

By the end of the 1940s, expertise in urban green plantings occupied a diverse range of institutional and disciplinary homes from the Architectural to the Medical to the Economic.¹⁰⁸ It was perhaps unavoidable, given the consistent attribution to urban green plantings of aesthetic, hygienic *and* infrastructural benefits i.e. "healthy, convenient, and beautiful cities."¹⁰⁹ The same bundled aspirations adhered to other public amenities united under the umbrella designation of "urban beautification [*blagoustroistvo*]," such as street paving, water systems and district-wide heating.¹¹⁰ Lofty aspirations also obtained to the provision and distribution of the more distinctively socialist network of public service facilities, which included libraries, medical

¹⁰⁸ e.g. E.A. Bragin, L.B. Lunts, V.I. Fedynskii. *Gigienicheskie osnovy ozeleneniia gorodov*, Moscow: Izd-vo Akademii med. nauk, 1947, 99 pages.; L. Lunts, *Blagoustroistvo i ozelenenie territorii zavodov*, M.: Moskovskii Rabochii, 183 pages. The range of institutional "sponsors" for urban greening and green construction work can also be seen in works cited in the 1954 BSE entry on greening, including two other works by Lunts: *Zelenoe Stroitel'stvo [Green Construction]*. Moscow: Goslesbumizdat, 1952. and *Proektirovanie Gorodskikh Zelenykh Nasazhdenii [Design of Urban Green Plantings]*. Leningrad: Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1953. The publishers here were, respectively, The State Press of Forest, Paper and Wood-Processing Industries and the Ministry of Communal Economy.

¹⁰⁹ from Marzeev, *Communal Hygiene, 1951* "The role, significance and benefit of green plantings in settlements is exceptionally great and heterogenous [*raznoobrazny*]." On the significance of Marzeev in the field of Soviet communal hygiene, see N.I. Sivolob, "Rol A.N. Marzeeva v razvitiu otechestvennoi gigieny (k 100-letiiu so dnia rozhdeniia)" *Sovetskoe zdravookhranenie*, no8 (1983): 54-56.

¹¹⁰ Humphrey, "Ideology in Infrastructure: Architecture and Soviet Imagination."; Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics*; Humphrey, "Rethinking Infrastructure: Siberian Cities and the Great Freeze of January 2001."}. The dark side of regional water infrastructures has been studied by German scholars Karl Gestwa and Monica Ruthers; the chronic failure of lived reality to live up to those ambitions is documented by Donald Filtzer. Gestwa, "Technology as Culture of the Future - the Cult Surrounding 'Stalin's Great Buildings of Communism'." See also Bocharnikova and Harris, "Second World Urbanity: Infrastructures of Utopia and Really Existing Socialism."

clinics, hair salons and baths.¹¹¹

The ubiquity of greenery as systemic ambition and systematic element of Soviet urbanism, combined with the ongoing interactive contestation between human ambitions and material capacities positions greening as a rhizomatic structure, rather than a veneer.¹¹² Like other forms of modern infrastructure, these urban “improvement” systems were expected to inspire and produce what Brian Larkin refers to as a definitional aspirations of infrastructure: that they are “material forms” intended “to create a sensing of modernity”... “to produce the ambient conditions of everyday life.”¹¹³ (In the case of the Soviet Union, it should be noted, such infrastructural interventions aspired to transform subjectivity as well as produce conditions.)

Larkin defines “infrastructures” as, most basically,

“the built networks that facilitate the flow of goods, people, or ideas and allow for their exchange over space. As physical forms they shape the nature of a network, the speed and direction of its movement, its temporalities, and its vulnerability to breakdown. They comprise the architecture for circulation, literally providing the undergirding of modern societies, and they generate the ambient environment of everyday life.”¹¹⁴

Moreover, Larkin presumes that the modern “materials of infrastructure” are exclusively technogenic—“iron, mud, concrete, fiber optic cables, plastic.”¹¹⁵

Yet unlike the technogenic communication and transportation networks named as infrastructure by Larkin, *ozelenenie* was a system or network of spaces dedicated neither to the flow of commodities, nor that of information. Soviet urban greenspace was a system of stationary amenities, removed as much as possible from monetary exchange or man-made materials, intended for production from wild-gathered materials by affect-motivated enthusiasts. It was intended to afford flows of health-giving air, provide visual and experiential access “to nature,” and incidentally, to coordinate the movement of people through the city. The more crucial difference between *ozelenenie* and other infrastructures termed forms of *blagoustroistvo* was that urban greening aspired to produce the ambient (pre)conditions of socialist modernity using living plants as its defining material. As such, this form of architectural practice was

¹¹¹ on baths see Vujosevic, “The Soviet Banya and the Mass Production of Hygiene.”

¹¹² “Veneer” is of course one of the terms Douglas Weiner uses to dismiss the potential significance of urban greening within the history of Soviet nature protection. More theoretical work would be required to position the Soviet system of greenspaces and greenspace practices relative to either Latour’s actor-network theory Bruno Latour, “On Actor-Network Theory: A Few Clarifications,” *Soziale Welt* 47 (1996). or the “rhizomatic” of Deleuze, Gilles & Felix Guattari. “1440: The Smooth and the Striated,” *A Thousand Plateaus* [Minneapolis: University of Minnesota Press, 1987: 474-500.

¹¹³ Larkin, “The Politics and Poetics of Infrastructure.”

¹¹⁴ *Ibid.*, 328.

¹¹⁵ *Ibid.*, 338].

uniquely influenced by late Stalinist developments in fields seemingly far removed from urbanist concerns: agriculture, botanical and landscape science, and landscape painting.

The Landscapes of Late Stalinism, Linked

At the height of the Zhdanovshchina, as seen above, architect-planners touted the benefits associated with urban green plantings as a means of demonstrating their concern for public welfare, seeking to leverage their association with urban trees to enhance their political and professional standing. Pronouncements by leading figures make clear that “greening and beautification” measures (increasingly linked as a set phrase) were imagined to be essential components of a healthy, convenient and beautiful built environment, deployed across land-use types as one more system of infrastructure.¹¹⁶ Moreover, particularly after the establishment in 1948 of the RSFSR Inspection Commission on City Planning within the Administration of Architectural Affairs, the central gaze turned outward, to assess urban conditions in cities across Soviet Russia.¹¹⁷ Increased concern at the center for national progress in city greening and beautification was reflected in a wave of publications taking either a national or regional scale of focus while tensions between the preservation and transformation of national natural heritage played out in discussions of species selection and planting design.

Leonov and other activists of the Green Plantings Society, for their part, encouraged popular “friendship” with urban trees as a means to increase patriotic feeling and proper morality, enabled by trees’ status as proxy for the Motherland. The late 1940s also saw trees gain

¹¹⁶ Besides the articles by Lunts, Semenov, Shkvarikov and others discussed above, evidence for multi-disciplinary attention to and support for greening comes from the following published works (1945-49): on street greening, see Palentreer, S. N. *Ozelenenie Zhilykh Ulits I Magistralei*. [in Russian] V Pomoshchi Massovomu Stroitel'stvu; Moskva: Izd-vo Akademii arkhitektury SSSR, 1945; on factory greening, see Lunts, L.B., *Blagoustroistvo I Ozelenenie Territorii Zavodov*: [Moskva] Moskovskii rabochii, 1948 with foreword by [name] Sysin (1948); Goldenberg, P., and V. Dolganov, eds. *Ozelenenie Gorodov i Poselkov: Derevia i Kustarniki (al'bom)*. Moskva: Izd Akademii Arkhitektury SSSR, 1946; Lunts, Leonid Borisovich. "Ocherednye Voprosy Ozeleneniia Gorodov." [In Russian]. *Gigiiena i sanitariia*, no. 3 (1946): 7–17.; “Ozelenenie gorodov” *Arkhitektura i Stroitel'stvo*, no.10 (May 1946): 1–2; “Ozelenenie gorodov: Itogi dvukh konkursov” *Arkhitektura i Stroitel'stvo*, no.2 (1946); L., L. [sic] “Bibliografiia: Knigi o zelenom stroitel'stve” *Arkhitektura i Stroitel'stvo*, no.10 (May 1946): 25; Borisov, A. “Novye raboty po ozeleneniiu Moskvy” *Arkhitektura i Stroitel'stvo*, no.10 (May 1946): 7–9; Prokhorova, Mariia Illarionovna. *Gorodskoi Skver*. Moskva: Gos arkhitekturnoe izd-vo, 1946.

¹¹⁷ Korobov, A.S. “Ozelenenie gorodov RSFSR” *Arkhitektura i Stroitel'stvo*, no.8 (June, 1947): 9. At that point, provincial greening was done through the development of “model” approaches in a smaller list of cities, which in Siberia included Novosibirsk but not Omsk or Krasnoyarsk. On the 1948 Inspection commission on city planning in RSFSR, Admin-n of Arch'l Affairs see Parkins, *City Planning in Soviet Russia*, 80-83. Multiple new directives in Soviet architecture and urbanism were issued in 1948. These also included **DECREES 1948** all new housing construction must be built according to standardized designs per Order #193 of the Committee on Arch, Affairs. *Ibid.*, 60.. But also: 1948 decree permits the allocation of plots for private construction (Andrusz 1984: 99, cited by French, 1995: 56);

new prominence in the fields of natural science, forestry, agriculture, and the visual arts. Trees, and the context of late Stalinism, were what all these disparate fields had in common. Because of the shared element of trees, developments in one field affected those in another. Moreover, the cumulative consequences of these linkages redounded to affect trees, their “friends,” and the symbolic antecedent of both: the Motherland.

The years 1947-1948, in particular, stands out as a turning point in the politicization of trees within Soviet society, what Stephen Brain describes as the “zenith” year for Stalinist environmentalism.¹¹⁸ In June 1948, as previously mentioned, the charter of the All-Russia Green Plantings Society was established, giving the official green light to popular “defense” of trees. Official supporters of the community organization included the Moscow city government, the Main Botanical Garden, the Timiriazev Agricultural Academy, and other prominent institutions. Organization leadership included a natural scientist as President (Nikolai Aleksandrovich Maksimov, director of the Academy's Institute of Plant Physiology) and Leonov as vice president, both well-connected politically. (In addition to his work as a writer and journalist, it surely helped that Leonov was also a deputy to the USSR Supreme Soviet at this time.)¹¹⁹

The year 1948 is also known for its significance for plants other than trees. In August 1948, at the Conference of the Agricultural Academy of Agriculture, the populist-agronomist T. D. Lysenko presented his infamous report “on the Situation in Biological Science.” Lysenko’s report, which he noted up front had been “examined and approved” by the Central Committee, proclaimed the institutional and ideological triumph of “Michurinist biology” with its insistence on plant acclimatization as the guiding principle of Soviet agriculture and botany.¹²⁰ In October,

¹¹⁸ Brain, "Stalin's Environmentalism."; "The Great Stalin Plan for the Transformation of Nature." Brain identifies two “zenith” points: in 1947, “Stalinist environmentalism” peaked with the creation of Minleskhoz, the Ministry of Forest Management and in 1948, with the advent of the Great Stalin Plan for the Transformation of Nature, which Brain describes as “the world’s first state-directed effort to reverse human-induced climate change.”

¹¹⁹ Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 79-80. See also footnote 15. The “effective role” of Leonov’s December 1947 article in *Izvestiia* included provoking a meeting between writers and forestry experts (*lesovody*) in November 1948, at the Central House of Writers on Moscow. Another sign of Leonov’s influence on Soviet forest preservation was the publication under the same title (“In defense of a friend”) in 1948 of a *sbornik*, or collection of materials, by the All-Russian Society for Promoting the Construction and Preservation of Green Plantings (VROSSiOZN). Cited in the “Primecheniia” (Comments) by L. Polosinoi pp663–677 to the edited reissue of *Russkii Les*, Moscow: Khudozhesvennaia literatura, 1974.

¹²⁰ Following Michurin, Lysenko “postulated that hereditary changes to plants could be induced by environmental influences” cf <http://www.cyberussr.com/rus/lysenko.html>. For an overview of the Lysenko affair and its legacies, see Pollock, "From Partiinost' to Nauchnost' and Not Quite Back Again: Revisiting the Lessons of the Lysenko Affair." On the topic of “Stalinist science” more generally, see Bailes, "Soviet Science in the Stalin Period: The Case of V. I. Vernadskii and His Scientific School, 1928-1945."; Graham, *Science in Russia and the Soviet Union: A Short History*; Kremenosov, *Stalinist Science*; Coopersmith, "The Dog That Did Not Bark During the Night: The "Normalcy" of Russian, Soviet, and Post-Soviet Science and Technology

the “Great Stalin Plan for the Transformation of Nature” as it is commonly known was announced, establishing protection for certain categories of forest and promoting the planting of extensive “shelter belts” of trees in steppe areas.¹²¹

Each of these turning points affected the political and cultural symbolism of trees and, by extension, of nature in the Soviet Union. These developments served to enhance the ideological and scientific capital of trees and plants as living Stalinist subjects. Each effectively added a layer of significance to the accreted Russian nationalist symbolism of the forest and specific tree species (especially birches, oaks, and pines). Additionally, each of these events underscored a perceived association between the health of the nation’s trees and national well-being, whether that well-being was associated with the quality of everyday urban environments (the Green Plantings Societies), with the supposed superiority of Soviet science over Western genetics (the Lysenko affair), or with the agricultural productivity of Soviet fields and forest-lands (the Great Stalin Plan).

Nature as Nation-Space

The post-1948 intersection between Stalinist plant science, greenspace design, and national identity is perhaps best seen in the example of the Main Botanical Garden of the USSR Academy of Sciences, recognized today as one of the major successes of postwar “landscape architecture,” as it was termed in retrospect.¹²² The construction of the Main Botanical Garden in the Ostankino district of Moscow was announced in 1945, in connection to the 220th anniversary of the Academy, celebrating the intellectual heritage of Tsarist Russia as seamless with Soviet achievements.¹²³ Its original 1940 plan, as described in a 1941 article on the “architecture of green plantings,” was intended to “maximally represent the theory of Soviet creative Darwinism as worked out by Timiriazev and Michurin.” The plan for the garden featured seven thematic areas including #2, “adaptation to adverse conditions,” #4, “the natural wealth of USSR

Studies.”; Pollock, *Stalin and the Soviet Science Wars*; Weiner, “The Roots of ‘Michurinism’: Transformist Biology and Acclimatization as Currents in the Russian Life Sciences.”

¹²¹ Brain, “The Great Stalin Plan for the Transformation of Nature.”; *Song of the Forest: Russian Forestry and Stalinist Environmentalism, 1905-1953*. Also announced in October 1948 was a decree aimed at preserving anthropogenic forms of resources: “On measures to Improve the Protection of Cultural Landmarks” See footnote 53 for relevant works.

¹²² Ivanov, V. “K istorii landshaftnoi arkhitektury Moskvy XX veka: 1930–1955 gody. Triumf moskovskogo sadovo-parkovogo stroitel’sstva” *Arkhitektura, Stroitel’stvo, Dizain* no2 (2001): 10-15.

¹²³ Ivanov, V. “K istorii landshaftnoi arkhitektury Moskvy XX veka: 1930–1955 gody. Triumf moskovskogo sadovo-parkovogo stroitel’sstva” *Arkhitektura, Stroitel’stvo, Dizain* no2 (2001): 13. Ivanov describes the Main Botanical Garden as “the most significant object of landscape construction of the second half of the the 1940s [in Moscow].”

especially forestry, and #6, Michurinist fruit-berry cultivation.¹²⁴ Between 1948 and 1950 a new general plan for the Botanical Garden was developed by architect I.M. Petrov, under the direction of Academicians N.V. Tsitsin and A.V. Shchusev.¹²⁵ The paired involvement of these two reflected the durability of the Great Green Friendship, both having contributed articles to the spring 1945 page on Moscow's "Green Lacework"—"Forgotten Breeds" and "Adornment of the Capital" respectively.

Nikolai Tsitsin (1898-1980) was by occupation a botanist, agronomist and geneticist. In 1947 he had been elected President of the All-Union Organization for the Protection of Nature (VOOP), where he was received as somewhat of an opportunist and interloper-bureaucrat amongst the pure scientists. Tsitsin's career included a stint in Siberia, in Omsk, where from 1936 to 1938 he was the Director of the Siberian Scientific Research Institute of Agriculture. In 1938-1949 and 1954-1957, Tsitsin was Director of the All-Union Agricultural Exhibit (VSKhV) in Moscow.¹²⁶ In 1945, he had advised readers that, first, the American Elm was overused as a species. He recommended, instead, to plant three familiar Russian shrubs: the *shipovnik*, or dogrose; the *oblepikha*, or sea buckthorn; and the *riabina*, or rowan. Besides their "decorative value," all had other qualities that would have been desirable in hungry, smelly, post-war Moscow.¹²⁷ As Tsitsin noted, all three "were among the best" providers of vitamins. Additionally, the berries of the sea buckthorn had "aromatic substances." "Mass educational work [*vospitatel'naia rabota*] among youth will promote a more cultured and caring relation to this noble affair," he concluded.¹²⁸

Alexei Shchusev (1873–1949), the other prominent patron of the Main Botanical Garden, was an architect and city-planner. One recent biographer identifies him as "[p]robably the most successful and influential Russian architect of the 20th century ... capable of practising in any

¹²⁴ 1941 "Khronika-Arkhitektura zelnykh Nasazhdenii" in *Arkhitectura SSSR* no5 [p71-72]

¹²⁵ <http://www.gbsad.ru/history.php> [Accessed July 8, 2017]. Many other leading specialists in "greening" and garden-park art worked on Garden's various plans (see Ivanov, "K Istorii," 2001). According to the gbsad.ru history page, the plan of 1948 included exhibits representing all the geographical landscapes of the USSR as well as a "Garden of Un-Interrupted Blooming."

¹²⁶ On Tsitsin's ambiguous role at VOOP, see Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 73-74. For biographical information, see footnote 33. Tsitsin, the plant scientist, should not be confused with Sysin, the communal hygienist, discussed in Chapter Three.

¹²⁷ On post-war Moscow sanitary and living conditions, see Filtzer, *The Hazards of Urban Life in Late Stalinist Russia: Health, Hygiene, and Living Standards, 1943-1953*. As Andy Bruno puts it in his review of Filtzer's book, "The postwar Soviet Union was full of shit." Andy Bruno, "The Environment of Postwar Stalinism" *History Workshop Journal*, Issue 72, Autumn 2011, pp. 315-320. see also Wheatcroft, "The Soviet Famine of 1946-1947, the Weather and Human Agency in Historical Perspective."

¹²⁸ N.V. Tsitsin, "Zabytye porody" *Vecherniaia Moskva* March 24, 1945.

architectural idiom requested.”¹²⁹ In 1946, he was instrumental in establishing the Moscow Museum of Architecture, where he then served as Director. The Lenin Mausoleum in Red Square is frequently attributed to Shchusev; other well-known projects include the Hotel Moskva (1935) and the Komsomolskaya station of the Moscow Metro (1952).¹³⁰ His urban reconstruction work included plans for Istra (1942-43), Novgorod (1943-45) and Kishinev (1947). His 1945 contribution, titled “Adornment of the Capital” (*Ukrashenie stalitsy*), blended discussion of health, beauty, and city heritage.

“Moscow with her healthy climate is especially amenable to greening. In ancient times [*drevnie vremena*] Moscow also had many gardens at house-estates. Remnants of these are preserved until our times.

In the capital are assembled new, wide, wonderfully asphalted magistrals [streets] — the Garden Ring, Great Kaluzhskaia, 1st *Meshchanskaia* [Merchant] and others. They could quickly be greened at the edges of the broad sidewalks.”

Regarding the question of tree selection, Shchusev recommended the Linden-tree, with its fragrant blossoms, the *riabina*, and the *cheremukha* or bird-cherry, with its “early spring blossoming.” His conclusion focused on the pleasures and health benefits to be gained: “Greenery adorns Moscow and makes healthy (*ozdorovit*) her air. On summer evenings it will be pleasant to stroll the streets and boulevards after the work day.”¹³¹

Located a few streets over from the Academy of Sciences’ Main Botanical Garden was the All-Union Agricultural Exhibit (VSKhV).¹³² As mentioned, Tsitsin was the Exhibit’s director from 1938-1949 to 1954-1957.¹³³ This exhibit of national fecundity and character, originally

¹²⁹ See profile by Owen Hatherley in *The Architectural Review* (March 29, 2014). “Aleksei Viktorovich Shchusev (1873–1949)” <https://www.architectural-review.com/essays/reputations-pen-portraits-/alexey-shchusev-1873-1949/8660736.article>. Last accessed 01/2019. See also 1979 3rd edition of the *Great Soviet Encyclopedia*. The Moscow Museum of Architecture, founded in 1946, now bears his name, see muar.ru. Hatherley notes that Shchusev was expelled from the Union of Architects in 1937 (during the Great Purge) but was immediately reinstated after appealing to Moscow City Council [Mossoviet]. He continued his high-profile work throughout his life, and was awarded a prestigious Stalin Prize in 1941, 1946, 1948, and posthumously in 1952.

¹³⁰ There is some unresolved historiographic debate about the attribution of the mausoleum; Khan-Magomedov reports hearing that Shchusev’s name replaced those of some Jewish architects originally involved in its design.

¹³¹ A.V. Shchushev, “Ukrashenie stolitsy” *Vecherniaia Moskva* March 24, 1945. Summer evenings spent leisurely strolling outside were thus redeemed by greenery from the unspoken alternatives: winter, communal apartments, late shifts, famine, tuberculosis etc.

¹³² In 1959 the VSKhV was renamed the Exhibit of Achievements of National Economy or VDNKh, the name by which it is perhaps best known. Guides to the exhibit grounds and pavilions were published in 1939 (one big volume) and 1955 (portable paperback pamphlets for each pavilion). See Pospelov, P. N., Gritsenko, A. V., and TSitsin, Nikolai Vasil’evich. *Vsesoiuznaia Sel’skokhoziaistvennaia Vystavka 1939*. Moskva: Ogiz, Gosudarstvennoe Izdatel’stvo Kolkhoznoi I Sovkhoznoi Literatury, 1939 and G.F. Dmitrieva, ed. *Vsesoiuznaia selskokhoziaistvennaia vystavka: Pavilion TSvetovodstvo i ozelenenie*. (Pavilion guide by I.V. Vasil’ev, I.S. Krivoshepov, V.N. Filonenko) Moscow: Gos. Izdat. Kul’turno-Prosveshchitel’noi Literatury, 1955.

¹³³ In the years between these spans, the exhibit was closed. Presumably Tsitsin remained involved.

opened in 1939, had been praised by Leonov in both his 1945 and 1947 articles. In 1948, the authorities announced that the Exhibit—closed during the war and its contents evacuated to Chelyabinsk, one of Siberia’s industrial centers—would be expanded, redesigned, and reopen in 1950. In reality, the Exhibit did not reopen until 1954.

The Agricultural Exhibit sought to display and encourage the agricultural and economic productivity of the Soviet Union, arranged in pavilions representing each of the politically constituent republics and regions. This would have been a direct complement to the Botanical Gardens’ intersection of plant propagation with national identity, displayed according to geographic region. Together they reinforced the Ostankino district as a verdant destination site for Muscovites and others seeking inspiration, education, or some healthy, cultured leisure.¹³⁴ These sites’ similar microcosmic functions—representing in a finite number of hectares all the plants and productivity of the USSR and/or the world—would, moreover, have reinforced the sense that Moscow as a city was both the eternal repository and the most advanced prototype of Russian and Soviet achievements.

With regard to urban greening, in 1939 the exhibit guidebook describes a pavilion of “Gardening” (*Sadovodstvo*), located next to the Exhibit gardens, between the pavilions of “Dairy Culturing” and the Pavilion of “Grape-cultivating and Viniculture.”¹³⁵ The Pavilion and gardens foregrounded the “work methods and achievements” of I.V. Michurin.¹³⁶ Of Michurin’s relationship to the notorious Soviet geneticist Trofim Lysenko, environmental historian Douglas Weiner writes that, during the Stalin era,

¹³⁴ The oscillation between display and reality at the Exhibit is discussed by Dobrenko in “The Soviet Spectacle: The All-Union Agricultural Exhibition” chapter 38 in Kivelson and Neuberger, *Picturing Russia: Explorations in Visual Culture*. He argues that, rather than the displayed bounty being seen as a fake or “Potemkin” camouflage of the Soviet reality of shortage and famine, that the displays were interpreted as “more real” than the cosmetic surface sheen offered in Western displays, given their didactic function, and therefore able to engender similar bounty through what might be termed Socialist mimesis. See also Dobrenko, “Socialist Realism and Stasis.”

On the exhibit’s longue durée evolution and “Potemkin Village”/kitsch tendencies, see 17 moments essay by Siegelbaum (<http://soviethistory.msu.edu/1939-2/all-union-agricultural-exhibition/>). Counter argument by Dobrenko is more focused on 1939-1954 versions. See also Dobrenko “Socialist Realism and Stasis” in *Utopian Reality* (1996). See also <http://www.bcx1939.com/> and [http://vdmh.ru/about/history/rozhdenie-vdnkh/](http://vdmh.ru/about/history/rozhdienie-vdnkh/).

¹³⁵ Pospelov, P. N., Gritsenko, A. V., and TSitsin, Nikolai Vasil’evich. *Vsesoiuznaia Sel’skokhoziaistvennaia Vystavka 1939*. Moskva: Ogiz, Gosudarstvennoe Izdatel’stvo Kolkhoznoi Sovkhoznoi Literatury, 1939 pages 458-475. Gardening was treated in this pavilion as a subfield of agriculture, with Michurist advances in the Soviet period contrasted with tsarist disdain and neglect.

¹³⁶ p471. On Michurin in the longue-durée context of Russian life sciences, see Weiner, “The Roots of ‘Michurinism’: Transformist Biology and Acclimatization as Currents in the Russian Life Sciences.” For his continued relevance and scientific sainthood see N. P. Goncharov and N. I. Savel’ev, “Ivan V. Michurin: On the 160th Anniversary of the Birth of the Russian Burbank” *Russian Journal of Genetics: Applied Research*, 2016, Vol. 6, No. 1, pp. 105–127. [Original Russian Text © N.P. Goncharov, N.I. Savel’ev, 2015, published in *Vavilovskii Zhurnal Genetiki i Seleksii*, 2015, Vol. 19, No. 1, pp. 339–358.]

Soviet propagandists never failed to express their debt to Ivan Vladimirovich Michurin for laying the theoretical and methodological groundwork for the ambitious programme of state-directed acclimatization and hybridization that reached its delirious apotheosis in the phenomenon of Lysenkoism. For their part, Western analysts of the Lysenko episode properly recognize that Lysenko's designation of Michurin as his intellectual forebear was a post hoc attempt by Lysenko and his supporters to establish an intellectual pedigree for their programme.¹³⁷

Particularly after the “triumph” of Lysenko in July 1948 at the Academy of Agricultural Science, the same “pedigree” of Michurinist biology was evoked in discussions of urban greening, emphasizing its status as an applied science and “an area of production.”

The classification of urban greening as a form of Michurinist nature-transformation was affirmed in a report read at the Conference on Green Construction at the V.L Komorov Botanical Institute of the Academy of Sciences of the USSR in December 1949, and later published in the Institute’s January 1950 annals.

Green construction is an area of production [in which] territories are being mastered by the help of living plants with the goal of changing the climate of the surface layers of atmosphere in a direction more pleasant for humans, animals and plants, with the goal of improving the fertility of soils, regulation of ground water and with the architectural goal of giving a space more beauty. [...] From this it follows that science, connected with greening, must by all means assist the fulfillment of the task placed before green construction by the Party and government of our country, and above all, further develop the applied Michurinist theory of mastery of living plants.¹³⁸

Having begun his lengthy report with an invocation of the “great attention from the Party and State” directed at green construction, Sokolov noted in his conclusions that the field remained relatively “backwards” in its adoption of Michurinist methods, compared to fruit, vegetable, and grain cultivation. He had no doubt, however, that improvement was possible, thanks in part to the Great Green Friendship. “The shared friendly work of the research and production organizations, based on Michurinist biological science, will doubtless transform nature and make the entire face of the Soviet lands [*oblik Sovetskoi zemli*] deserving of the great epoch of building communism.”¹³⁹

By 1955, the Gardening Pavilion at the All-Union Agricultural Exhibit at least had been

¹³⁷ Ibid., 244. The Western analysts cited by Weiner are David Joravsky, 'The First Stage of Michurinism', in *Essays in Russian and Soviet History*, edited by John S. Curtiss (New York, 1962), pp. 120-32; and Dominique Lecourt, *Proletarian Science? The Case of Lysenko* (London, 1977). Additional works published since then on Lysenko and Soviet Genetics include those cited in footnote 120 and DeJong-Lambert, *The Cold War Politics of Genetic Research : An Introduction to the Lysenko Affair*..

¹³⁸ S.Ia. Sokolov, “Michurinskai Biologiia i Zelenoe Stroitel'stvo” p7-8. Stenogram published in *Trudy Botanicheskogo Instituta im. V.L. Komarova Akademii Nauk Soiuza SSR*, Series VI, Issue 1, 1950. pp7–19. Sokolov later defines the task of Michurinist green construction as follows: “The producer-greenifier [*proizvodstvennik-ozelenitel*] must a) deploy living plants as a construction material, b) reconstruct the physical-geographical complex in the desired direction and c) build biologically and architecturally harmonious landscapes [*biologicheskii i arkhitekturno-garmonichnye landshafty*].”

¹³⁹ S.Ia. Sokolov, “Michurinskai Biologiia” 1950, p19. In 1963, an “S.Sokolov” contributed a chapter on “The Architectural-Artistic Meaning of Forest Types” to the volume, *Landshchafnaia Arkhitektura*, edited by L.S. Zaleskaia. It is likely this was the same author.

transformed. It was rededicated as the Pavilion of “Floriculture and Greening” (*Tsvetovodstvo i ozelenenie*). Inside, the central or fourth hall was devoted to the greening of settlements.¹⁴⁰

Exhibition material in that hall showed

“how broadly integrated [*kak shirako voshli*] green plantings are in the life and everyday habits [*byt*] of the peoples of the Soviet Union, how great the work that has been done by us in greening settlements, industrial enterprises, machine-tractor stations, resorts, and houses of rest.¹⁴¹

Michurin’s omnipresence as an individual inspiration in the 1939 pavilion had ceded the ground to the concept of greening as a national idea, applied equally across place-types and parts of cities. “After all,” stated the 1955 guide, “green plants are not only an element of modernization and adornment [*element blagoustroistva i ukrasheniia*] but also an important means of making city life healthy. In our cities—in the center and on the outskirts—are flowers; greenery has become an organic part of residential blocks, streets, and squares.”¹⁴²

In the evolution of the Botanical Garden and Agricultural exhibit, and the combined careers of their patrons, we see clear examples of Stalinist science merged with Stalinist aesthetics, a fusion lubricated by politics. Their significance cannot be separated, however, from a persistent tension. On the one hand, there was the expectation inherent in such spaces of national display that trees and landscapes serve as eternal proxies for national character (the Russian soul, the motherland); on the other hand, Soviet scientific and architectural norms called for living plants to be conceptualized as scientifically perfectible building materials. Trees transformation via Michurinist methods was taken, in the latter, as indication of the capacity of Stalinist science to transform nature/Soviet society/the world. This tension increased the challenge of balancing representations of existing plant diversity (greening, national in form) with examples of plant and landscape transformation (greening, socialist in content).

Protectors, Planters, Painters

This tension and potential contradiction had been publicly recognized back in April 1947,

¹⁴⁰ G.F. Dmitrieva, ed. *Vsesoiuznaia selskokhoziaistvennaia vystavka (VSKhV): Pavilion Tsvetovodstvo i ozelenenie*. (Pavilion guide by I.V. Vasil'ev, I.S. Krivoshepov, V.N. Filonenko) Moscow: Gos. Izdat. Kul'turno-Prosvetitel'noi Literaturny, 1955. Pages 29–39 discuss Greening. The other rooms were (1) the entry; (2) “Achievements of domestic science”; (3) Leading approaches to cultivating decorative plants; (5) Selection, seed-cultivating and agrotekhnik of cultivating decorative plants; (6) Indoor floriculture, Volunteer Societies; (7) Exposition plots.

¹⁴¹ Within the 1955 pavilion guide, the greening of factories, including the Moscow Kalibr Instrumentation Factory (discussed in chapter 3 of this dissertation) is described over pages 31–32; the greening of cities is covered on pages 33–35.

¹⁴² Dmitrieva, ed. *VSKhV Greening pavilion guide*, 1955: p33.

by speakers at the Congress of the All-Union Society for the Protection of Nature (VOOP). The scientific pursuit of the public green good meant that success (or failure) would redound equally to public welfare provision and the otherwise ‘pure’ realm of natural science. At the 1947 VOOP Congress, the organization Secretary Susanna N. Fridman, a non-scientist, posed the issue as a question and a caution:

Is nature protection, or, more correctly, the survival of wild nature and its blossoming, compatible or incompatible with our quickly changing culture and civilization? [...] Science has answered that it is compatible, and, I would go further, that if that is not the case our science is worthless, empty, and, as theory, holds no water. We know a great deal, but if we cannot [make the survival of wild nature compatible with culture], then that which we know wasn't worth knowing.¹⁴³

For Fridman, what was “worth knowing” was the doing. Unlike some scientist-members of VOOP who sought autonomy and separation from the Soviet masses and their emotional engagement with nature, Fridman urged VOOP to embrace outreach efforts and appeal on affective grounds to anyone and everyone who might aid “the survival of wild nature and its blossoming.”

The rising tide of officially-encouraged Russian/Soviet “love of the motherland [*rodina*]” in the late 1940s simultaneously celebrated national character, natural resources, and the aesthetic resources of the native *paysage*, including many forest scenes.¹⁴⁴ This concurrent fusion of economic, emotional, and political aspects of “Russianness” coincided, under the dominance of infamous scientist-demagogue Lysenko, with rising emphasis in agriculture and botany on the protective and collaborative capacity of trees, particularly oaks. These trends served to further cement the ideational links between the nation’s trees and national character. As is generally true in Soviet rhetoric and politics, the strength of the pro-motherland position was reinforced by equally strong anti-Western, anti-Cosmopolitan positions.¹⁴⁵ The overlap between these two

¹⁴³ Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 75., citing RTsKhIDNI f. 17, op. 138, d. 35, list 27. Translation by Weiner. He emphasizes that Fridman was a citizen-activist not a scientist, and had attitudes occasionally at odds with the scientific pursuit of pure autonomy from emotion or morality. Fridman is described as “the longtime secretary of VOOP from its founding through the war, who voiced the feelings of the founders’ generation.” In her address to the Congress, Fridman raised questions of the Society’s demographics; the founders’ generation now being relatively aged and new, young members were needed. Such statements would have been in keeping with the general impulse among public organizations to renew and extend their membership base as a means of demonstrating their authentic connections to “the populace.” Fridman also emphasized moral and emotional dimensions of Nature protection activism, a position that Weiner observes was unusual within the usually purely “scientific” discourse of the Society.

¹⁴⁴ Bassin, “‘I Object to Rain That Is Cheerless’: Landscape Art and the Stalinist Aesthetic Imagination.”; “Landscape and Identity in Russian and Soviet Art: An Introduction.”; Dobrenko and Naiman, *The Landscape of Stalinism: The Art and Ideology of Soviet Space*; Bassin, Ely, and Stockdale, *Space, Place, and Power in Modern Russia: Essays in the New Spatial History*.

¹⁴⁵ The habitual or even obligatory pairing of “for” and “against” positions in official rhetoric is discussed by Nikolai Kremontsov in *Stalinist Science* (1996) in Appendix A: “Stalinist Scientific Newspeak: A Glossary” [pp293-299]. The examples he gives concern the pairing of such slogans like “for Michurinist biology” and “against Mendelism” and, with regard to the

trends posed an acute challenge for those who represented nature/nation in another visual/experiential format: landscape painters.

The potential transfer of affect from national landscapes as painted to national landscapes in actuality had been recognized by another speaker at the April 1947 VOOP Congress, scientist Vasilii Nikitich Makarov (1887–1953), VOOP’s director.

The aesthetic importance of nature protection must not be sidelined from VOOP's field of action. We must care for and protect not only the paintings of Kuindzhi, Shishkin, and Levitan, which we treasure as works of great aesthetic value, but those natural landscapes that inspired Kuindzhi, Shishkin, and Levitan. [...] I have always been amazed that people are conscious of the value of these products of human creativity but find it impossible to perceive the beauty of nature and protect the actual nature [that inspired these paintings].¹⁴⁶

Socialist realist aesthetic norms had not always embraced landscape paintings, but Makarov and other nature-enthusiasts had grounds for hope. In the late 1940s, the politics of representing national landscapes, and their transformation through science/industry, changed drastically. Eventually, landscape scenes became a preferred genre of socialist realist painting, albeit one that required some care to include ideological cues.

The process by which landscape paintings was appropriated by postwar socialist realist aesthetics was complex, as ably captured by Mark Bassin.¹⁴⁷ In short, in 1930, Narkompros had faulted (foreign) landscape paintings at the Museum of Western Art because they “do not reflect social problems” e.g. were lacking both people and labor. In the postwar period, similar themes were raised in a 1947 speech by artist Gerasimov, published in early 1948, who warned against “bourgeois artistic influence, against formalism and naturalism [...] The worship of decadent capitalist art ... contradicts Soviet patriotism.”¹⁴⁸ The campaign against bourgeois “naturalism,” however, had to be reconciled with the socialist realist and patriotic advantages of celebrating representations of Soviet nature. As Bassin states,

patriotic campaign of 1946, for “principled ideological content” and “against groveling before the West.”

¹⁴⁶ Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 77. For full bio see pages 39-44 of same. Weiner cites the following archival files in his footnotes 47 and 48: RTsKhIDNI f. 17, op. 138, d. 35, list 145-146. Weiner then quotes Makarov describing how he had felt an emotional and patriotic connection to a specific stand of pines during a period spent in the Crimea: “I could see pines ten times and they would still stir me, because they tell much . . . because they are more valuable to me than a palace built in their place. It seems to me that we love nature through its specific examples, and, loving nature, we also love our homeland. For that reason, it is in the interests of the homeland and of cultivating love for it that we must care for the preservation of the most ancient examples of our own land's nature.” Weiner comments that in his speech, Makarov “touched on aesthetic questions of nature protection, which were ideologically among the most sensitive for Soviet conservation.”

¹⁴⁷ Bassin, “‘I Object to Rain That Is Cheerless’: Landscape Art and the Stalinist Aesthetic Imagination.”

¹⁴⁸ {Mileeva, 2013 #6080 @212, 204}. Gerasimov’s speech was published in *Iskusstvo* no1 (1948) from 1947 speech at Academy of Arts 1st session in Leningrad. See also Silina, “The Struggle against Naturalism: Soviet Art from the 1920s to the 1950s.”

one of the great advantages of acknowledging landscape painting as a politically acceptable genre was to make it possible to appropriate the remarkable legacy of nineteenth-century Russian landscape art, a legacy which continued to appeal strongly to the tastes of the Soviet viewing public and could therefore be especially useful for the Stalinist project.¹⁴⁹

In addition to the 19th century painters named by Makarov, another member of the Wanderers group (*Peredvizhniki*) whose work was celebrated at this time was Valentin Surikov, of Krasnoyarsk. While his landscapes of the hills and rivers around his hometown are not specifically mentioned by Bassin or his sources, increased official approval for the idea of painting such scenes would have contributed to Surikov's continued prominence.

Attempts to delineate the postwar embrace of landscape painting were expressed in art criticism published in 1949, and discussed by Bassin, particularly the article "What kind of landscape do we need" by artist Vasilii Iakovlev.¹⁵⁰ In *Iskusstvo*, Iakovlev wrote that

"The depiction of natural scenes should strive above all towards a 'meditative penetration' (*vdumchivoe vzhivanie*) into nature's 'very innermost essence'." Qualities attributed to another artist's landscapes by Iakovlev reinforced the timelessness of this "essence": [his] landscapes are profound and eternal like nature itself . . . [They] live and will live forever."¹⁵¹

The profound elementalism and eternal qualities of natural scenes presented a "dilemma... in the evolving framework of Stalinist art," however. "On the one hand," writes Bassin,

the revival of interest in the natural landscape as a painterly subject was conditioned on the new appeal of nature's elemental qualities discussed above. [...] At the same time, however, all Soviet art was uniformly required to 'think socially' and to depict all aspects of reality in such a way as to convey a highly articulated message about the meaning, direction and destiny of society itself. These two preoccupations would appear to be irreconcilable, and indeed a certain tension between them was never to disappear.¹⁵²

Reconciliation between the two positions, required a shift in the message, or cues, conveyed by landscape representations to Soviet viewers. In Bassin's words: "The depiction of the natural world had to be ideologized, and indeed quite deliberately so, according to the same political-theoretical precepts which set the standard for the rest of Soviet culture and society."¹⁵³ Visually, this ideologization could be accomplished by fusing the eternal and environmental with industrial motifs.

¹⁴⁹ Bassin, "'I Object to Rain That Is Cheerless': Landscape Art and the Stalinist Aesthetic Imagination," 320.

¹⁵⁰ V. Iakovlev, 'Kakoi nam nuzhen peizazh? (Zametki khudozhnika)', *Iskusstvo* 5 (1949). Another 1949 article, also discussed by Bassin (pp316-318) as indicative of the challenges of appropriating landscape art for Stalinism, captured the more complicated relationship of Soviet aesthetics to the "gloomy" masterworks of Isaak Levitan. See B. Ioganson, 'Zametki o masterstve', *Iskusstvo* 1 (1949), p. 41. Boris Ioganson was a renowned artist, director of the Tretyakov Gallery, the vice-president and finally president of the Academy of Arts of the USSR.

¹⁵¹ Iakovlev, 'Kakoi nam nuzhen peizazh?', quoted by Bassin, "'I Object to Rain That Is Cheerless': Landscape Art and the Stalinist Aesthetic Imagination," 316.

¹⁵² *Ibid.*, 318.

¹⁵³ *Ibid.*

Paintings of landscapes and landscape transformation were feted at the 1950 All-Union Exhibit in Moscow.¹⁵⁴ In a 1951 review of that show, art critic Boris Nikiforov asserted that “Like the work of any other genre of art, landscape painting has the duty of educating Soviet people in the spirit of communism.”¹⁵⁵ As Nikiforov carefully explained,

Not so very long ago, the opinion existed that the industrial motif would destroy [ubivat’] the beauty of nature and that this motif is [consequently] harmful for it. [...However...] Socialist construction does not destroy the life forces and eternal beauty of nature but, on the contrary, makes possible the ever-greater flowering of nature [by] subjecting the latter to its own needs and tasks.

In itself, this assertion is unexceptional, a typical expression of the Soviet impulse to exploit natural sites and resources through industrialization, wrapped in a gauzy rhetoric of eternal beauty.

Of course, as architects engagement with urban greening demonstrates, the Soviet nature-industry relationship was imagined to be one of mutual influence. Accordingly, Nikiforov’s followed his description of natural subjugation with a parallel assertion regarding the rightful place of nature in cities and industrial territories.

In constructing gigantic industrial works, the people of the Soviet Union carefully preserve nature and allow it a broad presence in their cities, crisscrossed by green roads, in their landscaped factories, and in the everyday lives of the Soviet people.¹⁵⁶

The forest in the factory, in short, was as integral to the spirit of communism as the tractor in the taiga. Nikiforov attributed this mutual inter-penetration of industry in nature and greenery in factory towns to the agency of the “the people of the Soviet Union.” The continued enthusiasm for trees, everywhere, was more properly the product of the Great Green Friendship. Architects, artists, scientists, and populists all contributed. So did trees. As this chapter has shown, political, professional, and popular developments converged around the talsimanic figure of “our green friend, the trees” in postwar Moscow, with consequences for Soviet space more generally.

Conclusions

In practice, the “ever-greater flowering” and broad urban presence of nature that was extolled by Nikiforov as a fundamental element of the Stalinist Soviet imaginary collided with

¹⁵⁴ Widespread awareness of landscape’s new acceptability can be seen in the 1947 comments from Makarov at the VOOP conference. (See footnote 146.)

¹⁵⁵ B. Nikiforov, ‘Tema rodnoi prirody na Khudozhestvennoi Vystavke 1950 goda’, *Iskusstvo* 2 (1951), quoted p313 in Bassin, “‘I Object to Rain That Is Cheerless’: Landscape Art and the Stalinist Aesthetic Imagination.”

¹⁵⁶ B. Nikiforov p. 24-25, from ‘Tema rodnoi prirody na Khudozhestvennoi Vystavke 1950 goda’, *Iskusstvo* 2 (1951), pp.19-28. Quoted and discussed by Bassin on pp327-328.

issues of implementation and actual landscapes. Late Stalinist landscape paintings frequently depicted Siberian scenes, reflecting the importance of Siberia to both sides of the industry-landscape equation. Both the most traditionally national landscapes and the most rapid/dramatic landscape transformations were found in Siberia. Artistic representations of these scenes further cemented the identity of Siberia as the “authentic” heartland of Russia, and a superlatively Soviet place where natural and national heritage came together with the promised bounty of natural and national transformation.

This convergence in Siberia of patriotism and Promethean production targets, like the convergence in the postwar period of cultural, scientific, professional and popular attitudes toward greens, produced unanticipated consequences within the field of urban greening and beautification. Beginning around 1948, when the first official commission was sent to Russia’s regions to evaluate the progress of urban reconstruction, specialist literature on urban greening began to foreground regional representativity in addition to the more familiar themes of greening’s synthesis of functions, systematic distribution within cities, and cultural-political capacities.¹⁵⁷ This bundle of expectations associated with greening was resilient but challenging to realize, for reasons made even more acute by the combination in Siberia of intense climate challenges and intensive tempo of industrialization.

The spatial mismatch between ideological and regional needs with regard to Siberia presented itself in many ways. One example comes from the question of tree selection, where of unforeseen tension arose between those seeking to plant fruit trees in Siberia (patriotically demonstrating the triumph of Soviet science over climatic challenges) and those who wanted birches, larches, and pines (patriotically representing the character of the region and the nation). On its own, this conflict could be theoretically resolved by planting different species in different parts of the city, or blended, to capture the benefits associated with each.¹⁵⁸

Either option had problems. Conscious variation in tree species was proposed as a means of aesthetically diversifying long boulevards.¹⁵⁹ This approach risked the communist sin of

¹⁵⁷ See bibliography. Examples of regionally-focused greening literature, 1948-1954, include Korobov 1947, Krylov 1948; Kolesnikov 1949, Zalesskaia 1949. On greening as a multipurpose urban system, see Marzeev 1951, Mashinskii 1951, Lunts 1948, 1952, 1953, Khorkhot 1953. On synthesis of industry and greening, see Usov 1954, Nikolaev 1950, 1954.

¹⁵⁸ As discussed in the final chapter “Can Trees Talk Back?” this prioritization of emblematic species that proved unable to thrive in conditions of industrialized urbanism (particularly in Siberia) meant that more trees died than might have been true otherwise, and contributed to the activist popular reaction when those trees died or failed to thrive.

¹⁵⁹ Kazakovtsev, G.M. “K Voprosu Ozeleneniia Gorodov Sibiri” *Arkhitektura Sibiri*, *Ezhegodnik Novosibirskogo Otdeleniia*

implying that all urban districts were not equal, not to mention the severely limited options available at most plant nurseries and greenhouses. A functionally and aesthetically satisfactory combination of species, specially composed for a given site, while preferred, was expensive in terms of time, compositional skill, and difficulty of realization. The use of unskilled ‘volunteer’ labor and prototype plans made such treatments difficult to realize outside of select prestige projects, such as the Main Botanical Gardens.

Ultimately, it proved significant that architect-planners and their spokesmen emphasized the plan itself (of a site, a city, a region) as the location of perfect synthesis between industry and nature, place-identity and national space. The process of urban beautification planning, rather than its outcomes, was assigned to bear the aspirational weight of creating the sensed conditions of socialist modernity. As long as a city’s greening and beautification plan called for the appropriately native yet diverse mix of tree species, the actual greenspace could be occupied in the meantime by fast-growing proxy species such as poplars, and in select sites, the “shortcut to paradise” solution of transplanting mature trees. Eventually, in the Khrushchev era and after, the spaces between buildings would be increased to accommodate the aspired-to agencies of urban greenery even as other aspects of Stalinist urban aesthetics were denounced. The cues to care established by Leonov and others in the Great Green Friendship thus proved more durable than the “Gardener of Human Happiness” himself, Josef Stalin, or his architectural monumentality.



Figure 4.1 Newspaper *Vecherniaia Moskva*, 1945. Full page of articles on greening. April 24, 1945



49. Панорама и план поселка Редборн

БИБЛИОГРАФИЯ

- Брагин Е. А., Санитарно-гигиенические требования к планировке жилого квартала, М., 1939; Генцмер Э., Планы застройки городов (в книге «Справочная книга для инж.-стр.»), М.-Л., 1938; Гроссман В., Планировка малозатяжных поселков в США, «Арх. СССР», № 6, 1940; Жилище. Материалы II Пленума Правления Союза советских архитекторов, 1938; Жилой квартал, Гос. Центр. Научно-иссл. и-т коммунальной санитарии и гигиены, сборник трудов, т. 2, М., 1938; Зальцман А. М., Классификация жилых домов; Сообщ. И-та массовых сооружений Акад. Арх., № 2, М., 1943; Ильин Л. А., Новые кварталы Ленинграда, «Арх. СССР», № 3, 1938; Кварталы (ряд статей), «Арх. СССР», № 9, 1940; Кругляков Ю. Г., Реконструкция жилых кварталов, М.-Л., 1933; Массовое строительство (школы, детские ясли и пр.), Материалы IV Пленума Правления Союза советских архитекторов, 1938; Мижуев П. Г., Города-сады и жилищный вопрос в Англии, 1916; Мионов Н. В., Гелиоориентировка жилых зданий, 1934; Планировка и застройка кварталов. Сборник работ под ред. Ю. Круглякова, ч. 1, Л.-М., 1939; Рубаненко Б., Кварталы Автово в Ленинграде, «Арх. СССР», № 5, 1941; Типовые проекты детских яслей на 1941 г., «Арх. СССР», № 4, 1941; Томсон Н. М., Проветривание жилого квартала, М., 1937; Френци Б. К., Шателе-Малабри «Лесной город» под Парижем, «Архитектура за рубежом» № 1, 1935; Adams T.H., The design of residential areas, 1934; Building Parkchester, «Amer. sign of residential areas», № 7, 1937; № 3, 1939; Chicago zoning builders, № 8, 1940; Building types, № 7, 1937; Handbook des Wohnungsordnance, Chicago, 1927; Eberstadt R., Handbuch des Wohnungsordnance, Jena, 1920; Habitations à bon marché, «Arch. d'auj.», № 6, 1935; Hagemann W., City planning housing, v. 2, 3, N.-Y., 1937; «Jork-ship villages», «Pencil Points», Sep., 1940; The housing work of the settlement association, № 2, 1937; Thompson F. L., City planning in practice, L., 1923; Wolff P., Wohnung und Siedlung, Berlin, 1926; Wright H., City Planning and Sunlight as developed, «Amer. Architect and Architecture», v. 149, № 2648, 1936.

Figure 4.2 pages from *Architect's Reference Handbook (Spravochnik Arkhitektora)*, 1946¹

Pages from "Settlement Development" chapter includes panorama, plan of Radburn, NJ, and various foreign sources.

¹ Poliakov, N.Kh. *Spravochnik Arkhitektora Tome II: Gradostrotel'stvo*. Moscow: Izdat. Akademii Arkhitektury SSSR, 1946. pp136-37

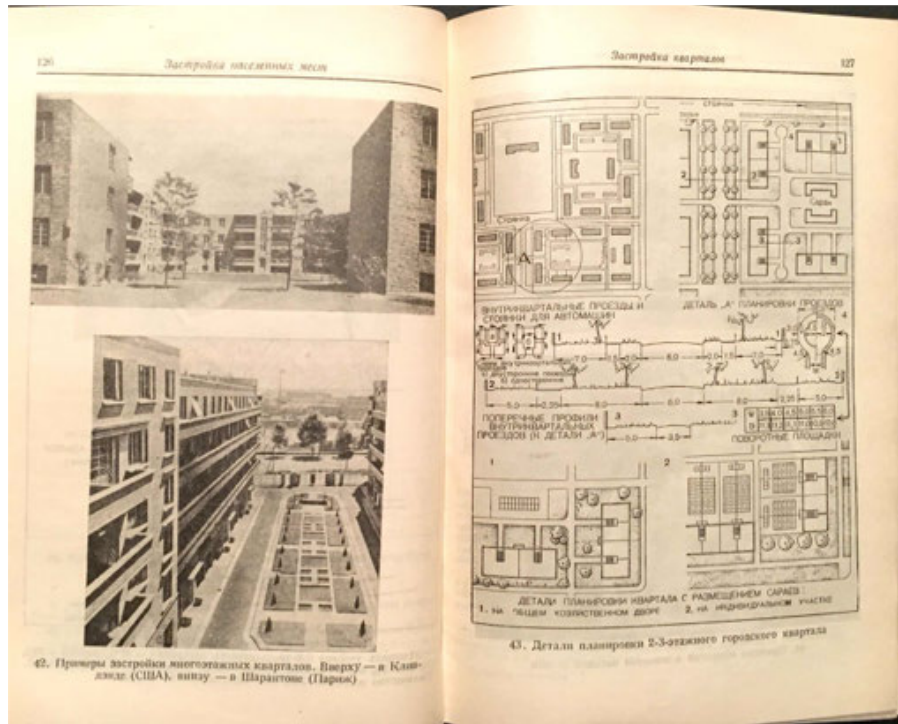


Figure 4.3 Pages from *Spravochnik Arkhitekтора 1946* showing examples of foreign residential courtyards²

Images of apartment block development include Cleveland (left top) and Paris (left below).

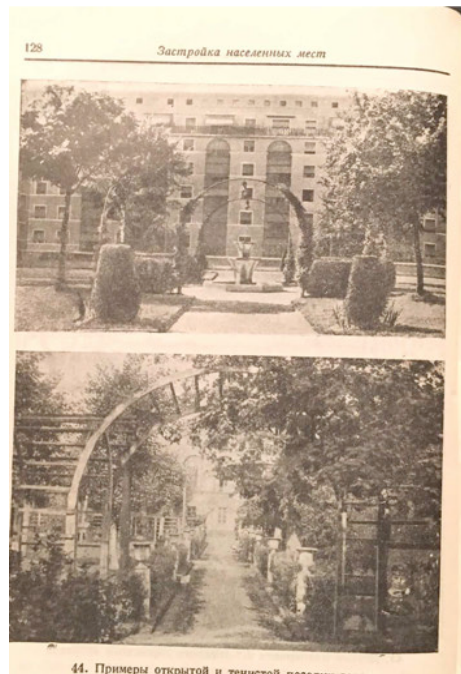


Figure 4.4 "Open" and "shady" courtyards, page from *Spravochnik Arkhitekтора 1946*²

² Poliakov, N.Kh. *Spravochnik Arkhitekтора Tome II: Gradostroitel'stvo*. Moscow: Izdat. Akademii Arkhitektury SSSR, 1946. pp126-28

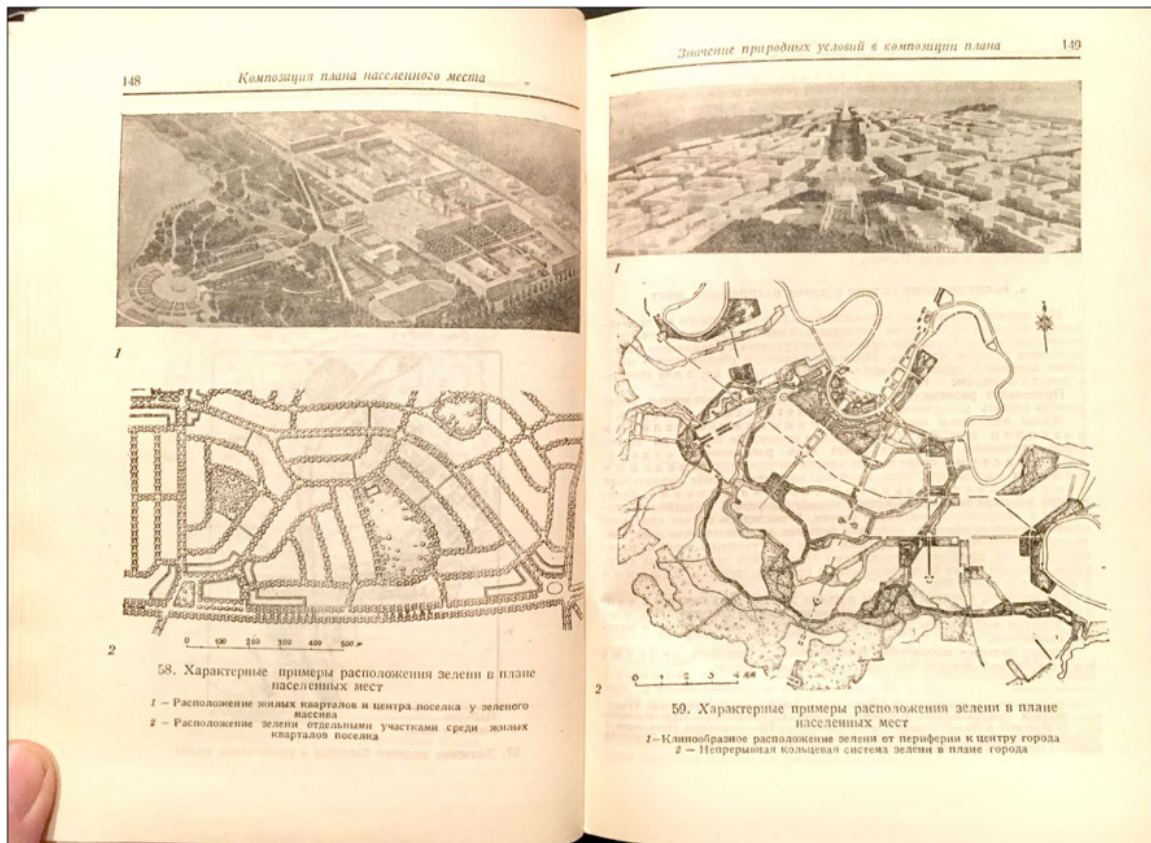


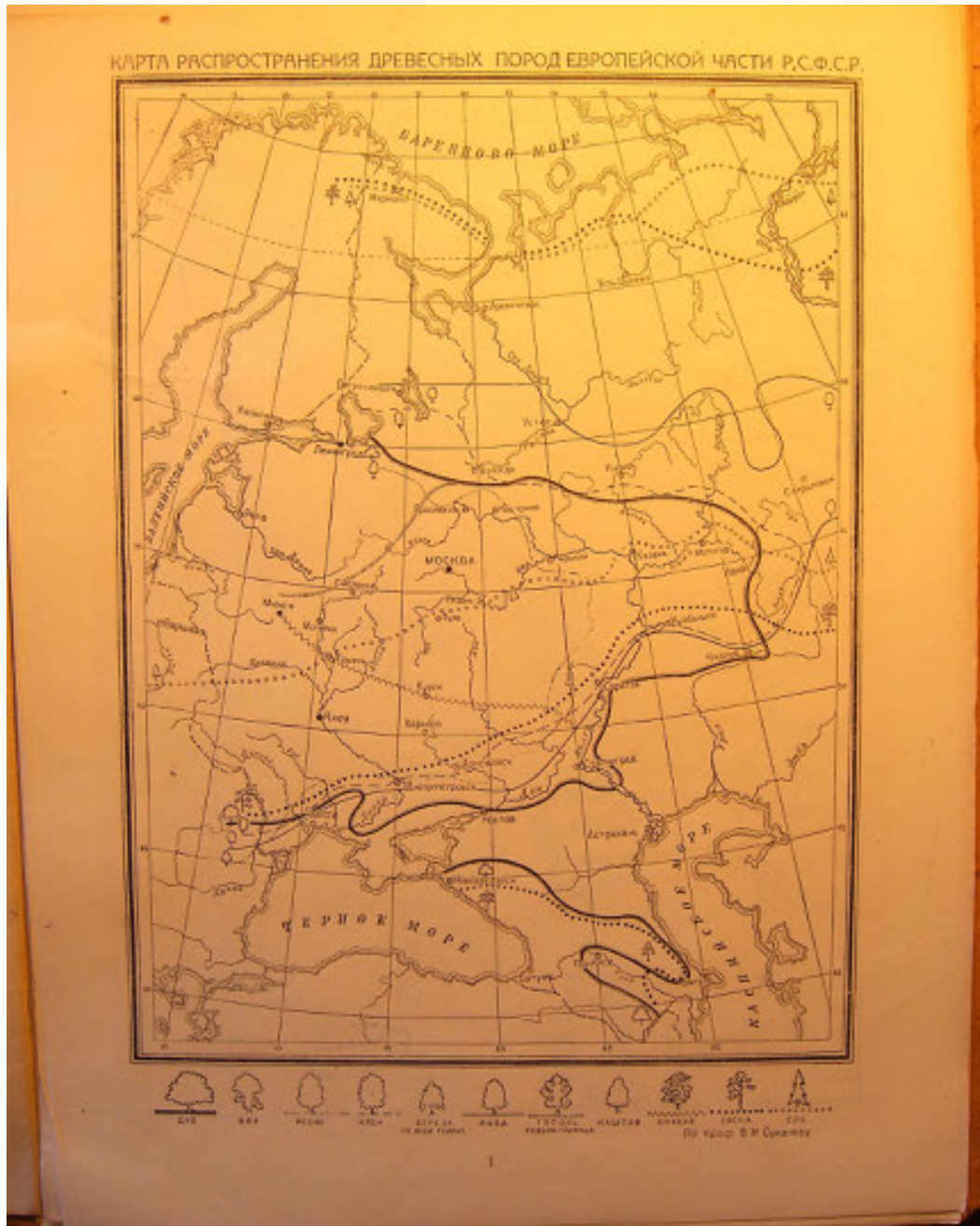
Figure 4.5 Greenspace disposition in settlement plans, pages from *Spravochnik Arkhitekтора*, 1946³

Original caption: “Characteristic examples of disposition of greenery in settlement plans”

Left: 1) Disposition in a green massif, 2) Disposition of greenery in separate parcels among residential blocks.

Right: 1) Wedge-shaped disposition from periphery to center 2) Continuous ring

³ Poliakov, N.Kh. *Spravochnik Arkhitekтора Tome II: Gradostroitel'stvo*. Moscow: Izdat. Akademii Arkhitekturny SSSR, 1946. pp148-49



Map 4.1 Tree Species distribution in European Russia, from *Ozelenenie Gorodov i Poselkov (Greening of Cities and Hamlets)*, 1946⁴

Key to mapped species (showing typical growth habit) given at bottom, with birch trees marked as “across whole territory.” No equivalent map for other regions of Soviet Russia was included in the album, much less for other Republics of the USSR.

⁴ Goldenberg, P., and V. Dolganov, eds. *Ozelenenie Gorodov i Poselkov: Derev'ia i Kustarniki. (Greening of Cities and Hamlets: Trees and Shrubs)* Moscow: Izdat. Akademii Arkhitektury SSSR, 1946.

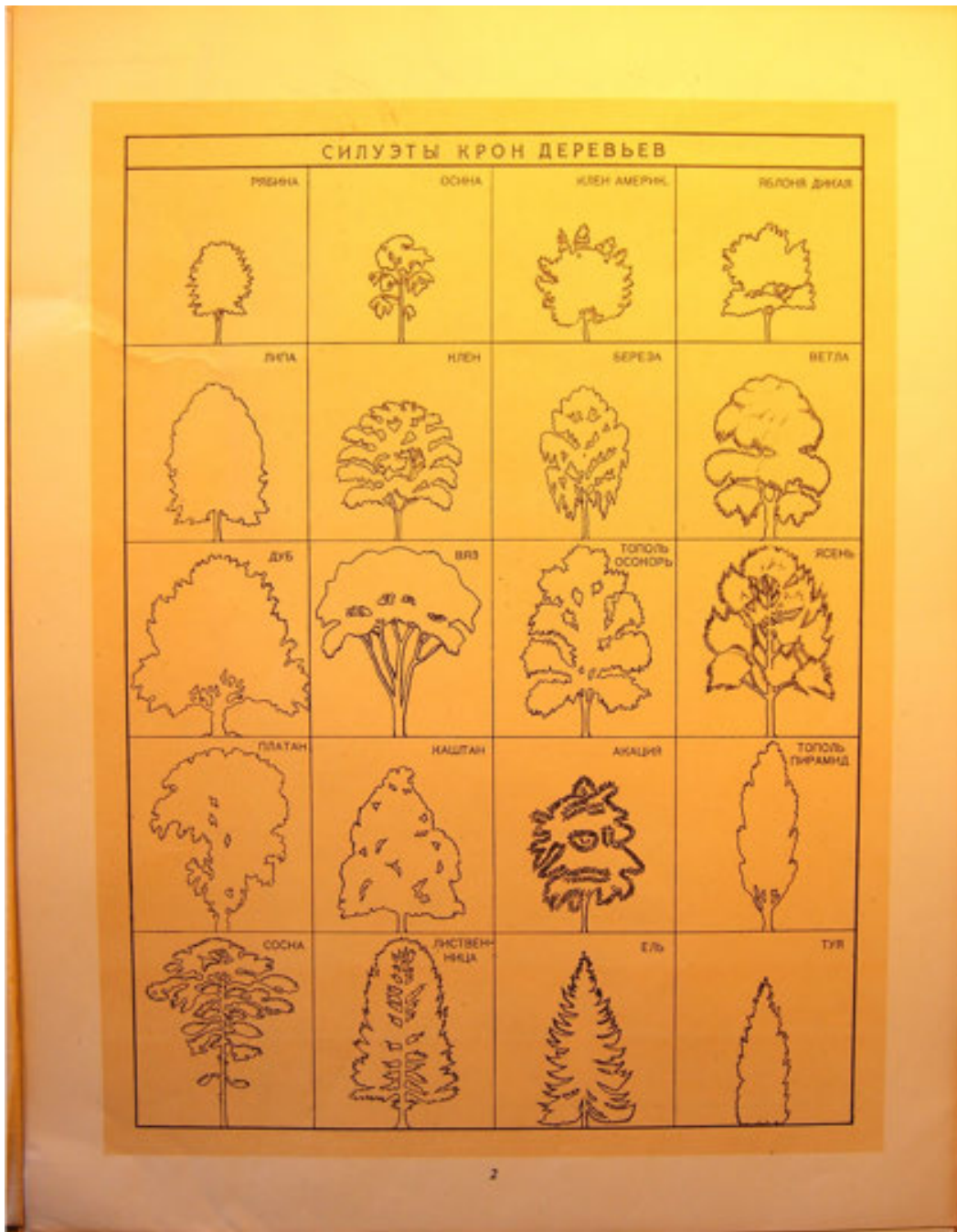


Figure 4.6 Silhouette of common tree species, from *Ozelenenie Gorodov i Poselkov*, 1946⁵

Much attention was paid to the visual silhouette of cities (and trees) during the postwar Stalinist period, as part of Soviet urbanists efforts to create distinctive ensembles and cityscapes. Such a wide variety of mature trees were not, however, necessarily available from municipal nurseries or forested areas adjacent to the cities.

⁵ Goldenberg, P., and V. Dolganov, eds. *Ozelenenie Gorodov I Poselkov: Derev'ia I Kustarniki*. (Greening of Cities and Hamlets: Trees and Shrubs) Moscow: Izdat. Akademii Arkhitektury SSSR, 1946.

Название пород	Высота в метрах (максимальная)	Использование													
		Посадки вдоль улиц (зеленые полосы)	Бульвары, аллеи вдоль дорог	Лицевые сады (палисадники)	Внутрикварталы, скверы и сады	Приовраж. посадки	Набережные	Живые изгороди и опушки	Массовые, посадки в парках и защитных полосах	Бордюры	Солитеры	Приветственные посадки	Охран, площади	1-й ярус	2-й ярус и подлесок
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Береза бородавч. и пушистая	15-20	+	+	+	+		+		+						
2. Лиственница сиб.	30-35	+	+		+		+		+						
3. Тополь серебрист.	30	+	+				+		+						
4. Тополь сиб. балз.	20-25	+	+		+		+		+						
5. " душист.	20-25	+	+		+		+		+						
6. Осина	20-35	+	-		+		+		+						
7. Черный тополь (осоколь)	20-30	+	+		+		+		+						
8. Тополь канадск.	30-40	+	+		+		+		+						
9. Ель сибирская . .	25-35	+			+		+		+						
10. Пихта сибирская .	25-35		+		+		+		+						
11. Сосна веймутова .	20-25				+		+		+						
12. Кедр сибирский .	25-35				+		+		+						
13. Липа мелколиств.	15-20	+	+	+	+		+		+						
14. В я з	20-25	+	+	+	+		+		+						
15. Карагач	15-20	+			+		+		+						
16. Ясень американ. . .	20-25		+		+		+		+						
17. " маньчжур.	25-35	+	+		+		+		+						
18. Клен американ. . .	15-20	+	+	+	+		+		+						
19. Серебристый клен американский	20-30	+	+	+	+		+		+						
20. Маньчжурский клен	15-20	+	+	+	+		+		+						
21. Клен Гиннала . .	4-6		+		+		+		+						
22. Орех маньчжурский	15-25				+		+		+						
23. Ольха бел. и зелен.	15-20				+		+		+						
24. Черная ольха	20-30				+		+		+						
25. Дуб монгольский . .	15-20				+		+		+						
26. Ива белая (ветла)	15-25		+		+		+		+						
27. Амурский бархат . .	15-25		+		+		+		+						
28. Серебристая ель . .	10-15				+		+		+						
29. Сербская ель	15-25				+		+		+						
30. Американ. зап. туя	10-20				+		+		+						
31. Черемуха	10-15				+		+		+						
32. Рябина	10-15				+		+		+						
33. Яблоня сибирская . .	4-7		+	+	+		+		+						
34. Ранет длинноножка.	4-7				+		+		+						
35. " скалеповка	4-10				+		+		+						

Figure 4.8 Table of tree species with typical properties and recommended uses, from *Greening of Novosibirsk (Ozelenenie goroda Novosibirska)*, 1948⁷

This regional publication includes a cross-referenced list of tree species, indicating the appropriateness for different use-types, height in ideal conditions, other qualities.

⁷ Krylov, Georgii Vasil'evich. *Ozelenenie goroda Novosibirska i naselennykh punktov oblasti (Greening the city of Novosibirsk and Settlement points of the Region)*. Novosibirsk: Akademiia Nauk Souza SSR- Zapadno-Sibirskii Filial Botanicheskii Sad, 1948

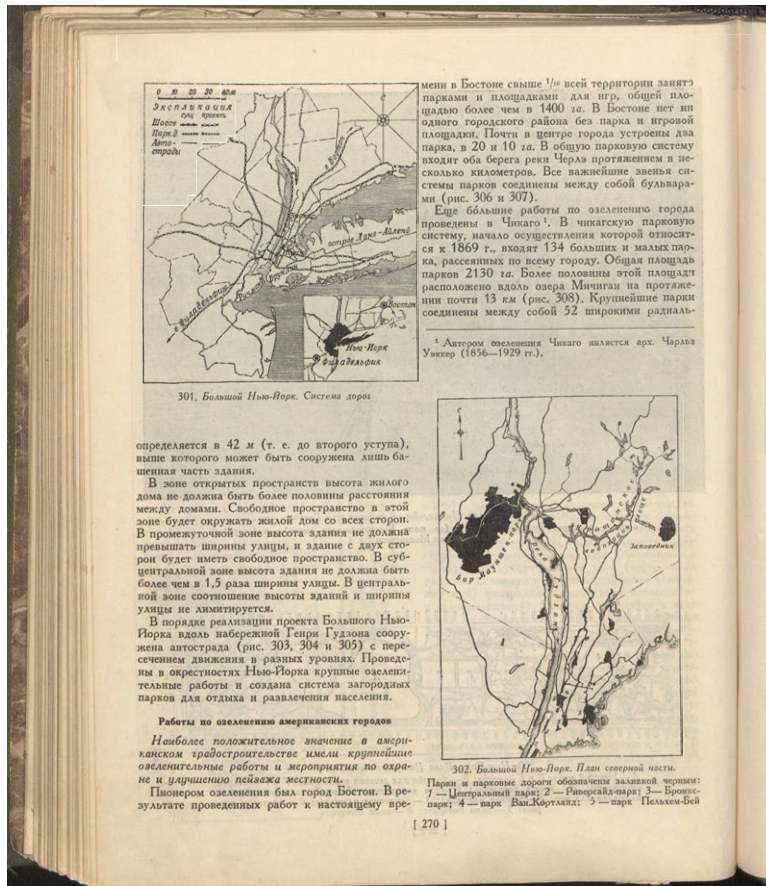
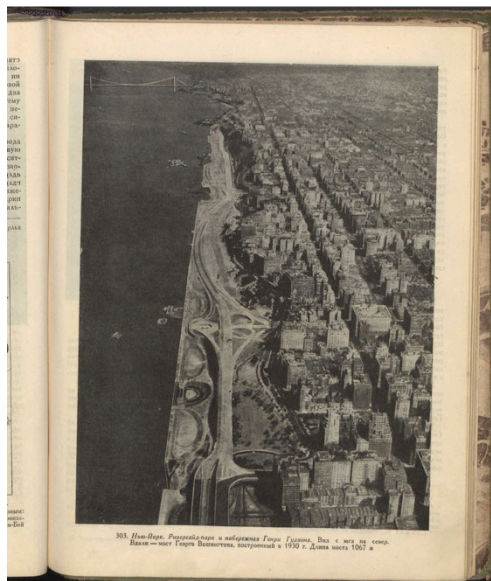


Figure 4.11 Pages on greening in American cities, from *Gradostroitel'stvo (City-building)* textbook, 1945¹⁰

From book section titled “Greening Work in American Cities.” Top left diagram of “Greater New York, road system”; top right diagram “Greater New York: plan of northern section.” Below: photograph of New York Riverside Drive and the Hudson Bridge



¹⁰ Shkvarikov, V. A., L. B. Bunin, N. Kh. Poliakov, and L.A. Il'in. *Gradostroitel'stvo*. Moscow: izdatel'stvo Akademii Arkhitektury SSSR, 1945 p270-71



Figure 4.12 Photographs of All-Union Agricultural Exhibit (VSKhV) in Moscow, from 1945 book *Gradostroitel'stvo (City-Building)*¹¹

Top: General View of the Exhibit in 1939

Below: View from the Main Entrance of main plaza faced by Republic pavilions

¹¹ Shkvarikov, V. A., L. B. Bunin, N. Kh. Poliakov, and L.A. Il'in. *Gradostroitel'stvo*. Moscow: izdatel'stvo Akademii Arkhitektury SSSR, 1945 p308



Figure 4.13 Pages from 1939 All-Union Agricultural Exhibit guidebook: Pavilion of Gardening and exhibit gardens¹²

Left: First page of chapter on pavilion of ‘Gardening’ (*Sadovodstvo*)

Right: “Exhibit gardens” first page of section, with sculpture of I.Michurin



Figure 4.14 Fold-out panorama of VSKhV exhibition grounds¹²

¹² Pospelov, P.N., Gritsenko, A.V, and TSitsin, N.V. *Vsesoiuznaia Sel'skokhoziaistvennaia Vystavka 1939*. Moscow: Ogiz, Gosudarstvennoe Izdatel'stvo Kolkhoznoi i Sovkhoznoi Literatury, 1939.

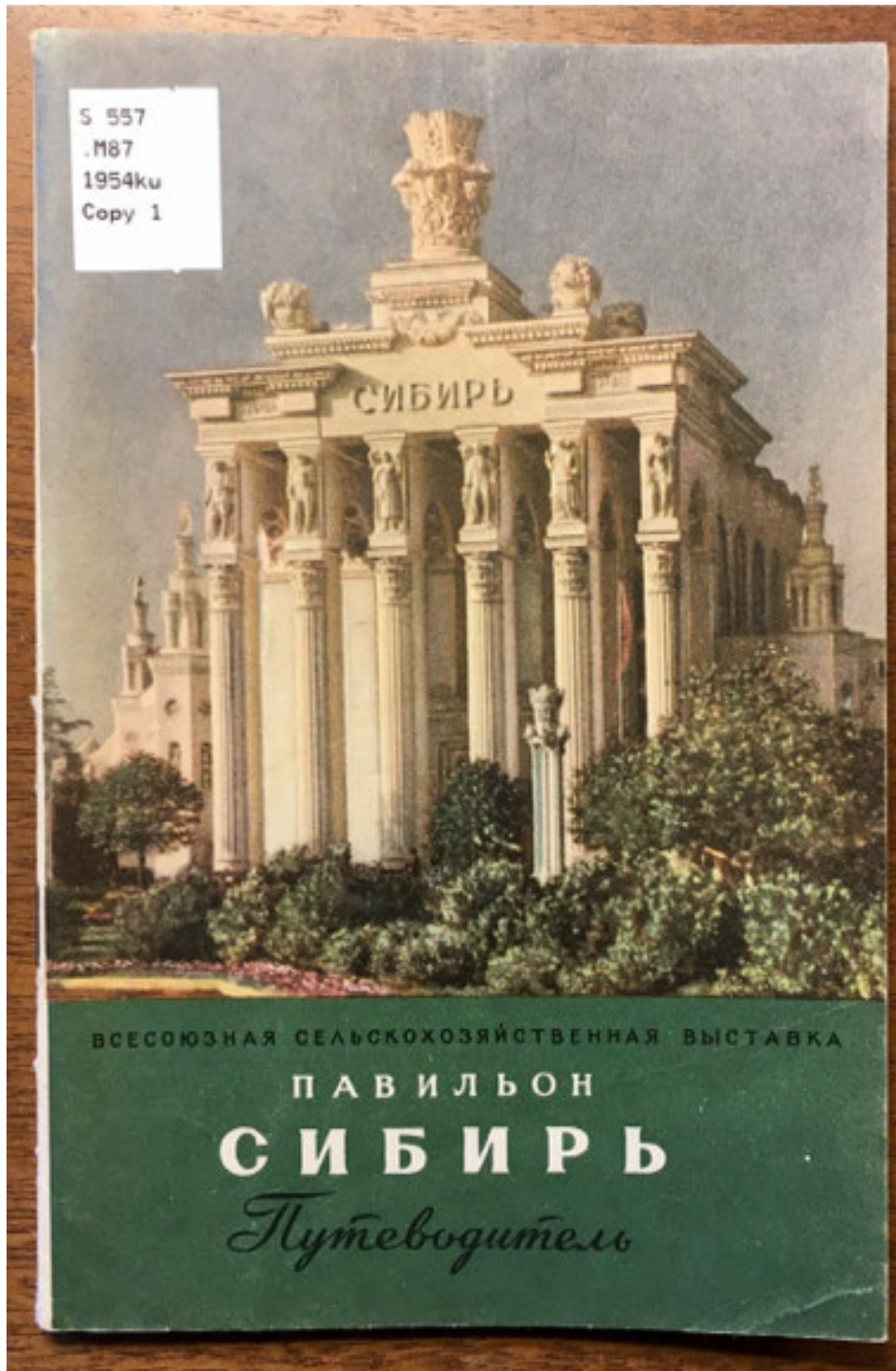


Figure 4.15 pamphlet guide to Siberia Pavilion, VSKhV 1955¹³

¹³ Vsesoiuznaia sel'skokhoziaistvennaia vystavka, (VSKhV) *Pavil'on Sibir'*; *putevoditel'*. Moscow: Gos. Izdat Sel'Khoziastvennoi Literatury, 1955;



Figure 4.16 pamphlet guide to Floriculture and Greening pavilion, VSKhV 1955¹⁴

¹⁴ Vsesoiuznaia sel'skokhoziaistvennaia vystavka. (VSKhV) G.F. Dimitrieva, ed., *Pavil'on TSvetovodstvo i ozelenenie*. Moscow: Gos. Izdat Sel'Khoziastvennoi Literatury, 1955

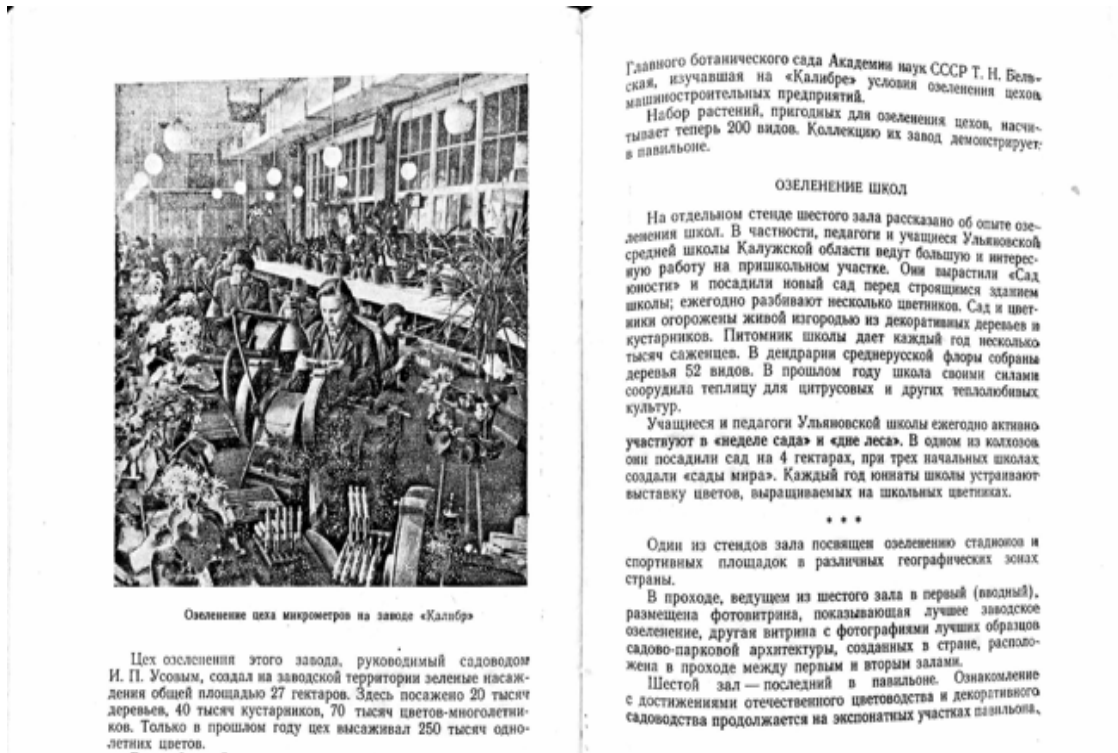


Figure 4.17 Pages from 1955 VSKhV guide to Floriculture and Greening pavilion, showing greenery indoors in a Kalibr factory workshop¹⁵



Figure 4.18 Photographs of green space at the Kalibr Factory in Moscow: Hero's Square, the Main Entrance, and "800th Anniversary of Moscow" Square¹⁶

¹⁵ Vsesoiuznaia sel'skokhoziaistvennaia vystavka. (VSKhV) G.F. Dimitrieva, ed., *Pavil'on TSvetovodstvo i ozelenenie*. Moscow: Gos. Izdat Sel'Khoziaistvennoi Literatury, 1955. p54-55

¹⁶ Usov, I.P. *Zavod-Sad: Zapiski Sadovoda*, Foreword by Leonid Leonov. Moscow: Profizdat, 1954.

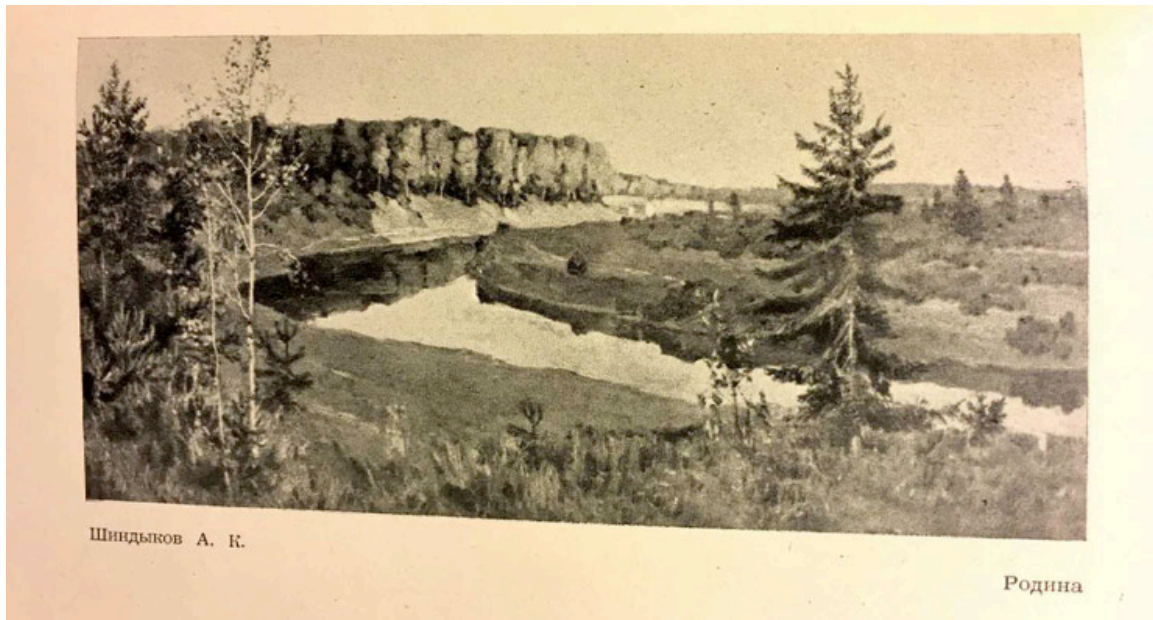


Figure 4.19 Painting "*Rodina [Motherland]*" displayed at RSFSR Art Exhibit in Moscow, 1950¹⁷



Figure 4.20 Frontispiece and title page of *Greening Soviet Cities: A Guide for Design*, 1954 showing green boulevard leading to Moscow State University¹⁸

¹⁷ Artist was A.K. Shindykov, Yaroslavl. *Respublikanskaia vystavka proizvedenii khudozhnikov kraev, oblastei i avtonomnykh respublik RSFSR*, 1950.

¹⁸ M.P. Korzhev, and L. S. Zalesskaia. *Ozelenenie Sovetskikh Gorodov: Posobie Po Proektirovaniu*. [in Russian] Moscow: Gos izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954.

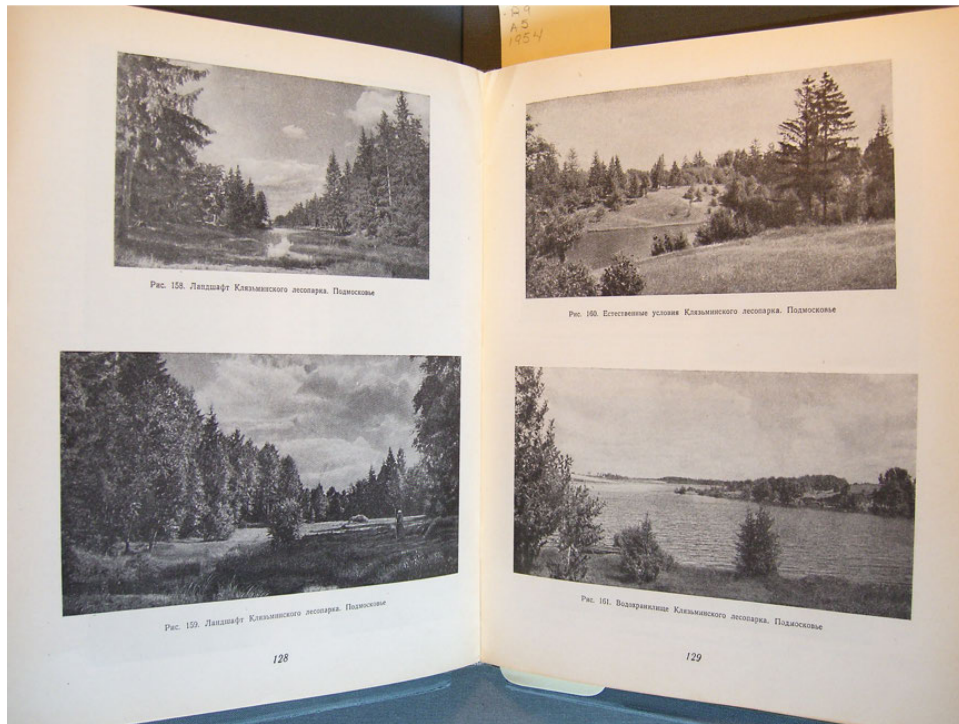


Figure 4.21 Photographs of four landscapes scenes in Kliaz'minskii Forest-Park, near Moscow, from *Greening Soviet Cities* 1954¹⁹

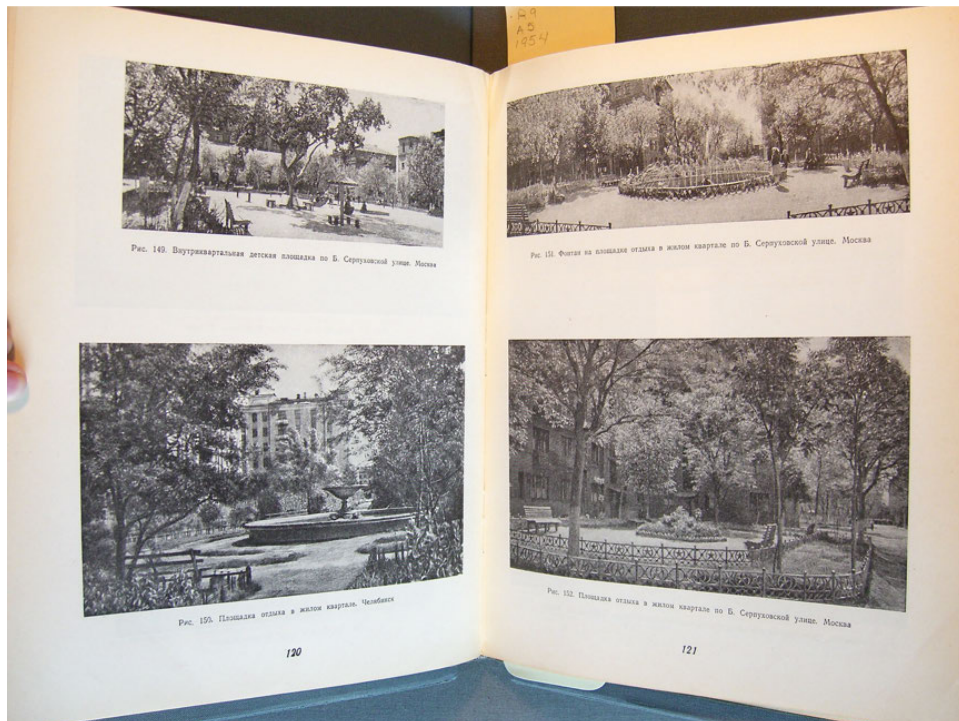


Figure 4.22 Photographs of four rest areas [*ploshchadka otdykha*] in residential courtyards, Moscow and Cheliabinsk, from *Greening Soviet Cities* 1954¹⁹

¹⁹ M.P. Korzhev, and L. S. Zalesskaia. *Ozelenenie Sovetskikh Gorodov: Posobie Po Proektirovaniu*. [in Russian] Moscow: Gos izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954 pp128-29, 120-21

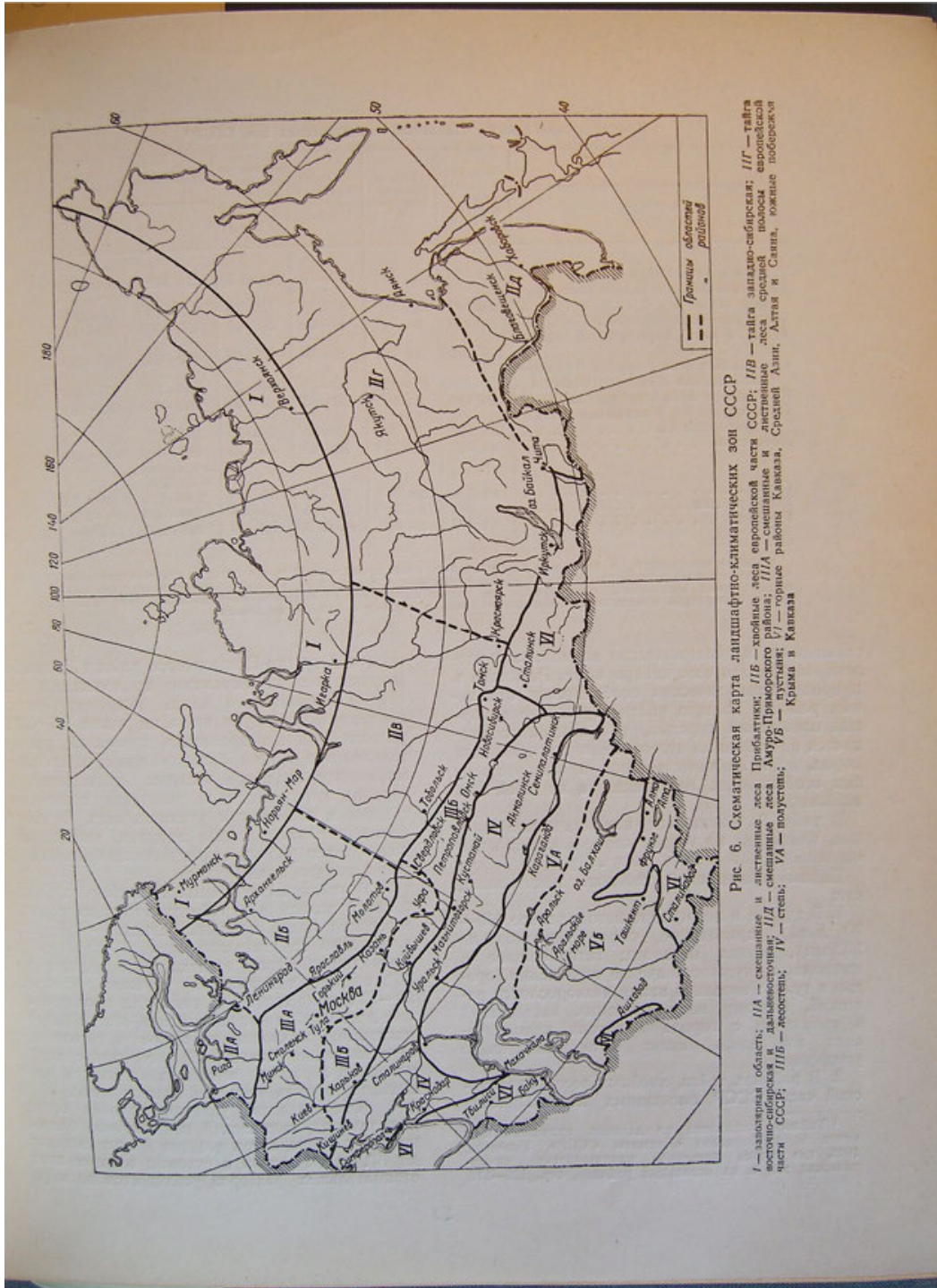


Рис. 6. Схематическая карта ландшафтно-климатических зон СССР. I/B — тага западно-сибирская; I/C — тага восточно-сибирская и дальневосточная; I/D — смешанные и лиственные леса Амурско-Приморского района; I/A — смешанные и лиственные леса европейской части СССР; II/B — лесостепи; IV — степи; VA — полустепи; VB — пустыни; VI — горы Кавказа, Средней Азии, Алтая и Саяна, южные побережья Крыма и Кавказа

Map 4.2 Schematic map of the landscape-climate zones [landshafno-limaticeskikh zon] of the USSR, from *Greening Soviet Cities*, 1954²⁰

²⁰ M.P. Korzhev, and L. S. Zalesskaia. *Ozelenenie Sovetskikh Gorodov: Posobie Po Proektirovaniu*. [in Russian] Moscow: Gos izd-vo lit-ry po stroitel'stvu i arkhitekture, 1954 pp23

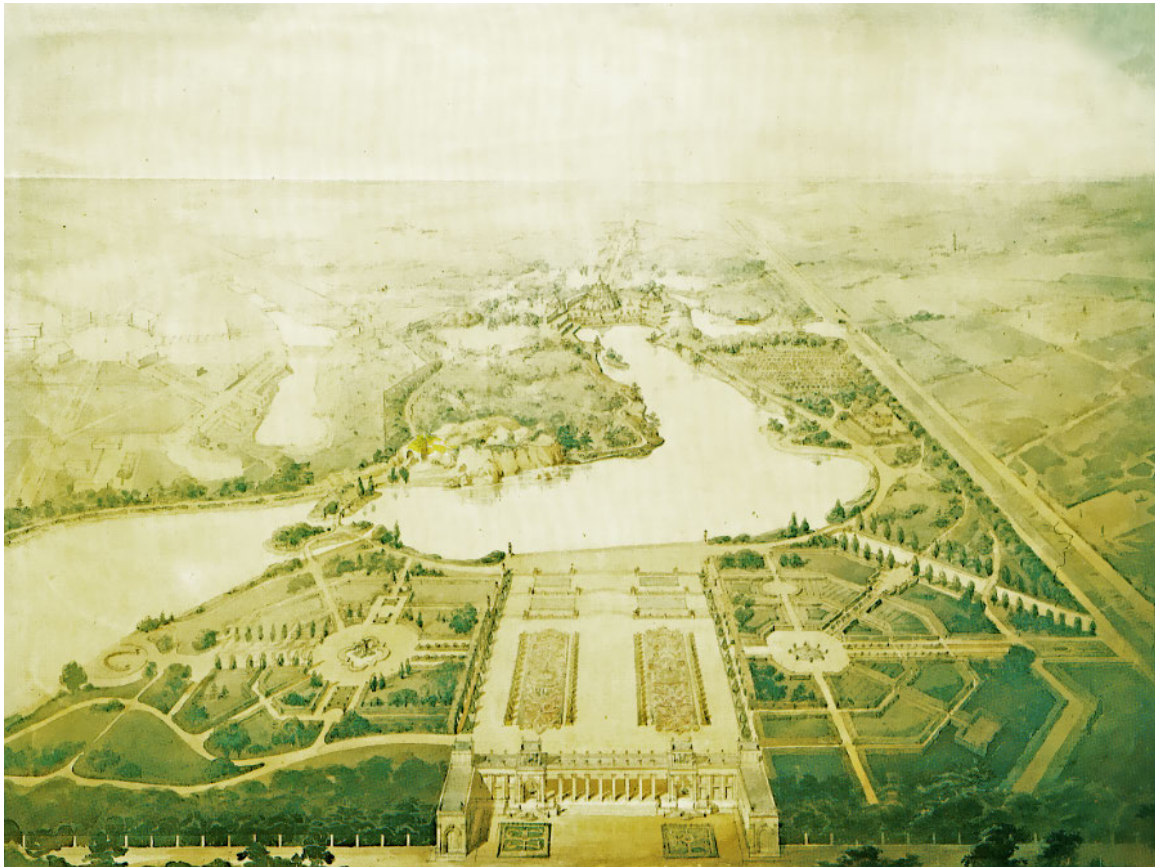


Figure 4.23 Birds' eye view of Main Botanical Garden (GBS) in Moscow's Ostankino district, 1948²¹



Рис. 53. Дубрава в Главном ботаническом саду Академии Наук СССР



Рис. 52. Березовая роща в Главном ботаническом саду Академии Наук СССР

Figure 4.24 Photographs of Oak and Birch groves in Main Botanical Garden, from *Ozelenenie Gorodov*, 1951²²

²¹ from Polis Blog website, included in post by Peter Sigris on Stalinist public parks. See <https://www.thepolisblog.org/2010/01/urbanism-under-stalin.html> Last accessed 01/2019.

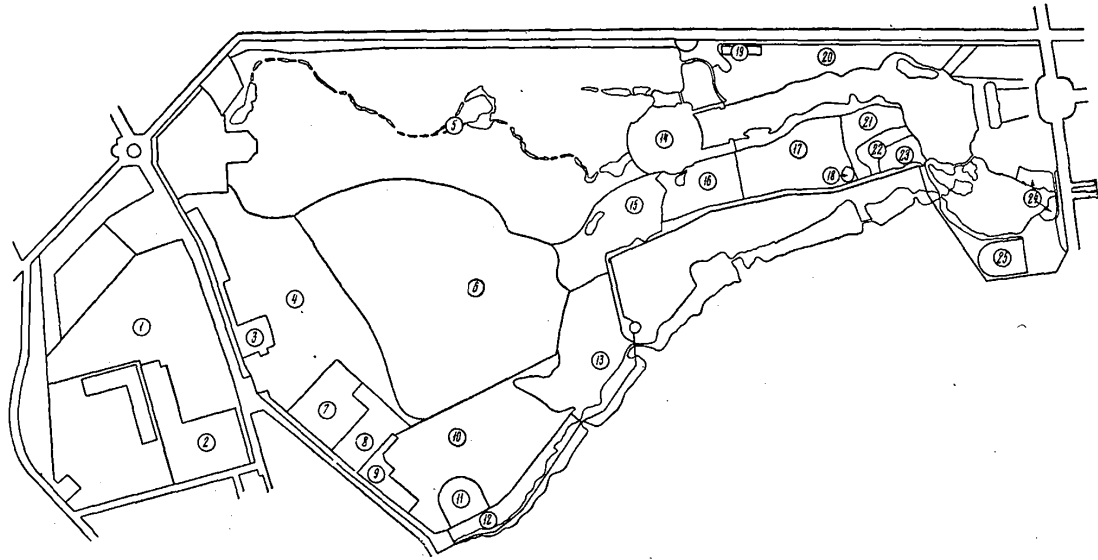


Рис. 51. Схема размещения экспозиций Главного ботанического сада Академии Наук СССР (проект)

1 — питомники; 2 — интродукционно-селекционные участки; 3 — экспериментальный участок флоры СССР; 4 — пейзажный парк; 5 — дендрарий; 6 — заповедник; 7 — коллекционный участок травянистых растений; 8 — фондовая оранжерея; 9 — колледжия роз; 10 — лесопарк; 11 — сад роз; 12 — сад прибрежных и водных растений; 13 — сад непрерывного цветения; 14 — тропическая флора; 15 — флора Европейской части СССР; 16 — флора Сибири; 17 — флора Дальнего Востока; 18 — флора Арктики; 19 — дикие полевные; 20 — культурные растения; 21 — флора Алтая; 22 — флора Средней Азии; 23 — флора Кавказа; 24 — эволюция растений; 25 — учебный сад



Рис. 50. Схема распределения полей, реди и насаждений на территории Главного ботанического сада Академии Наук СССР

1 — поляны, прогалины, огороды. Насаждения: 2 — дубовые; 3 — березовые; 4 — осинные и ольховые; 5 — сосновые; 6 — еловые; 7 — липовые. Редины: 8 — дубовые; 9 — березовые; 10 — осинные и ольховые; 11 — сосновые; 12 — еловые; 13 — липовые

Figure 4.25 Exhibition and Planting Plans for Main Botanical Garden of the Soviet Academy of Sciences, Moscow. 1951²³

²² L.O. Mashinskii, *Ozelenenie Gorodov*. Moscow: Izd-vo Akademii Nauk SSSR, 1951.

²³ L.O. Mashinskii, *Ozelenenie Gorodov*. Moscow: Izd-vo Akademii Nauk SSSR, 195. p130, 132

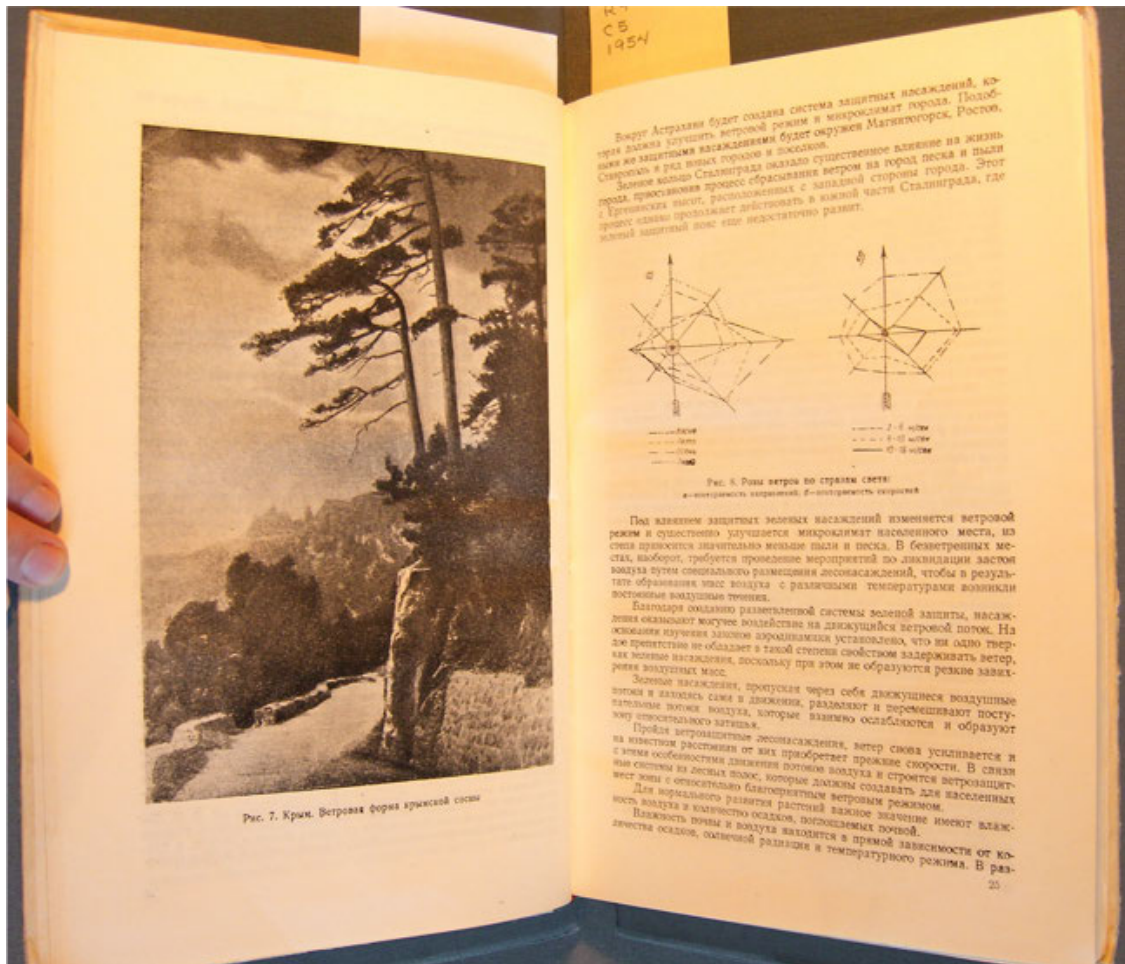


Figure 4.26 Cover and pages from *Composition of Green Plantings*, 1954 showing a windblown pine in Crimea opposite two wind-rose diagrams of prevailing winds²⁴

²⁴ M. I. Cherkasov, *Kompozitsiia Zelenykh Nasazhdenii* [Composition of Green Plantings]. Moscow: Goslesbumizdat, 1954

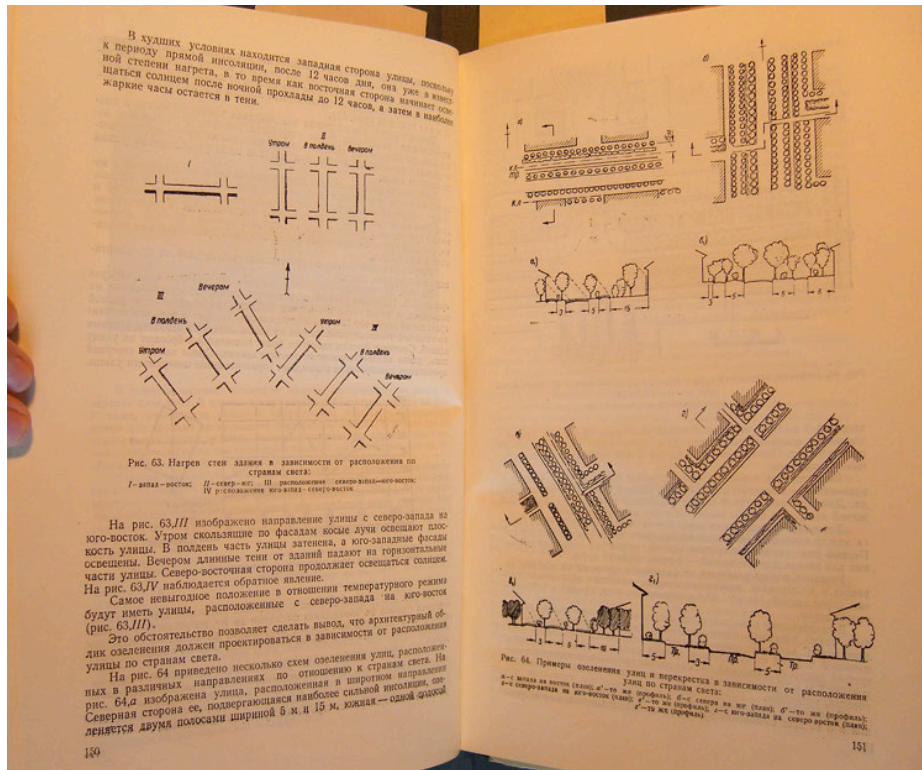


Figure 4.27 Model plans and street sections showing best practices in greening relative to street orientation relative to cardinal direction, from *Composition of Green Plantings*, 1954²⁵



Figure 4.28 Photograph of workers sitting on tree-shaded benches in the plaza on the grounds of 'Kauchuk' factory, Moscow, 1954²⁵

²⁵ M.I. Cherkasov, *Kompozitsiia Zelenykh Nasazhdenii* [*Composition of Green Plantings*]. Moscow: Goslesbumizdat, 1954. p150-51



Рис. 72. Озеленение площадки завода „Каучук“ в Москве

Figure 4.29 Photograph of greenery on the site [ploshchadka] of the Kauchuk factory in Moscow, from *Composition of Green Plantings, 1954*²⁶

²⁶ M.I. Cherkasov, *Kompozitsiia Zelenykh Nasazhdenii [Composition of Green Plantings]*. Moscow: Goslesbumizdat, 1954.

Chapter 5

“Let’s Dream!” Precarity and Patronage in Postwar Krasnoyarsk

Postwar Soviet culture and politics were deeply infused with themes of stasis, conservatism, heritage, and reinforced hierarchy.¹ In architectural terms, the period from 1945-1954 was also when building styles, like late Stalinist culture, “ossified” and settled into its Socialist Realist canonical forms.² Both of these phenomena can be seen in Moscow, the petri dish of Soviet prestige projects. Not all parts of the USSR experienced the period in the same way, however. In the postwar period, the official emphasis on restoration and commemoration—so appropriate for Moscow and other long-established cities of European Russia—was at odds with how the war and postwar period of “reconstruction” was experienced in the cities and settlements of the USSR’s eastern regions. Particularly in the Siberian settlements and cities transformed by war-related factory relocation and demographic shifts, the postwar period was characterized by rapid industrialization and modernization, rather than heritage or socialist realist stasis. In this period, the characteristics most commonly associated with this vast region—the desolate snowscapes, labor camps, and ‘peripheral’ isolation—were drastically altered in an explicit campaign of urban modernization and expansion.³ Turning our attention away from

¹ “Stasis” should not be confused with “stability,” which Sheila Fitzpatrick has noted was in short supply in this period. See Dobrenko, “Socialist Realism and Stasis.”; Sheila Fitzpatrick, “Postwar Soviet Society: The ‘Return to Normalcy’, 1945-1953,” in *The Impact of World War II on the Soviet Union*, ed. Susan J. Linz (Totowa, NJ: Rowman & Allanheld, 1985). By comparison, the 1930s were times of relative movement and flexibility. Scholars interested in the “landscapes” of the interwar period have focused, for instance, on the “spatial dynamics of ideology” “the naturalization of ideological space” and, in the third and final section, the “utopian impulse of ‘the imaginary geography of the 1930s.’” In particular, see Dobrenko and Naiman, *The Landscape of Stalinism: The Art and Ideology of Soviet Space*. Specifically, chapters by Katerina Clark, “Socialist Realism and the Sacralizing of Space”; Evgeny Dobrenko “The Art of Social Navigation: The Cultural Topography of the Stalin Era”; and Emma Widdis “To Explore or Conquer?: Mobile Perspectives on the Soviet Cultural Revolution.” Greenspace design, which was a more direct “cultural construction of space” is not included in this book or {Lodder, Kokkori, and Mileeva, *Utopian Reality*., although as a subfield of gradostroitel’stvo it was equally a subfield of arkhitektura, usually considered one of the “creative” fields.

² “Ossification” comes from Dobrenko, “Socialist Realism and Stasis.”. Regarding architecture’s changes and continuities under Stalin, see Lodder, “Ghost in the Machine.” In the same passage, Lodder quotes Andrei Ikonnikov to the effect that the period from 1945-1954 was characterized by ‘the absolute dominance and dogmatism of the utopia of “eternal values”’ (p174, fn17). In general she asserts the continuity of many modernist and avant-garde techniques and personnel across the Stalinist period, but distinguishes her argument from that of Groys, *The Total Art of Stalinism: Avant-Garde, Aesthetic Dictatorship, and Beyond*..

³ Gary Hausladen, *Siberian Urbanization since Stalin* (National Council for Soviet and East European Research, 1990). p15: “In

Moscow to regional developments offers means of understanding regional variation and contrast within the national postwar experience. We gain fuller understanding of how urban greening and beautification developed during this period far from the Moscow main-stage. By studying provincial implementation and reaction to late Stalinist phenomenon as expressed within the praxis and discourse of urban greening and beautification in Krasnoyarsk, this chapter thus links the late Stalinist social construction of space to actual place-making.

The Siberian experience of the postwar period diverged in multiple ways from that of Moscow. In the “big tent” coalition of postwar beautification and greening, the architectural community participated as one of a broad array of professional and scholarly groups. In Moscow, Leningrad and other major cities, architects and other built environment design specialists bumped shoulders with public health experts, botanists, forestry scientists, engineers and CPSU ideologues at conferences and in the central planning and research institutes. In the cities of the “home front” or hinterland [*tyl'*], shortages of those same specialists exacerbated the deeply felt direct and indirect wounds of wartime violence and labor shortage, as well as of materials and funds for reconstruction and recovery work. Whereas the earlier chapter on Krasnoyarsk addressed the public side of the city’s mid-century transformations, this chapter examines how local urbanists and architects navigated the postwar period, responding to and participating in All-Union or central phenomena (including those covered in the previous chapter).

The Acceleration and Industrialization of Postwar Siberia

Siberia and northern Kazakhstan were geographically privileged as ‘safe’ areas for military-industrial technology far from international borders. This geo-political situation influenced the mid-century arc of Soviet urban and regional planning. American planning scholars Robert J. Osborn and Thomas Reiner, writing from the more immediate vantage point of the early 1960s, asserted that the three defining characteristics of Soviet settlement patterns were the rapidity and extent of Soviet urbanization since the early 20th century, the growth of Siberian cities in particular, and the disproportionate growth of the USSR’s largest cities, which attracted

1929, on the eve of rapid industrialization, only 14 percent of the population of Siberia lived in cities; this proportion had increased to 31 percent in 1939 just prior to the War. By 1945, at the end of the War, 43 percent of the population lived in cities (Isupov, 1987, pp . 35 and 39).” and p33: “By 1985, over 70 percent of all Siberians (22 of 30 million) lived in urban places .”

the greatest influx from country and smaller cities alike.⁴ Just as Russian and Soviet industrialization is sometimes said to perform an accelerated version of West European industrialization, the “new industrial communities” that comprised/drove mid-century urbanization of Soviet Siberia experienced accelerated modernization in the postwar period, repeating “in a shorter span the experience of older cities.”⁵ Siberia’s ‘Great Leap’ happened in fast forward.⁶

The divergent experience of center and provinces was repeated within Siberia between western and eastern regions. As stated in a general history of the region’s conquest and settlement,

“Siberia.. held a key to rebuilding the war-torn European lands of the Soviet Union, but the age-old problems remained. Climate, distance, and the need to move armaments from factories to the front as quickly as possible had concentrated the resettlement and industry of the great relocation in Siberia’s western lands, while its remaining two thirds had remained much as it had in earlier times.”⁷

In general, Siberia’s overall population increased at a pace similar to that of elsewhere in the USSR, but became sharply more urban during WWII, when inhabitants of the countryside and smaller towns moved into the cities to work on re-located factories and replace the outmigration of military-age men.⁸ Many existing cities doubled and tripled in size as factories were shipped

⁴ Osborn and Reiner draw from statistics from the USSR Central Statistical Administration, particularly its 1959 numbers. They point to the following increase in urbanization: In Tsarist Russia [1913] “less than 20 per cent... lived in cities and towns; now the proportion is crossing the 50 per cent mark.” In 1926: 31 cities with pop. ≥100,000; 3 cities ≥500,000; as of 1959 “five times this number [medium-large cities], containing about one-fourth the Soviet population” and “25 cities over 500,000.” Slower or no growth noted in smaller cities, even as “a great many small urban communities known as “workers’ settlements” have sprung up around new industries.” Robert J. Osborn and Thomas A. Reiner, “Soviet City Planning: Current Issues and Future Perspectives,” *Journal of the American Institute of Planners* 28, no. 4 (1962): 239D40..

⁵ *Ibid.*, 247. Osborn and Reiner note the initial construction of industrial production facilities, followed not preceded by the urban fundamentals of “permanent housing and service facilities.” This is a pattern noted in a wide range of cities and settlements, most famously Magnitogorsk where the immediate necessities of workers’ living somewhere generally ended up interfering with the ultimate viability of officially preferred “planned” urbanism—interim shelters having long before been built by the workers and industries involved as close to the worksite or factory plant as possible. A similar pattern is observed in the case of developmental “bootstrapping” at Norilsk. See Andrew R. Bond, “Noril’sk, Profile of a Soviet Arctic Development Project” (PhD Dissertation, University of Wisconsin-Milwaukee, 1983).. In Krasnoyarsk, discussions regarding factories’ sanitary-protective zones often included questions of housing demolition and resettlement for this reason.

⁶ Industrialization, acceleration, and infrastructure development are classical markers of modernity. Siberia’s lived experience of rapid change and its relocation from backwater to military-industrial-economic main current would have appeared aesthetically at odds with the “stasis” and a-temporal “harmony” otherwise associated with postwar stalinist iconography. This qualitative dissonance between Siberian and European Russian “ambient conditions of modernity” would likely have been sensed as a rush to join an Other— strengthening rather than eliding a feeling of Siberian identity as distinct from ethnic pan-Russian-ness. The attempts by landscape painters and critics at the end of the decade (discussed later in this chapter to reconcile aesthetic celebration of “timeless nature” and of “socialist transformation” as defining elements of nationalist socialist realist art could thus be interpreted as, most directly, an attempt to determine the cultural place-status of Siberia, where both elements had deep associations, within the space of Russian identity.

⁷ Lincoln, *The Conquest of a Continent: Siberia and the Russians*, 363.

⁸ These demographic shifts were accompanied by the equally transformative forced movement of demobilized soldiers, prisoners of war, and “suspect” ethnic populations during and after the war, from Poles to Koreans.

eastward during and after WWII to avoid actual and threatened invasion, irrevocably transforming of the region's ecological and urban characteristics.

Among the Siberian cities transformed mid-century was Krasnoyarsk, which emerged at this time as a major industrial center. The massive expansion of industry triggered an increase in population from 190,000 inhabitants in 1939 to 650,000 in 1970.⁹ In general, cities east of the Ural mountains grew faster during the 1940s-1970s than cities in other Soviet regions and republics. According to some, Krasnoyarsk was the fastest growing of the cities.¹⁰ Compared to the fivefold or greater growth in general Siberian urbanization asserted by Osborn and Reiner, Vera L'vovna Ruzhze in her 1966 book on the formation and development of Krasnoyarsk states that, between 1917 and 1962, the city's population increased by a factor of seven. She gives the following growth percentages for Siberia's major cities, 1939–1959: Krasnoyarsk 217%, Irkutsk 146%, Khabarovsk 156%, Tomsk 172%, Ulan-Ude 139%, Chita 142%, and Yakutsk 141%.¹¹ Notably, with the exception of Tomsk, the cities called out by Ruzhze are located to the East of the Yenisei River. She does not give stats for Novosibirsk, Omsk, or Sverdlovsk (Ekaterinburg), all equally major Siberian cities located to the West of Krasnoyarsk along the Trans-Siberian Railroad. The population in thousands of other major Siberian RR cities, from West to East in 1939 was Novosibirsk 404k, Omsk 289k, and Irkutsk 250k. The population of each city increasing in the 1959 and 1970 census as follows: to 885k and then 1,161k (Novosibirsk); 581K, and 821K (Omsk), and 366k to 451k (Irkutsk).¹²

Local authorities frequently remarked that the city and region of Krasnoyarsk occupied “a leading position” among the Siberian cities and towns swept up in this newest wave of industrialization and modernization. This was more than a figure of speech. The city of Krasnoyarsk effectively straddled the “edge” of three thresholds: of industrial modernity, of topography/climate, and of political status. For this reason alone it is a useful site from which to access Soviet postwar experience. Moreover, the very developments and trends that shaped the built environment and culture/ambience of Krasnoyarsk during this period were directly and centrally involved in issues of greening and beautification. The local experience therefore

⁹ Gary Hausladen, *Siberian Urbanization since Stalin* Washington, DC: National Council for Soviet and East European Research, 1990. Appendix 3, 102.

¹⁰ see also chart of postwar Siberian city growth FIGURE XXYZ

¹¹ Ruzhze, *Krasnoiarsk: Voprosy Formirovaniia I Razvitiia*, 6.

¹² According to Hausladen, *Siberian Urbanization since Stalin.*, using the same official census data, see Appendix 1 and 2}. He gives the population of Krasnoyarsk before and after the war as follows: 190K in 1939, 412K in 1959, 648K in 1970.

provides in microcosm a taste of the challenges faced by the architectural community of the RSFSR/Soviet Union generally as they strove to meet the many and often contradictory aspirations associated in the postwar period with regional “beautification and greening.”

The experience of (post)war transformation, shared with other cities in the rear of the war effort, was made more acute in the case of Krasnoyarsk by its over determined “edge” condition. First, the transition to industrial modernity experienced by so many Siberian cities at this time was, in Krasnoyarsk, expressed spatially and materially in the differences between Left- and Right-bank sections of the city. In contrast to a new city such as Magnetogorsk, in which the poles of reference were an undeveloped setting and imagined full-fledged completion, Krasnoyarsk’s pre-Revolutionary and 1930s developments remained more or less intact if threadbare while new development was concentrated on the opposite bank. The city’s “before” and “after” remained prominently on view.

Second, although Krasnoyarsk remained geo-politically internal to the continent and USSR national boundaries, in crossing the Yenisei River one moved from West to East Bank and from “western” to “eastern” Siberia. In doing so, one also moved from a “mainland” of modernizing RSFSR where industry, agriculture, and urban settlements coexisted to a region that was a temporal and infrastructural backwater— the region of the archipelago of the GULAG as classically imagined, but also a topographically and culturally distinct region.

Third, as part of the Lend-Lease program active during the war, Krasnoyarsk had been a site of transfer between generic Red Army pilots and the specially selected cadre of pilots permitted to travel to Alaska in order to fly the “on loan” American-built aircraft westward to the front.¹³ In this, Krasnoyarsk acted as the gateway to the wild/secret/backward regions of the Soviet east. Likewise, prisoners and others sent North to Norilsk and other “closed” sites of GULAG-infused industrialization transferred in Krasnoyarsk between the technological infrastructure of the Trans-Siberian railroad to the “environmental infrastructure” of the Yenisei River.

Specific challenges faced in Krasnoyarsk during this period were the provision of sanitary

¹³ Lincoln, *The Conquest of a Continent: Siberia and the Russians*, 362, note 18. Lincoln mentions only that Irkutsk and Krasnoyarsk were receiving points of U.S. Lend-lease aircraft flown from Alaska. More detail on the itinerary, pilots, and distinction between the security regime of Western and Eastern Siberia can be found in Geust and Petrov, *Lend-Lease Aircraft in Russia*. also available online at http://lend-lease.airforce.ru/english/articles/geust/aircraft_deliveries.htm. See also Hays, Otis Jr. *The Alaska-Siberia Connection: The World War II Air Route* (Williams-Ford Texas A&M University Military History Series). College Station, Texas: Tamu Press, 1996.

and other urban infrastructure, the incorporation of multiple new factories into the city's orbit, and the not-always-orderly expansion of residential and industrial districts on the right bank of the Yenisei, opposite the city's historical left-bank center. These challenges, and their attempted resolution, affected the material realities of the city's relationship with local hydrology, topography, biosphere as well as the immaterial realm of landscape aesthetics and urban self-identity (as discussed in Chapter One). Given the contrast between the experience of center and Eastern regions during the 1940s, reconciling the official policies of "urban restoration and reconstruction" and cultural conservatism [patriotic heritage celebration] to local conditions proved challenging for local architects, revealing some of the societal and ideological tensions animating the seemingly stagnant/static postwar period of Late Stalinism.

Reconstruction, and the surge in industrialization, offered urban administrators and design professionals a chance to modernize what was still essentially a pre-Soviet tsarist urban environment. Their focus in doing so was, for the most part, infrastructural. Even the most "technophilic" interventions could not avoid becoming entangled with issues of landscape and ecological processes, however. As discussed in the earlier chapter, the surge in right-bank activity and concomitant need for better river-crossings stressed the available river-crossing infrastructure, then limited to the 1899 Railroad Bridge (awarded a gold medallion in Paris, 1900 at the Exposition Universelle), a seasonal ferry, and, since 1941, an equally seasonal pontoon bridge. The city's relationship with the river was further altered by the completion in 1952 of the Rechnoi Vokzal [River Station], a Stalinist neo-classical building meant to provide stately access to the river and a new visual-spatial focal point along the riverbank. According to a 1953 New Year's Day newspaper piece discussed at the end of this chapter, the River Station symbolically and architecturally heralded the urban future of Krasnoyarsk, the way a swallow brings the Spring.

In the case of Krasnoyarsk, that socialist springtime included multiple large-scale interventions that served to further entangle environmental and technological processes. The postwar arrival of so many massive industrial enterprises transformed the city of Krasnoyarsk, cementing its transformation from a provincial railroad stop-over town to a regional powerhouse with numerous scientific and educational institutions. To the dismay of political and urbanist authorities, the city's beautification efforts—needed to produce what anthropologist and STS scholar D. Larkin refers to as the "ambient conditions of modernity"—did not keep pace with

this economic-industrial and administrative growth.¹⁴ All of the projects that comprised the city's transformation had their landscape aspects; examination of meeting transcripts and other discourse within the architectural community suggest why and how landscape, and greening, accumulated such status within local praxis.

Of Beautification & Backwardness: Krasnoyarsk 1945

As the war drew to a close, architects and urban authorities in Krasnoyarsk scrambled to provide basic communal amenities. The "General Plan for Greater Krasnoyarsk" remained in limbo, approved only in 1950 and 1951 by central and local authorities.¹⁵ In the meantime, lacking an overall blueprint for the city's development, the focus remained on the struggle to acquire resources and respond as needed to the relatively inflexible effects of industrialization. At times the new industries presence seemed to offer leverage to improve overall conditions, as in a report from November 1944:

"The Executive Committee [Ispolkom] of the City Council and the GorKom bureau of the VKP(b) note that, in contrast to the substantial growth of industry in the city of Krasnoyarsk, significant backwardness [otstavanie] is observed in the realm of beautification, grown especially acute in the years of the Patriotic war. The current state of municipal infrastructure [...] sharply limits the city's ability to meet the cultural-everyday demands of workers [kul'turno-bytovykh zaprosov].¹⁶

The reported noted specifically issues in the following areas: there was no approved layout plan, no sewage system (kanalizatsii) or communal transport in the city, no permanent bridge over the Yenisei. In addition to these inadequacies in traditional areas of infrastructure, Lytkin also noted problems and backwardness in specifically socialist forms of municipal infrastructure: listing "the insufficient quantity of bathhouses, entertainment facilities [zrel'ishchnykh predpriiatii], and external urban beautification (roads, sidewalks, greenery etc)" as evidence of this backwardness.

Facing significant gaps between the dream and reality of urban infrastructure, the city authorities therefore resolved to ask the RSFSR Council of People's Commissars 1) to approve the General Scheme for Krasnoyarsk and allocate 100-200 thousand rubles for detailed

¹⁴ Larkin, "The Politics and Poetics of Infrastructure.". He also describes infrastructure as the "improvements to the city" that produce "a common visual and conceptual paradigm of what it means to be modern." For Soviet urbanists during the postwar Zhdanovshina, the urgency associated with distinguishing their interventions from the false models of Western aesthetics and infrastructure increased the importance of spatial and vegetal forms of infrastructure, these being seen as impossible to achieve under Western/capitalist conditions of private land ownership.

¹⁵ Tsarev, "Planirovka Bol'shogo Krasnoiarska 1930-Kh Godov: Etapy Proektirovaniia I Gradostroitel'noe Znachenie.".

¹⁶ Nov.16, 1944 Report "On measures [to be] taken in the beautification of the city of Krasnoyarsk in 1945 and immediate prospects for its development" by (architect) Lytkin GAKK f P-17 op.1 del737 L229

planning;¹⁷ and 2) to allocate 250 thousand rubles for design-development work on a permanent bridge over the Yenisei River. Central allocations were likewise requested for a number of municipal improvement projects, including the architectural restoration of various buildings and cultural sites linked to the pre-Revolutionary political heritage of the city.¹⁸ Specifically, funds were requested to restore

the house...where Stalin lived; the [Yudin] library in the *sloboda* of the 3rd International where Lenin worked; the house on Uritskii Street no74 where Lenin lived; Pushkin Theatre, where comrade Uritskii spoke; and the House of the Teacher, where Ia.M. Sverdlov spoke.¹⁹

Unlike in Moscow, where the preservation and celebration of “heritage” might encompass monuments from the tsarist era due to their architectural or aesthetic grandeur, in Krasnoyarsk protection or improvement to the city’s built heritage was requested due to buildings’ historic use by political figures. (Architectural distinction as rationale seems to have been avoided, perhaps because those buildings might carry to close an association to the city’s past merchant or penal functions.)

Finally, the Ispolkom President (Shashelev) and local Party Secretary (Butuzov) stated that the chief of Krasnoyarsk Gorkomkhoz (Municipal Communal Economy) should fulfill the plan by allocating 455 thousand rubles for road and bridge construction, and 150 thousand for greening (“120 thousand items planted”). They also resolved to approve the greening plan for 1945 “for the enterprises and facilities of the city,” demonstrating a logic of intervention that centered on specific industrial sites rather than a city as a whole.²⁰ Greening was still site-oriented at this time, not yet the network of connected green streets and spaces that it would become. It was also just one task of many in a punch list of “infrastructural” interventions into the built environment of Krasnoyarsk, interventions characterized by reliance in concept if not in execution on the helping hand of local enterprises and industry sponsors. Industries were the source of beautification as well as its object.

Professional architecture-planning expertise, meanwhile, was in short supply. As noted in

¹⁷ The larger sum is stated on GAKK fond P-17 op.1 del737 L238, unclear which amount was the final request.

¹⁸ These included water supply system, automated telephone station for 4000 numbers, more staff and transport equipment for the Krasnoyarsk Stroikontor; 4,500 tons of cement for the 2nd and 3rd *kvartaly*. [GAKK fond P-17 op.1 del737 L239]

¹⁹ 1946 GAKK fond P-17 op.1 del737 L238b-239. Moisei Uritsky (1873–1918) and Yakov Sverdlov (1885–1919) were key figures in Bolshevik circles in the years leading up to the 1917 Revolution, though both died shortly thereafter. In Leningrad, Palace Square was renamed Uritsky Square.

²⁰ 1946 GAKK fond P-17 op.1 del737 L239b. [This 1945 plan may be the same as the April 1945 designs approved by the Gorkom— see Nifant’ev report GAKK fond P-17 op.1 del737 [L185-187] Draft 1945-04-29 Beautification Plans approved: Nifant’ev GAKK fond P-17 op.1 del737 [L185-186]

a 1945 report memo from the Party Secretary of the City Committee, one Krasnobaev, to the Party Secretary of the Krai Committee, one Aristov, the city of Krasnoyarsk was involved in “major construction of enterprises of Union, Republic and local industries.”²¹ This multi-scalar involvement in production offered the city traction in its petitions for resources. Krasnobaev describes in detail the substantial rate and amount of [industrial] construction and growth in Krasnoyarsk in 1944-1945, including a list of factories under construction. Many had military applications, others were connected to the construction industry e.g. in the fabrication of building materials. “Regardless of all this,” notes Krasnobaev, “the construction department of the City Committee (GorKom) consists of a single individual: the Gorkom deputy secretary in Construction.” In combination with the logistical challenges that prevented quick or easy travel between the city’s two banks, this short staffing would obviously have made it difficult to supervise construction progress or quality. Without belaboring the obvious mismatch between task and capacity, Krasnobaev asked the bureau of the Regional Committee [KraiKom] to petition still higher, and request that the Central Committee of the Communist Party [VKP(b)] approve the addition of an “instructor” to the staff of the construction department, with pay rate of 950 rubles a month.

Such requests were common: local authorities wrote to regional and central authorities requesting status, funding, and staff allocations based on the city having ‘earned’ such things thanks to the robust industrial growth, regardless of that growth’s chaos or productivity. Vertical requests coexisted with horizontal petitions sent from city officials to local industries and organizations requesting labor, materials, and “attention” to duty — these latter justified in terms of such things having been approved/required by the relevant central authorities. Local architect-planners in this context had limited procedural or punitive leverage over urban outcomes, although they might seek to influence outcomes by discursive means.

In general, the position of the local architectural community in the postwar period was thoroughly intermediate. Local architects were expected to be the bridge between central directives/standards and local on-site reality; they were also middle-figures with feet in both professional and official [governmental] realms. Self-awareness of this situation is evidenced in letters of petition and other correspondence between professional and municipal leaders. One

²¹ GAKK fond P-17 op.1 del737 L84. Dokladnaia Zapiska from GorKom Secretary Krasnobaev to Krasnoyarsk KraiKom Secretary Aristov. Reports such as this included detailed information on the city’s budget and industrial production

telling example comes from the following memo from the director of the Krasnoyarsk Krai Chapter of the Union of Soviet Architects (SSA), Marychev, to the Secretary of the Krasnoyarsk Gorkom [City Committee] of the Communist Party, comrade Shishkin. A copy was also directed to the Deputy Secretary on Construction comrade Gorbenko.

Marychev asked that the city's Party authorities release funds so that the Union of Architects, which "unites all the creative professionals in the area of spatial planning and architecture of the cities of the Krai," could subscribe in 1945 to certain periodicals and newspapers. Since the Union apparently lacked even this degree of independent control over its budget, such subscriptions required a petition ritual of justification, allowing a glimpse of how the Union wished to be seen in the eyes of the authorities. According to Marychev, the "task" of the local SSA chapter was

... to cooperate and provide practical help to the state and public organizations in the construction of residential, public, cultural-daily, [and] industrial buildings, as well as in the construction and reconstruction of cities. The Union must therefore be in-the-know [*byt' v kurse*] with regard to all questions discussed in the local and central press.²²

On this basis, one copy each was requested of five publications: *Pravda*, *Izvestiia*, *Trud*, *Stroitel'naia Promyshlenost'* [Construction Industry], and *Krasnoiarskii Rabochii* [the newspaper Krasnoyarsk Worker].²³ The need of local architect-planners to follow equally the political and other news of the center, as well as locally, would continue, even as the design of individual buildings became increasingly standardized and the work of "adapting" those designs "to the site" was outsourced to personnel at the centralized design bureaus in Leningrad and Moscow.²⁴ Design control was centralized, while responsibility for design realization remained distributed.

At the close of the war, responsibility for improvements to the urban environment in cities like Krasnoyarsk was divided among the design-planning bureaus active locally. On April 29, 1945, E. Nifant'ev, in his capacity as Deputy Chairman of the Regional [*Kraevoi*] Commission on Beautification, sent to the Secretary of the Krasnoyarsk City Committee

²² GAKK fond-17 op.1 del737 L86

²³ No mention was made of the journal *Arkhitektura SSSR*, the centrally published organ of the the Union of Architects or its main competitor in the postwar period, *Arkhitektura i Stroitel'stvo*, which represented the positions of the central Committee on Architectural Affairs, but did not begin publication until 1946.

²⁴ It is difficult to draw stark divisions between "local" and "central" actors here- at times the central bureaus sent their employees to live in Krasnoyarsk while working on a design-plan for the city. See {Slabukha, *Arkhitektory Prieniseiskoi Sibiri*. in which job descriptions in bios of local architects include "*priviazka k mestu*", also Crawford, "From Tractors to Territory: Socialist Urbanization through Standardization."

(Gorkom VKP(b)), S.M. Butuzov, and the City Architect, A.F. Lytkin a list of beautification projects whose design-plans had been completed and approved in April.²⁵ All projects were described under the unifying and capacious category of “beautification” and associated with a specific site, usually one defined by an architecture-planning object such as a building or factory site.

Improvements to these sites and buildings would have varied, as did the functions and scale of sites named. The list named specific projects, indicated which of three organizations was responsible for its development, and gave the date of its approval by the Commission. The distribution of responsibility for these projects and their variety made connections between civic, residential and industrial architecture; between “public” and “private” spaces of leisure, production and infrastructure; between central and local agency. In this way, beautification and greening work involved actors and objects from all sides of the institutional and conceptual divisions that otherwise compartmentalized Soviet urban planning and architecture.

The regional design-planning group, Kraiproekt, bore the brunt of the design-planning work, judging by number of line items. Items varied greatly in scope, however. The list of design projects completed by Kraiproekt included everything from the design of “wooden and cast iron garden benches” and various elements of park and playground equipment (a carousel, a climbing wall, a sandbox, swings) to the beautification of various schools, residential buildings or *zhildom*, including that of the NKVD. They were likewise responsible for the beautification design-plans of Dom Partkursov, the Stadium “Dynamo,” two small squares [*skvery*] located along ul. Stalina, and the park of the “Red Profintern” Factory.²⁶

The second design group named, Dorproekt, was responsible for a similarly broad range

²⁵ 1945-04-29 GAKK fond P-17 op.1 del737 [L185-187] E.S. Nifant’ev was also the author, in 1954, of a “popular guidebook” to Krasnoyarsk, *Gorod Na Yenisei*, that was significantly revised in a second edition in 1973. {Nifant’ev, 1954 #5801}

²⁶ The Red Profintern factory, formerly of the Briansk region, was one of the best known factories evacuated to Krasnoyarsk beginning in Autumn 1941. While sources at the time rarely go into detail, given the national security sensitivity of these factories, all are explicit in stating the significant effect of these relocations on the city. More detail on the range of military-industrial facilities evacuated to Krasnoyarsk can be found at the bilingual website pobeda.krskstate.ru (or victory.krskstate.ru), which provides access to O. A. Karlova, *Krasnoyarsk—Berlin: 1941-1945: 65-Letnei Godovshchine Velikoi Pobedy Posviashchaetsia* (Krasnoyarsk: Polikor, 2010).. On the evacuation and its local effects, see section 2 part 2: http://pobeda.krskstate.ru/oborona/part2_2] The importance of the evacuation effort to the industrialization of Siberia was widely recognized at the time, e.g. in Andrew J. Steiger, "Industrialization of Siberia," *Far Eastern Survey* 15, no. 4 (1946).. In English-language histories, Manley, *To the Tashkent Station: Evacuation and Survival in the Soviet Union at War*. is the dominant resource on the evacuation of Soviet citizens, institutions and factories but its close focus on the experience of evacuees in Tashkent leaves unturned the case of Siberia. The Siberian evacuation experience is discussed in Lincoln, *The Conquest of a Continent: Siberia and the Russians*; Kristen Elizabeth Edwards, "Fleeing to Siberia: The Wartime Relocation of Evacuees to Novosibirsk, 1941-1943" (Ph.D. Dissertation, Stanford University, 1996). and a chapter by Robert Argenbright on the evacuation in Smith, *Beyond the Limits: The Concept of Space in Russian History and Culture*..

of projects; in their case all were associated in some way with railroad facilities and support facilities e.g. the Stadium “Locomotive of the East,” the Railroad Workers’ Dom Kultura, the train station and adjacent plaza, and residential buildings for employees of the Railroad and the Locomotive Repair Plant (PVRZ). The small City Architect’s office, meanwhile, was responsible for a relatively limited number of beautification projects. These were the park on Revolution Square, the embankment of the Yenisei River, the garden of the “Red October” Club, the school of the Paper Combine [*Bumkombinat*], the planted “green zone” of the Cement Factory, and a *skver* at the Leninskii District Council [*Raisovet*].

It is clear from the projects assigned to Kraiproekt, Dorproekt,²⁷ and the City Architect’s Administration that institutional lines of affiliation were more pertinent than questions of object type or scale in determining who was responsible for which projects. Everyone had a bit of everything on their plate; intra-enterprise linkages seemingly outranked spatial or thematic ties.²⁸ Notably unmentioned in this list is the beautification of the city’s central streets—an objective that would dominate local greening and beautification efforts a few years later.

Cross-grained against the division of production responsibilities was the “control” apparatus of construction supervision and evaluation. After development of the design-plans, all had been reviewed and approved by the Kraevoi Commission, as decreed by the Kraikom and Kraispolkom. Furthermore, Nifant’ev asserts that all architect-members of the Commission have been released [*raskrepleny*] from other basic tasks for the period of work production “in order to supervise the correct and timely realization of the projects in actuality [*v nature*].”²⁹ By the end of the decade, this expectation, that local architecture-planning organs would enforce quality-control standards and ensure on time completion of centrally developed, increasingly

²⁷ Possibly the same as Dortransproekt, a Republic-level *trést*. See GAKK fond P-17 op.1 del737 L137 for November 21, 1945 discussion of Dortransproekt as involved in the construction of a bridge over the Yenisei and a tramway in the city of Krasnoyarsk.

²⁸ This pattern of enrolling all available enterprises in “public works” and beautification projects was also seen in the construction, seasonal installation, and maintenance of the pontoon bridge across the Yenisei River, one of the most significant “city-shaping” project of the period. For evidence of this, see GAKK fond P-17 op.1 del737 L152-153, which comprises a List of best workers distinguishing themselves in work on the installation [*po navodke*] of the pontoon bridge over the Yenisei. The enterprises from which these individuals hail gives a sense of the collaborative labor that went into the bridge: OSMCh-26 (42 workers recognized), “Pontonnyi Most” (24 recognized), Sibmashzavod (3 mentions), Factory No.4 (4 mentions), and RechPort (River Port, 6 mentions). Elsewhere, in correspondence between those enterprises and both central and local authorities, it is clear that tis system was plagued by difficulties in coordination. Additionally, the enterprises could and did refuse to provide the requested labor or materials, stating that they were needed elsewhere. GAKK fond P-17 op.1 del737 L168, L172, L189, L196; The additional burden of Krasnoyarsk’s intemperate climate and weather was also mentioned repeatedly as grounds to explain delays and other difficulties.

²⁹ GAKK fond P-17 op.1 del737 [L185-187].

standardized designs, was felt even more deeply. At that time, logistical challenges in the provisioning labor and materials were joined by political precariousness, e.g. the need to show correct “ideo-political content” and “connection to the masses.”³⁰

The language of petition and justification changed little after the end of the war with Germany. In February 1946, a decree on beautification activities was released by the Executive Committee of the Krasnoyarsk Krai Council (Ispolkom Kraisoiveta) and Bureau of the Krai Committee of the All-Union Communist Party (Bolsheviks) [Kraikom].³¹ In keeping with a general Soviet pattern of comparative analysis, the decree begins by noting that local conditions and amenities fell short of the standard presumed to characterize other regions in Soviet Russia.³² The “cities, regional centers and workers’ settlements of the Krai” had a “large backlog [otstavanie]” in beautification when compared to most other “settlement points” of the country.

The “large” amount of beautification work conducted in 1945, while acknowledged in the decree, had not made up for the accumulated neglect of wartime. “Many substantial shortcomings” persisted in the Krai’s urban areas. The cause of these shortcomings, however, could no longer be as easily blamed on the temporary exigencies of war. Instead, the fault lay in “weak participation” by both Party and populace in the task of beautification. Before proceeding to the specifics of issues to be addressed in 1946, the decree cast blame on political organs for failing to properly “attract the population and enterprises” [*privlekat’*] to this work. The Ispolkom Kraisoiveta and Bureau of the Kraikom VKP(b) conclude that the basic shortcoming in matters of beautification of the Krai’s settlements is weak participation on the side of Party and soviet [council] organs in the matter of attracting the population and enterprises to beautification work, and the absolutely insufficient use...of internal material resources.³³

In other words, local resources and local enthusiasm were to be mobilized by local authorities in order for the cities and towns of Krasnoyarsk Krai to catch up to the rest of Soviet Russia. Improved participation would lead to improved urban beautification, thereby eliminating aspects

³⁰ Particularly after 1948.

³¹ 1946-02 Decree: Beautification Plans for Krasnoyarsk Krai, signed by Kolushinskii (director of the Ispolkom of the Kraisoiveta) and Aristov (Secretary of the Kraikom VKP(b) GAKK fond P-17 op.1 del737 [L38-40]

³² No mention is made of the standard set by beautification or greening in European capitals, as was frequently done in 1930s professional literature for instance in Semenov, V. "Zelen' v Gorode" *Krasnaia Niva*, no19 (May 11, 1924): 446-462; Lunts, L. B. *Parki Kul'tury i Otdykha*. Moscow, Leningrad: Gosstroizdat, 1934.

³³ GAKK fond P-17 op.1 del737 [L38]

of backwardness that continued to distinguish Siberia and other “peripheries” from the center.

The beautification measures named in this decree required went far beyond the planting of flowers or other merely cosmetic interventions, again demonstrating the broad infrastructural ambitions of *blagoustroistvo*. Against an unstated backdrop of acute postwar shortages and hardship, the domain of beautification delineated in this decree even exceeded what might be considered “public works” in Western urban planning and governance. Instead, the stated targets of beautification ranged in scale from cities to sidewalks, and included spaces and functions both intimate and infrastructural. Specifically, the decree lamented that

Cities of the Krai are polluted [*zagriaznny*]; roads, bridges and sidewalks exist in unsatisfactory condition, while large quantities of green plantings perish due to the lack of protection and proper care [*okhrany i nadlezhashego ukhoda*]. Cemeteries are mostly unimproved [*ne blagoustroeny*] and exist in neglected conditions. The lack of timely measures, has delayed the repair [*remont*] of housing, baths, electro-stations and other communal services for the population.³⁴

Correction of these defects would, in any city or time, comprise an ambitious agenda of urban modernization, comparable to Baron Haussmann’s mid-19th century transformation of Paris or, closer to home, the 1935 General Plan for the Reconstruction of Moscow.

The implication of the decree was that these problems were a target to be met within the year, thanks to stronger political and ideological mobilization of local capacity. As means to that end, the decree itemized changes to the planning and financing of beautification work. Among other sources of financing, local industries including industrial and food combines were to be assessed a 25% deduction from profits. Another line item obliged various local Party and municipal authorities “to entrust work on the enrollment [*vozlozhit’ rabotu po privilecheniiu*] of enterprises and the populace in beautification efforts” under the “personal responsibility” [*personal’nuu otvetsvennost’*] of one of the secretaries of the Party’s regional city committee and, in the case of city council executive committees, of the chairperson or deputy chairperson in charge of industry.

Regional city Party committees (*Raigorkomy VKP[b]*) and city council executive committees to name the specific executors of the work “taking into account the broad involvement of enterprises, organizations and the populace” in their development of concrete work plans.³⁵ Against the ever-present Stalinist threat of denunciations and purges, the decree’s

³⁴ 1946-02 Decree: Beautification Plans for Krasnoyarsk Krai, signed by Kolushinskii (director of the Ispolkom of the Kraisoвет) and Aristov (Secretary of the Kraikom CP(b)); GAKK fond P-17 op.1 del737 [L38-40]

³⁵ GAKK fond P-17 op.1 del737 [L38]

emphasis on the naming of “specific” names represented an attempt to ensure project realization by establishing clear lines of responsibility—and potential individual scapegoats, should the broad involvement of “enterprises, organizations and the populace” prove inadequate to complete the decree’s objectives.

The scope of work for 1946, meanwhile, included such items as the organization of “mass cleansing” [*massovuiu ochistku*] of “trash and uncleanness” [*ot musora i nechistot*] from cities, regional centers and workers’ settlements.³⁶ A winter or more worth of waste was to be deposited “on the icy surface of rivers, on the fields of ancillary farms, sovkhoz and kolkhoz, or on workers’ vegetable gardens [*ogorody trudiashchikhsia*]” in order to achieve “full completion” of the cleansing by April 20th. Half the year’s necessary construction materials—stone, sand, lumber, brick, lime etc.—were to be brought to worksites by the first of May, and “all major buildings” were to be repainted by the end of July.³⁷ [L39]

With regard to the city of Krasnoyarsk in particular, item 7 of the decree charged comrades Shashelev and Butuzov of the Krasnoyarsk City Council (Gorsoviet) and Party Gorkom respectively to resolve major organizational issues within a short period. These municipal power brokers were tasked “in the course of February-March” with the following:

to resolve the organizational questions regarding the construction in Krasnoyarsk of a sewer system [*kanalizatsii*], the reconstruction of the water supply, centralized heating [*teplofikatsii*] of the left-bank and right-bank parts of the city, and road construction...³⁸

Moreover, lest they forget that the significance of local roads infrastructure is rarely purely local, “particular attention” was to be paid to bringing into “full order” all parcels of the *trakty* [regional highroads, such as the road to Moscow] that were located within city boundaries.[L39]

Many of these measures concern improvements to the urban environment at the scale of district or municipal infrastructure systems, rather than architectural improvements to individual

³⁶ These annual or semi-annual clean-up campaigns were a widespread phenomenon in the postwar Soviet Union, entailing the manual removal of household wastes including excrement from on-site holding containers (in the best scenario). Even the capital city of Moscow was no exception, as detailed by Donald Filtzer in *Hazards*. Filtzer, *The Hazards of Urban Life in Late Stalinist Russia: Health, Hygiene, and Living Standards, 1943-1953*. In the absence of sufficient equipment or municipal sanitation employees, such campaigns were largely conducted on the basis of mass “volunteer” labor.

³⁷ GAKK fond P-17 op.1 del737 [L39]

³⁸ GAKK fond P-17 op.1 del737 L39. The “Titul’nyi spisok” [Title list] of Krasnoyarsk Krai supra-budget spending objects for 1946 [GAKK fond P-17 op.1 del737 L19] includes ten items, most of which also appeared in the beautification plan. Of these ten, eight were located in Krasnoyarsk, one in Kansk, and one in Achinsk. The headliner projects in Krasnoyarsk were: 1. The bridge across the Yenisei River; 2. The Tramway, 1st phase, in the right-bank half of the city; 3. Heating, phase 1; 4. Construction of sewer collectors; 5. Construction of water supply on the right bank; 6. Construction of the Krasnoyarsk Dom Sovetov; 9. Reconstruction of the Thermo-Electric Station of the Engine Repair Factory [PVRZ] to provide heat for the city; and 10. Asphalt paving for *prospekt Stalina*.

buildings and their interiors. Even as the enrollment of “the populace” [*naselenie*] in beautification work included theoretically volunteer labor to supplement the explicitly unfree, unpaid labor of prisoners of war and labor camp inmates³⁹, the spaces and objects subject to beautification efforts included a range of residential, industrial/productive, and civic spaces.

The catholic embrace of the decree’s general provisions was mirrored in its specific discussion of urban greenery and greenspace. The task of urban greening, like everything else in the postwar period, was challenged by shortages of material and labor. The response taken by the Krai’s authorities was to distribute responsibility for planting materials in the same way that they demanded contributions of construction materials. By the 20th of the month [*v 2-kh dekadnyi srok*],⁴⁰ local state and Party authorities were to “arrange contracts for planting material” and “establish concrete tasks for enterprises, institutions, and organizations” with regard to their completion of the spring planting.[L39] The specter of food shortages, a common experience throughout this period, subtly haunts the specifics of this measure.⁴¹ The spring planting of 1946 was to include “no less than 10% fruiting trees and berry plants [*plodovykh derev’ev i iagodnikov*],” with authorities to organize their planting “in gardens, parks, on estates [*na usad’bakh*], educational facilities, medical and children’s’ institutions, and in the courtyards [*v dvorakh*] of residential buildings.”

Following completion of this pervasive planting agenda, “personal responsibility” for the “protection and care” of said green plantings was assigned in a similarly distributed manner to the proprietors [*vladel’tsev*] of “estates, parks, and so forth.” Most concretely, proprietors were responsible for the installation of “appropriate fencing.” Such fencing, whether metal or wood, which would have served to signal the special or even sacred character of such spaces of culture and leisure, as well as offer some sorely needed protection from the depredations of roving

³⁹ The use of prisoners in labor contingents (*kontingenty lagernogo punkhta*) is mentioned in 1946-01: GAKK fond P-17 op.1 del737 L54, 54b “Report on the condition of the Pontoons, their preparation and repair as of January 1st, 1946.”

⁴⁰ Literally, the second ten-day period. This is a standard unit of time frequently mentioned in Soviet official discourse, linguistically derived from the Greek word *decados* for ten. I don’t know if it was also used in imperial times. Politically, the organization of official calendars into ten-day periods (e.g. rather than weeks or fortnights) harkened back to Revolutionary France, where such a system was adopted as more rational.

⁴¹ On the famine of 1946-47, see Wheatcroft, “The Soviet Famine of 1946-1947, the Weather and Human Agency in Historical Perspective.”; Filtzer, “The Standard of Living of Soviet Industrial Workers in the Immediate Postwar Period, 1945-1948.” and a subject essay by Lewis Siegelbaum, “Famine of 1946-1947” on the 17 Moments in History website <http://soviethistory.msu.edu/1947-2/famine-of-1946-1947/>. Last accessed 09-2018.

livestock.[L39]⁴²

Protection from the ravages of war—materially represented in the space and bodies of cemeteries—was similarly considered a “necessary” component of beautification work. Improvement of the cemeteries of the Krai, including “bringing into full order the graves of Red Army fighters and officers,” was to be completed by the end of August. While the decree did not identify who specifically would be responsible for this cemetery work, it can be assumed that “the population” would once again be expected to volunteer their labor.

Building occupants were typically held responsible for the maintenance of that building and its grounds.⁴³ This pattern reflected a mixture of self-interest and collective expectations. To enroll or attract [*prevlekat*] residents’ participation, the system that leveraged cultural and political values rather than the promise of increased property values per se. (The dissolution of all private land ownership in cities shortly after the Bolshevik Revolution had meant that individuals and enterprises were “owners” with certain rights of tenure to the built space of an apartment or other facility, but no legal ownership of the *land* on which the buildings sat.⁴⁴) Complicating the issue of popular enrollement, the tolerance of the authorities for self-organized “independent” housing construction changed with time. In contrast, the notion of self-organized “enthusiastic” contributions to the urban public realm were, with some exceptions, met with

⁴² The consistent enclosure of Soviet parks and gardens has been noted in aesthetic and political analyses of Stalinist leisure space, where it is typically interpreted as an indication of such spaces’ cultural function as limited-access “paradise” set apart from the everyday realities of Soviet life. Shaw, “A Fairground for “Building the New Man”:’ Gorky Park as a Site of Soviet Acculturation.”; Brodsky, “The Psychology of Urban Design in the 1920s and 1930s.” A more pragmatic concern with “children, hooligans, and goats” as threats to urban green plantings was voiced by author-advocate Leonid Leonov [1945 article] and others, as seen in Chapter Four. Statistics on the urban livestock population in Krasnoyarsk are given in GAKK fond P-17 op.1 del737 L39.

⁴³ e.g. item 5G: “for the full, timely, and high-quality renovation [*remont*] of housing and communal facilities, attract the necessary work force and acquire unsupplied materials from local enterprises and organizations taking into account the wide enrollment [*s uchetom shirokogo prevlecheniia*] of house residents in this ongoing work of apartment repair.” GAKK fond P-17 op.1 del737 L39. A similar emphasis on domestic responsibility for shared outdoor environments would resonate throughout official environmentalism of the late Soviet period, with such slogans as “Nature—our common home” being used prominently in poems, songs, and agitational posters.

⁴⁴ The complexity *de jure* and *de facto* of Soviet property rights and responsibilities is detailed with respect to residential property in the postwar Stalin and Khrushchev periods by Smith, *Property of Communists: The Urban Housing Program from Stalin to Khrushchev*. Industrial enterprises seem to have enjoyed a slightly more favorable bundle of rights and responsibilities, at times being granted more territory than their current needs—space that was then used to hoard raw and scrap materials—partly in recognition that additional property for expansion of a successful enterprise was not easily acquired. Filtzer, *The Hazards of Urban Life in Late Stalinist Russia: Health, Hygiene, and Living Standards, 1943-1953*; Marie Howland and A. M. Katkhanova, “Changes in St Petersburg’s Industrial Belt after Land Privatization,” *Environment and Planning C: Government and Policy* 18, no. 3 (2000). The Soviet system of urban land leases (not ownership) persists into the Post-Soviet period, where William Pyle has shown it affects the real estate decisions of international companies such as IKEA, who prefer to own rather than lease the land of their facilities. They therefore tend to locate outside the city limits of cities such as Moscow. William Pyle, “The Ownership of Industrial Land in Russian Cities: Explaining Patterns of Privatization across Regions and Firms,” *BOFIT Discussion Papers* 2011, no. 26 (2011).

more consistent approval.⁴⁵

The pattern of using political and affective leverage to effect municipal improvements was also seen in the postwar continuation of “socialistic competition” among cities, based on “the best completion [*provedenie*] of beautification work.” In keeping with a March 1945 decree of the Regional Council Executive Committee (Ispolkom Kraisoventa),

It is proposed that the Ispolkom of [Khakassia Oblast] and the Ispolkom of the various city councils, together with the trade union organizations [*profsoiuzy*], organize the participation of all enterprises, institutions, organizations and the population in socialistic competition on the best completed work in beautification, and submit reports by the fifth of each month on the progress of the sots-competition to the Regional Department of Communal Economy [*Kraevomu Otdelu Kommunal'nogo Khoziastva*].⁴⁶

Such full mobilization in the cause of urban improvements did not spare the current local and regional authorities: the Ispolkom of the Region’s City Councils [*raigorsovety*] were expected to “discuss [*obsudit*]” beautification activities at their regular sessions, while the Ispolkom of the Regional Council [*Kraisovet*] was “to listen to and discuss [*zashushchat' i obsudit*]” reports from the chairmen of the Krasnoyarsk, Achinsk, and Minusinsk city councils.[L40]

Local industrial enterprises were enrolled as participants at all points in the 1946 beautification decree, from initial funding to the provision of materials to the organization of labor. Also involved in the seemingly prosaic yet metaphorically potent task of enforcing sanitation standards was the local NKVD chief, who was instructed to give orders to the *militsiia* organs regarding their “decisive struggle with violators of sanitary order and plunderers of the municipal economy.”⁴⁷ Similarly, the Regional Sanitary Inspector was obliged to organize “meticulous control” over the city’s sanitary conditions, bringing to “strict liability [*prevlekaia k strogoi otvetsvennosti*] persons guilty [of creating] antisanitary conditions of urban estates [*usad'by*] and streets.” The hands that encouraged residents and industries to turn out to improve

⁴⁵ The construction of residential buildings by individuals (often pooling their resources and labor to circumvent the glacial pace of official housing construction by enterprises and bureaus) was legal and even encouraged in the immediate postwar period. Official sanction for “self-built” housing was withdrawn in 1948, as was permission for non-standardized housing designs, however, with banks prohibited from releasing funds for the latter. But even as the State and Party authorities strove to restrict individual participation and individual designs in the production of buildings, they continued to rely on mass participation for the installation and maintenance of inter-building greenspace

⁴⁶ no 298, from March 9, 1945. Cited GAKK fond P-17 op.1 del737 L40

⁴⁷ [L40] In addition to their infamous role in political repression and state-sponsored violence, the NKVD and its predecessor organizations also had a long tradition of involvement in municipal utilities and affairs of public safety, such as fire prevention and sanitation. Links between the state apparatus of violence and “public safety” concerns were especially long-established in Siberian cities. As noted in Schmidt, after 1797 urban construction was administered in the Ministry of Internal Affairs and, after 1810, in the Ministry of Police. Schmidt, “William Hastie, Scottish Planner of Russian Cities.” The 1930s were another period of overlap between public safety/security and city planning organs, particularly in Ukraine. See Crawford, “From Tractors to Territory: Socialist Urbanization through Standardization.”, also *Kodeks Pravit Planirovki Naseleennykh Punktov: Proekt Instruktii, Podlezhashchei Izdaniu V Razvitie Ustava Grazhdanskogo Stroitel'stva*. [in Russian] Khar'kov: Odessa, 1930

their city's health, beauty, and greenery were clawed. Initially directed at "violators of sanitary order," by 1948 these claws would begin to prick at those architects and planners responsible for imagining and establishing an orderly urban environment. The concern with biological contamination shifted to concern over political vectors, notably "groveling before the West" and "formalist tendencies." (The city's sewer system or systems, meanwhile, were only gradually completed throughout the 1950s, with each of the city's major enterprises responsible for construction of related infrastructure in adjacent districts.⁴⁸)

Precarious Professionalism: Krasnoyarsk House of Architects, 1948

Writers under Stalinism were, famously, "engineers of the soul." As such, novelists such as Leonid Leonov were expected to write balanced on the knife's edge of correct political-ideological content. Where did that leave other artistic professions, much less actual architects and engineers?⁴⁹ Early in February 1948, a decree from the Central Committee of the Communist Party of the Soviet Union [CC CPSU, in Russian, the TsK VKP(B)] was published, critical of the opera "The Great Friendship" [*Velikaia Druzhiba*, by Vano Muradeli]⁵⁰. This decree, discussed at more length in the chapter on postwar Moscow, was one of the major salvos in Andrei Zhdanov's postwar campaign to narrow the scope of acceptable artistic production, particularly in music. It immediately spread ripples across the arts, and almost one month later to the day, became a topic of urgent, even existential conversation at the Krasnoyarsk House of Architects.⁵¹

⁴⁸ A detailed history of water and sewer system construction in the city of Krasnoyarsk can be found in a (unpublished?) typed 1963 manuscript by K. Matveev "Istoriia i razvitie vodoprovoda i kanalizatsii gor.Krasnoiarska" Krasnoyarsk Knizhnoe Izdatel'stvo. (KGA f1200 op1 d95a). The postwar period is discussed on pages 106-116.

⁴⁹ While Katerina Clark in her book on Moscow discusses the relationship of architects as well as writers and other creative disciplines to the regime/doctrines of socialist realism in the 1930s, few scholars writing in English have discussed the postwar period in detail with respect to architects, much less landscape design / greening and beautification. Clark, *Moscow, the Fourth Rome: Stalinism, Cosmopolitanism, and the Evolution of Soviet Culture, 1931-1941*. In Clark et al., *Soviet Culture and Power: A History in Documents, 1917-1953*. architects feature only incidentally, while the relevant chapter in Richard Anderson's *Russia focuses on analysis of the design choices of prominent projects, such as the Moscow high buildings or specific Metro stations. Anderson, Russia*.

⁵⁰ On this decree and associated effects in 1948, see Mileeva, "Utopia in Retreat: The Closure of the State Museum of New Western Art in 1948."; Silina, "The Struggle against Naturalism: Soviet Art from the 1920s to the 1950s." and the chapter "Modernity and realism: architectural relations in the Cold War" by Catherine Cooke (with Susan E. Reid) published posthumously in Rosalind P. Blakesley and Susan Reid, eds., *Russian Art and the West: A Century of Dialogue in Painting, Architecture, and the Decorative Arts* (DeKalb: Northern Illinois University Press, 2007).. On the experience of musicians and composers generally, see Tomoff, *Creative Union: The Professional Organization of Soviet Composers, 1939-1953*..

⁵¹ The decree was similarly discussed in Moscow's House of Architects, a few days later than the Krasnoyarsk Union discussion. As seen by the discussion of this decree among architects within a month of its publication, local and elite architects considered themselves subject to this decree, even if scholars on the interplay of Soviet culture and power have not always agreed. (E.g., the lack of explicit discussion of architecture in Clark et al., *Soviet Culture and Power: A History in Documents, 1917-1953*..

After agreeing to approve the 1948 plan of work, discussion turned to the relationship of professional practice to politics. Here, too the transcript of the meeting suggests agreement among the ten members present—with each other, and with the Party line.⁵² “It is necessary to work out a definition of criteria with which to approach the evaluation of projects... In everything, there must be ideological content [*ideinost*].”⁵³ The question was, first, how to instill that content in their work. Second, local architects needed to ensure that their efforts and its effect were properly recognized by local and central authorities. The Union president, Leont’ev, articulated the new parameters for identifying “bad” (*plokhoi*) work:

Review of projects should be resumed at meetings of the Union. Criteria for project evaluation will be solely the correspondence with the requirements of socialist realism. If a project has no ideological content, that means it is a bad one [*esli v proekte net idei*]. If a building lacks beauty, it means the building is a bad one. If a project is not economical, it means it is a bad one. In the previous competition the proper attention was not given to the ideological side and from this the results were significantly lesser. A communal review [*obshchestvennyi prosmotr*] of projects will be the answer to the decree of the Party Central Committee on the opera “Great Friendship.”⁵⁴

While the archival record does not indicate the immediate results of this new absolutism, the threat of late Stalinist cultural repression continued to loom ever darker over gatherings of the Krasnoyarsk architectural community. The crux years after this decree saw increasingly broad-gauge reiterations of the ritual of *kritika* and *samo-kritika* at local architectural meetings and in the press until a new equilibrium of architecture and socialist realist politics was seemingly reached in the early 1950s.⁵⁵

In contrast to the pre-1948 emphasis on pragmatic or professional-development concerns, the period from 1948–1951 was saturated with awareness of the precariousness and risks faced by local architects, caught as they were between the demands placed by the *Zhdanovshchina*, with its socialist realist demands on artistic production, and the applied technical challenges of

⁵² Present at this meeting, according to the *Protokol*: Shapovalov, Leont’ev, Svobodin, Brudskii, Ogandzhanov, Sokolovskii, Vandalovskii, Klimushin, Lytkin.

⁵³ GAKK fond P-1153 op.1 del.2 L3 Protokol No.3 10.III.1948:

⁵⁴ GAKK fond P-1153 op.1 del.2 L3 (Protokol No.3 10.III.1948)

⁵⁵ At that time, following the official approval of the city’s new General Plan in 1950 locally and centrally in 1951, architects began to express more confidence in their professional expertise and status vis-à-vis the central authorities, even leveraging their more intimate knowledge of local environmental conditions against centrally-developed standardized housing plans. This trend seems to have continued despite/past the disruption caused by the death of Stalin in March 1953 and the 1954–1955 pivot under the leadership of Nikita Khrushchev to more “modernist” architectural styles and modes of production. See Iu.L. Kosenkova and Iu.P.Volchok, “Chronicle of architectural-citybuilding process in the USSR postwar period (1945–1955)” available online from NIITIAG (Scientific Research Institute of the Theory and History of Architecture and Citybuilding). http://www.niitiag.ru/pub/pub_cat/khronika_arkhitekturno_gradostroitel'nogo_protsesta_v_ssr_poslevoennogo_perioda. They identify 1947–48 as one of two pivotal or rupture moments within Stalinist architecture, the other being the mid-1930s. See also Kosenkova, *Sovetskii Gorod 1940-Kh-Pervoi Poloviny 1950-Kh Godov: Ot Tvorcheskikh Poiskov K Praktike Stroitel'stva*; Iu. L. Kosenkova, ed. *Sovetskoe Gradostroitel'stvo 1920-1930-Kh Godov: Novye Issledovaniia I Materialy* (Moskva: URSS: Librokom, 2010).

project completion in the adverse climate (economic and environmental) of Krasnoyarsk. Local municipal and Party authorities continued to petition the central ministries for funding and support for urban beautification as before, unemotionally couched in the ritual phrases of resource allocation and workers' deserving better."⁵⁶ Discussions at meetings of the Union of Architects, meanwhile, were shrill with anxiety, recriminations, and attempts to deflect blame away from oneself and one's allies. The lack of connection (*sviaz*) between the Krasnoyarsk Union of Architects and, on the other side, the masses and applied "concrete" work continued to be a frequent complaint.⁵⁷

Compounding the threat to individuals was the designation, in 1949, of Krasnoyarsk as a "city of Republic-level subordination." This bureaucratic move shifted responsibility/glorification for urban design-planning work from local hands to the higher status Leningrad branch of Giprogor, where the city's new GenPlan was developed (based on the never officially-approved 1930s "Greater Krasnoyarsk" proposal).⁵⁸ While this meant that local architects, engineers, and urban planners had less to do with regard to the city's spatial and economic development, it also meant that they had less control—and fewer opportunities to demonstrate their utility to the regime. They remained, meanwhile, vulnerable to blame by reason of proximity for instances of projects not completed as planned or completed in unsatisfactory condition.⁵⁹

Concerns raised at an expanded meeting of the Union leadership, members, municipal authorities and local press in July 1950, for instance, spanned the gamut of late Stalinist sins: formalism, lack of ideological content, even the incorrect incorporation of a spire in the design of

⁵⁶ cf Sept 1948 memo from Krasnoyarsk GorKom to Molotov requesting additional funds for "urgently needed" beautification measures 1949-1950. The logic of the petition rests in demonstrated need to "keep up" with the city's development in other areas: e.g. economic growth (number and diversity of factories, their importance to national goals), as a cultural-political capital, and sheer population growth (per capita norms of amenity allocation). The language of self-abnegation and blame deflection heard at the KO SSA meeting is not seen in this correspondence.

⁵⁷ GAKK fond P-1153 op.1 del.5 na32L <20>: Protokoly zasedaniia pravleniia KrOSA 1951; fond P-1153 op.1 del.6 na101L <22>: Protokoly Zasedanii Pravleniia 1952

⁵⁸ The back-and-forth between center and periphery in this earlier master plan, developed in Moscow was a significant factor in its delayed approval. The resulting compromise plan, while never formally adopted/approved, contained many ideas that continued to influence plans for the city's development well into the late 20th century. See Ruzhze, *Krasnoiarsk: Voprosy Formirovaniia I Razvitiia*; Tsarev, "Planirovka Bol'shogo Krasnoiarska 1930-Kh Godov: Etapy Proektirovaniia I Gradostroitel'noe Znachenie."

⁵⁹ There was a general All-Union reorganization and centralization of architecture-planning bureaucracy in 1948. Local architects employed in the design bureaus of local enterprises and organizations remained responsible for their specific work for those entities; the local office of the City Architect and Architectural Affairs Bureau remained responsible for the design of smaller cities, towns, kolkhoz and other settlements within the Krai. The year 1949 was also the start of construction on "Krasnoyarsk-26," a closed "post-box" city later known as Zheleznogorsk where plutonium was processed.

a residential building on the city's "Red Square."⁶⁰ The architectural community as a whole (as represented/condensed/scapegoated in the often sparsely attended entity of the Union) was faulted roundly for its lack of connection to builders, populace, and municipal entities. This criticism extended to a lack of coordination with the local planting nursery (the Trust of Green Construction of TZKh), resulting in the overuse of poplar and other species in city and street greening.

The Union was also accused of lacking demonstrable successes in either project management or project development, having been unable to prevent (or indifferent) to violations in construction quality and efficiency on the part of local factor, residential and civic construction work. A specific problem area, reminiscent of that seen in the rapid development of such early 1930s industrial cities like Magnitogorsk, was the "chaotic" development of housing on the industrial Right bank—a realm of production under the responsibility of the industrial enterprises themselves, with only nominal control reserved for their relatively weak municipal and professional watchdogs.

At stake in this surge of *kritika* was everything from the group members' collective and individual reputation for appropriate expertise, their livelihood/place of residence, and their status in the cultural-political regime. The threat of repression for the wrong intervention in Krasnoyarsk's urban development and identity, while real and acute, does not seem to have been a mortal one, as it had been during the 1930s.⁶¹

⁶⁰ fond P-1153 op.1 del.2 na33L: <13> Protokoly zasedanii 1948–1950; The latter was a sin of incorrect or insufficiently socialist realist architectural signification: spires and verticality in buildings indicated higher status, as in the "high buildings" being constructed in this period in Moscow. A spire on a local apartment building was accused of confusing residents/viewers as to the relative status of housing vs the square's monument to heritage (commemorating the fallen in the Civil War), and the adjacent civil monument of the city's main train station. The designer in question was then-Union president Leont'ev, who was generally accused of "formalist" tendencies but seems to have eventually emerged professionally intact. Slabukha, *Arkhitektory Prieniseiskoi Sibiri*.

⁶¹ Published sources in Krasnoyarsk do not foreground the repression of local architects in the postwar period; further research would be needed to confirm or complicate this scenario. For now, personnel files remain sealed in the city and Krai archives. No mention is made in Slabukha, Tsarev, or Khrushchinskii of violence or criminal charges against local architects or urbanists, even those singled out for the greatest vitriol in the archival transcripts of meetings etc. Some did lose positions of authority within the local Architects Union or city offices. Noted instead are the lengthy careers of many local architects, including those trained in or achieving status in the pre-Revolutionary and interwar periods. One exception that is mentioned is V.A. Smirnov, the author of a brief essay on the history of Krasnoyarsk, written in 1928 for the occasion of the city's 300th anniversary. He is said to have been arrested and been shot in prison in the 1930s, for "incorrectly" documenting the achievements of the tsarist period. Ibid.. Smirnov's repression can be compared to two postwar cases. First, E.S. Nifant'ev was a powerful administrator of the city, whose 1954 book on Krasnoyarsk, *Gorod Na Yenisei* was criticized in the local paper. He relocated to Igarka, and returned to Krasnoyarsk a few years later for reasons that remain unclear. He published a revised edition of his book in 1973. Also notable, amidst a general shortage of labor and expertise, was the career of Miron Merzhanov, "'Stalin's architect" who was repressed and sent from Moscow/Leningrad to Komsomolsk-na-Amur. After serving his sentence there, he re-located to Krasnoyarsk, where he and his son worked as influential architects, seemingly in secrecy but held in high esteem. Merzhanov is credited with the design, among other works, of the Krasnoyarsk House of Soviets. His continued professional involvement

To defend against the conjoined threats of political and professional inadequacy, the architectural community, first, sought ways to popularize their work in order to establish and demonstrate more and better ties [*sviaz*] to the masses. They resolved to arrange more public exhibits of recent and ongoing work, sharpened and extend discussion within and between professional communities, increase membership and meeting attendance in the Union, and raise their profile by contributing more frequently to local publications such as daily newspaper the Krasnoyarsk Workers' Gazette (*Gazeta im. Krasnoiarskii Rabochii*, since 1905), the *Krasnoiarskii Komsomolets* (published since 1935), or the recently established journal *Enisei*. Similarly, they hoped to improve the mutual awareness of local and national communities by more frequent lectures, study tours of cities elsewhere in the Union, and attendance at national conferences.⁶²

The outreach campaign of self-popularization and perception reconstruction, directed , was not in itself enough. A second front was also opened. In hopes of improving their record of quality control and project completion, the Krasnoyarsk Union of Architects embraced the cause of urban beautification. Specifically, they sought out and claimed “sponsorship” [or patronage? *byt pod sheftsvom*] of street greening and pocket park [*skver*] design for the central, historical districts of Krasnoyarsk. The most prominent architects were named to develop design-plans for specific sites. While some of the larger sites such as the city’s Embankment and Central Gorky Park of Culture and Rest were eventually handed off to larger entities, soon the leader of the Architectural Union felt able to proclaim the efforts successful.⁶³

Efforts by architects to defend themselves against the charge of being “cut off” [*otorvannyi*] from the masses and public approval/supervision, as well as from direct

would have been an example of the “sharashka” model of qualified professionals exiled from the center, restricted in their options, but professionally and personally relatively well-treated. For more on the complex relationship between Siberian cities and their twinned Gulag camps, and between prisoners and non-prisoners, see Wilson T. Bell, "The Gulag and Soviet Society in Western Siberia, 1929–1953" (PhD Dissertation, University of Toronto, 2011); "Was the Gulag an Archipelago? De-Convoyed Prisoners and Porous Borders in the Camps of Western Siberia."; Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters*; Barenberg, *Gulag Town, Company Town: Forced Labor and Its Legacy in Vorkuta*. Bell’s book on this topic, *Stalin's Gulag at War: Forced Labour, Mass Death, and Soviet Victory in the Second World War*, was published in 2018 by U-Toronto Press but came too late for incorporation in this work.

⁶² Fond P-1153 op.1 del.2 na33L: <13> Protokoly zasedanii 1948–1950 L17-17b *Protokol*, 27.X.1950 Expanded session of the Krasnoyarsk branch of the Architects’ Union (SSA).

⁶³ GAKK fond P-1153 op.1 del.9 na75L <30>: Protokoly zasedaniia pravleniia KrOSA 1953–56; PROTOKOL General meeting of the Union of Soviet Architects, 25.II.1954. L63-71. Regarding the work of the leadership in 1952–53: quote from Nifant’ev: “other creative unions in the city are better known than the Architects, despite the on-going construction boom, need to conduct more work in popularization, raise the discipline among members (e.g. absence from meeting of Klimushin [city architect], Brudskii, Tat’ianin). ¶ The leadership worked wholeheartedly, gave visible help on the issue of beautification of the city, it follows we should organize an exhibit of our work, so that the city could see and know of the work of our union. “

construction work and the needs of the populace, took place in the context of many professional and activist organizations also seeking to raise their local, “populist” profile. In Krasnoyarsk, this included efforts by national groups such as the Union of Writers and Society for Nature Protection sought to establish local chapters and otherwise popularize their work.⁶⁴ Likewise, the quest to identify and celebrate local elements of national(ist) heritage contributed to the opening of a Vasily Surikov house-museum in 1948 (and later, art school).⁶⁵

As shown in the previous chapter, the years 1948-1949 were characterized in the center by increased interest in and concern over everyday conditions, including the degree of greening and beautification, in the “reconstructing” cities of the interior. This concern was expressed in a series of articles on beautification and greening efforts in cities of the Urals and Siberia, including very industrial ones.⁶⁶ These changes reinforced the mutual awareness of central and local entities. By publicizing local greening and beautification work (even if that work was aspirational), as is seen in the example detailed below, architects and planners in seemingly isolated or provincial locations were able to connect themselves and their work to a national project of protecting and promoting urban green plantings. Discussion of planned improvements, including increased urban green plantings, sent cues to the “masses” responsible for installation and maintenance of those plantings.

“Let’s Dream”: Aspirational Modernity in Krasnoyarsk, 1953

Once the chaos and rancor of the immediate post-WWII period had a chance to settle, the early 1950s were discursively a time of optimism. At this time the Soviet Union, flush with victory but thin on resources, took up the serious challenge of reconstructing cities far from the front, as well as those damaged more directly by fighting. The aspirations of the time were frequently presented to the population in a variety of formats, including in the press. As

⁶⁴ This included an exhibit organized by VOOB on the Stolby nature preserve. See also {Nifant’ev, 1954 #5801} Ceremonial Event in Honor of VOOB 50th-Anniversary, Leninskii Raion, 3 December 1974. *fond R-2085*: Leninskii Raion Council of Workers’ Deputies Executive Committee op.1 del.291 na 84L Material from the gathering dedicated the 50th anniversary of VOOB (the AllRussia Organization for the Protection of Nature), 3 December 1974. and *fond P-17 op.1 del1661 na36list <23>*: Exhibit “Stolby” 1952

⁶⁵ The official charter was expanded in 1948-49

⁶⁶ For this period articles included “Khronika: Soveshchanie Arkhitekturov i Stroitelei Gorodov Urala i Sibiri” *Arkhitektura SSSR*, no.2 (February, 1952): 32; G.M. Kazakovtsev, “K Voprosu Ozeleneniia Gorodov Sibiri” *Arkhitektura Sibiri*, *Ezhegodnik Novosibirskogo Otdeleniia Soiza Sovetskikh Arkhitektorov*, July 1951, pp65-80; I.A. Shishkin and L.E. Biriukov L.E. “Nekotorye voprosy planirovki i zastroiiki gorodov Urala (Sverdlovsk, Cheliabinsk, Nizhnyi Tagil, Zlatoust) *Problemy Sovetskogo Gradostroitel’stva* no.3 (1952): 47-95

Krasnoyarsk began to find its feet again in the postwar period, and architects bestirred themselves to greater outreach, public profiles of the city focused on the future prospect of a more modern, “joyful” and urbane living environment. On New Year’s Day, 1953, the Krasnoyarsk Workers’ Gazette (*Gazeta imeni Krasnoiarskii Rabochii*) published a lyrical piece meant to stir readers’ enthusiasm and hope for the new year.⁶⁷ In it, the author set out on a “tour” of the city-then-planned, detailing a future that was better provided with the “ambient conditions” of socialist modernity, specifically urban greenery and beautification.⁶⁸

“Let’s dream, friends, of the future!” invited the title. Rather than reviewing the accomplishments (or difficulties) of the past year, the author, one Korobov, portrayed a society striving towards the future. And as might be expected, it was a bright one. The pressing challenges of the immediate postwar having subsided, the city dreamed of a pleasantly prosperous, well-built modernity just over the horizon.

As Chapter Two related, a positive and place-oriented self-image was nothing new for the then three-centuries-old city of Krasnoyarsk. On the eve of the 20th century, while traveling through Siberia, author and playwright Anton Chekhov described Krasnoyarsk as “the best and most beautiful of all the Siberian cities” with a surrounding landscape of “smoky, dreamy” hills reminiscent of his beloved Caucasus. This quote, which seems to have enjoyed consistent use since then, was used prominently in the New Years’ article as a means of drawing the readers’ attention beyond the city’s past to its future potential.

Is it really possible to compare today’s Krasnoyarsk with the city as seen by Chekhov? Perhaps the great writer spoke of something drawn by his imagination? Perhaps. But for us, what Chekhov dreamed as become actuality. The city is beautified and improved [*blagoustraivaetsia i khorosheet gorod*], grows and youthens [*molodeet*] from year to year, is covered in greenery, and is built up with beautiful houses.

These in-process physical changes are swiftly linked to national ambitions and character development. “Everything in [the city], like everywhere in our country, strives toward the future [*ustremleno v budushchee*]. That, which we did yesterday, today cannot satisfy us, and tomorrow we want to do even better, even more beautiful.”

⁶⁷ 1953-01-01 *Gazeta Krasnoiarskii Rabobchii*, K.Korobov, “Pomechtaem, druž’ia, o budushchem!” Similar sentiments are expressed by architect Lytkin in his 1953 status report on beautification in Krasnoyarsk, his piece “Vesna” [Springtime], presumably intended for publication in *Krasnoiarskii Rabochii*, [GAKK fond R-1153 op.1 del.9 na75L <30>: Protokoly zasedaniia pravleniia KrOSA 1953–56, L44–56] and Nifant’ev’s 1954 essay in the literary/cultural journal *Enisei*, “About a Green Friend” [O Zelenom Druge].

⁶⁸ Descriptive pieces such as this were regularly published in the newspaper, particularly around major holidays. This one is useful as it synthesizes the dreams of the city on the cusp of 1953, the year of Stalin’s death. The changes that would be precipitated in Soviet society and built environments by de-Stalinization were not yet imagined at the time of its publication.

At first, Korobov painted a generic picture of ideal urban experience—a city with all the modern amenities, covered in greenery and energized by the construction of “beautiful buildings [doma].” Despite the mid-winter publication date, within the space of the text the weather was fine and the season temperate.⁶⁹ Korobov then swiftly turns his focus to the specific architecture and beautification elements that grace Krasnoyarsk in this foreseen future. The policy of postwar urban reconstruction that promoted on-site improvements to cities, rather than the whole-cloth replacement of existing cities with new ones as proposed by some in the 1920s, meant that improvements and additions to the historic built environment of central Krasnoyarsk received the bulk of attention.

The reader’s mental eye was directed first to the public display spaces of gathering and transportation infrastructure: green squares, paved streets with well-dressed pedestrians, elegant cars and a new trolleybus with, it is noted, the extra fillip of buried wires, “not the current spider’s web.” The spaces described were elegant, ample, and primarily outdoors. The viewpoint that of someone standing in the main square looking around, instead of a scene viewed from indoors, or of the indoors. The city’s public life and spaces were the focus here, as if for tourists, rather than individual living conditions.⁷⁰

“Let’s dream further” invited the narrator. In the dream to be, there would be a park beyond the square that extended “to the very Yenisei,” with a granite staircase connecting it to the water. The park in question, known in Soviet times as the “Gorky” Krasnoyarsk Park of Culture and Rest, had existed since tsarist times but was renovated throughout the Soviet period from the mid 1930s on.⁷¹ The future location of Lenin’s stern and stony presence was, in this vision, a site of aesthetic pleasure: “On the square, in front of the entrance to the park, all the colors of the rainbow flow in the streams of a fountain.”⁷²

⁶⁹ Vladimir Papernyi, *Architecture in the Age of Stalin: Culture Two*, Cambridge Studies in New Art History and Criticism (New York: Cambridge University Press, 2002). Papernyi observes that Stalinist “culture two” was characterized by a preference for envisioning Russia as baked with summer warmth, emphasizing its southern aspects and seasons rather than the traditional association of Russia with winter, cold, snow, troikas, and northerly latitudes. In this newspaper article, Krasnoyarsk is also “moved” South by reference to its horticultural potential. For instance, Korobov notes that in the city center, a botanical garden and greenhouse “burst with acclimatized southerners” e.g. fruit trees, grapevines, even citrus trees.

⁷⁰ The newspaper in which this article appeared was the official regional paper of Krasnoyarsk Krai but it seems likely that the majority of its readers lived in Krasnoyarsk. Haywood, *Siberia: A Cultural History*. adopts a similar framing conceit in his treatment of Krasnoyarsk, of participants in a hypothetical “international psychology conference” wandering the city.

⁷¹ Tsarev, V.I. and V.L. Chobanian, “Tsentral’nyi park v gorode Krasnoiarske: istoriia formirovaniia i arkhitekturno-planirovochnye preobrazovaniia” in *Vestnik KrasGAU*, no7 (2013) pp281-288

⁷² Today, Krasnoyarsk celebrates itself as a city of a thousand fountains, thanks to a previous mayor who made a priority of fountain construction. Haywood, *Siberia: A Cultural History*. numbers them at 150. In the winter, these fountains are generally bleak and neglected, although occasionally decorated with ice sculptures. It should be noted that fountains were more than

The leisurely tour with Korobov's nameless guide continued into a second column of the daily newspaper, moving from the park's staircase connection to the Yenisei embankment:

"Now look to the left. Along the bank of the Yenisei up to the very River Station—that first swallow [*pervaia lastochka*] heralding the future shape [*oblik*] of our city—stretches the green lane of a boulevard. Everything here brings joy to the eye: the openwork lattice fencing, sculptures, granite staircases descending to the river. People stroll along the shady allées [and] sit on convenient benches, admiring the Yenisei."

In asserting that the city's future shape was accessible via greenery, specifically a green boulevard, Korobov did more than anticipate a site of leisure replacing the riverbank's previous association with labor, marginalization, and the city's history as a river crossroads. Beyond the deep resonances in Russian nature aesthetics of such river views, and the Stalinist evocation of "joy" and radiance, a "green street" carries in Russian connotations similar to the English phrase "a green light."⁷³ Moreover, while the neo-Classical monumental architecture of the River Station may appear stylistically retrograde today, it was not a standardized design, but one "organically" inserted into the Embankment, and meant to evoke uniquely the rhythms of the Yenisei and a nearby historic arcade.⁷⁴

After an imagined brief taxi ride to the crest of one of the area's hills, or *sopka*, readers were presented with a view of the city where wood and coal heaters have been replaced by a central gas system, and the enterprises that remain coal-powered have installed effective filters. "How clear and clean the air above the city!" exclaims the narrator. Even in a moment of rapid industrialization as Krasnoyarsk adjusted to an influx of factories—or perhaps because of it—the future city is described as "awash in greenery." Korobov concluded the piece on a note of certainty:

...All this will be, pronounces someone decidedly. It will be, just like there is already the Volga-Don, communist building-sites [*stroiki kommunizma*] on the Volga and the Dniepr, in Crimea and Turkmeniia, like there is already the palace on the Lenin Hills and high buildings in Moscow. It will be for the reason that our future is not a dream, but real plans; because our people [*narod*] are led to communism by the party of Lenin and Stalin, by the genius of great Stalin."

The creation of the ambient conditions of modernity were to be sensed by residents through

cosmetic interventions in two ways. First, urban fountains generally functioned in Soviet design culture as a proxy for development, being associated with greater engineering prowess and water consumption. Second, fountains were routinely included in discussion of factory-greening as an enviro-technical means of achieving cleaner air amidst conditions of industrial particulate emissions. For factory cities like Krasnoyarsk, fountains played multiple roles. This is an aspect of factory greening and beautification that deserves further study.

⁷³ Sophia Lubensky, *Random House Russian-English dictionary of idioms*, New York: Random House, 1995. A "green street" is "always singular. a clear path without obstacles, a green light all the way, clear passage." [p729]. See also Irina H. Corten, *Vocabulary of Soviet society and culture : a selected guide to Russian words, idioms, and expressions of the post-Stalin era, 1953-1991*, Durham: Duke University Press, 1992

⁷⁴ [p76] of V.I.Tsarev, V.I. Krushlinskii, *Krasnoyarsk: istoriia i razvitie gradostroitel'stva*, Krasnoyarsk: Klaretianum, 2001.

interaction with anticipation, by confidence in a plan—not a dream!—of future infrastructure, regardless of the actual conditions of that infrastructure in built reality.

Conclusions

Both this chapter and the one previous covered the period immediately after the Great Patriotic War (WWII) concluded in 1945 until Stalin’s death, in 1953. Considered together, the chapters alternate in focus between the general development of greening and beautification discourse in the center (Moscow) and shifting attitudes and practices of the architectural community in Krasnoyarsk. “Central” discourse was represented by published discourse in books, articles and conferences of the research institutes, planning and design organizations, and related professional communities in Moscow, Leningrad, and Kiev. Developments in Krasnoyarsk feature as captured in the archival record of Party, governmental and public/professional organizations, including the local chapters of the Union of Soviet Architects (SSA) and the All-Union Society for the Protection of Nature (VOOP).⁷⁵ The years 1947 and particularly 1948 have been identified as “crux” years for Soviet architecture and architects based at the Central Scientific Research Institute.⁷⁶

These years were similarly a formative period of intensity and rupture for many of the individuals and institutions involved in Soviet greening and beautification in both the central and local arenas. Architects’ slow recovery of political balance after 1948 relied in part on their ability to conceptually consolidate patriotism with participation. One means of doing so was to lay claim to local beautification efforts (especially greening) as a core task of architecture-planning expertise.

For architect-planners finding themselves in a precarious position during the postwar period, the patronage and popularization of urban greening represented a means, first, to demonstrate professional expertise, even as other areas of practice became increasingly constrained or distributed. In claiming greening as an “inalienable” area of architecture-planning practice, the architectural community may have sought to borrow status from other

⁷⁵ Also included are a few sources and developments from the shoulder period of the late 1930s through the war, and from the transition period after Stalin’s death 3/1953 until the 2nd Congress of the Union of Soviet Architects in 11/1955, at which the new direction of architecture and planning was clarified.

⁷⁶ Kosenkova, NIITiAG Khronika http://www.niitiag.ru/pub/pub_cat/khronika_arkhitekturno_gradostroitelного_protsessa_v_ssr_poslevoennogo_perioda

professional/scientific disciplines currently in favor, such as landscape painters and “Michurinist” biologists. Second, urban greening represented an opportunity for architects to demonstrate that their work was connected to popular benefits and labor, including those of community groups e.g. “forest friends.” Perceived and actual connections “to the masses” were useful in countering accusations that architects were Westernized elites “cut off” from popular needs and aesthetics. The use of local species, even in otherwise formal and linear arrangements, would have contributed to this patriotic association.

I conclude that urban greening was a form of socialist infrastructure rather than an artform, but no less culturally/politically significant for its utilitarian aspirations. In particular, the evidence suggests that urban greening and beautification efforts in the postwar period were shaped by the convergence of potent, long-term trends. On one side, urban greenery and other society-nature entanglements were increasingly politicized under the terms of socialist realism i.e. promoted as essentially and especially socialist. This politicization was linked to such factors as the Lysenko-Michurinist promise of new plant varieties that could joyfully withstand any climate and bloom all year around, bringing “gardens” to Siberia. Other factors included the increasingly nationalist celebration of landscape aesthetics as a form of cultural patriotism (including painting of industrial landscapes), and a new rhetoric of “care” [*zabota*] for Soviet citizens in which wartime sacrifices would be appropriately acknowledge through the provision of both culture and civilization (e.g. advanced infrastructure and amenities).

On the other side, although labor and materials had traditionally circulated along “enterprise” lines (e.g. local factories tasked with providing housing and water/sewer systems to adjacent residential buildings), the shortage of both was particularly acute during this period, including in newly industrialized cities and districts of Siberia such as on Krasnoyarsk’s right bank. This shortage of workers and building materials meant that municipal authorities increasingly normalized the use of “voluntary” participatory labor grounded in residential rather than work-place affiliations. Simultaneously, the use by supervising architects of participatory labor brigades to install and maintain urban public space (including these spaces’ vegetated plantings) functioned as a defensive response by architects to accusations from on high that as elite specialists they were insufficiently connected to “the masses.” In all cases, authorities mobilized and ritualized spring-time planting campaigns by means of a discourse of emotional passion and “love of homeland.” Nature was politicized; care for urban environments was

popularized. While the physical design of urban green spaces did not change greatly from pre-war models, from this crossroads it was but a small step to a popular politics of nature protection, the first stirrings of which can be clearly seen as early as 1945-1947.

The challenge of (regional/local) instantiation of entwined political and professional aspirations also prioritized popular participation and support for the installation, maintenance, and protection of urban green plantings, against the perceived threat of “uncultured” elements from goats and wild children to drunks and officials’ indifference. This emphasis represented a shift from the foregrounding of industrial enterprise capacity in the immediate postwar period, to recognition that mobilization was more effective when based on popular local pride or national-patriotic affect. In the case of Siberia, and specifically Krasnoyarsk, the local landscape specificity and expertise required by greening work jostled for pre-eminence against the Michurnist-Lysenkoist idea of “acculturation” across climate regions— eventually, local natural conditions became seemingly accepted grounds for local “pushing back” against the centralized, standardized dictates in architecture and planning.

The specific forms and styles associated with ideal urban greenspace design and production during this period did not diverge significantly from the Neo-Classical or Beaux Art models of parks, gardens and urban design found in cities such as Paris or Vienna. (In contrast to the post-Stalinist period, when Soviet architecture and urban planning was re-shaped by radically different spatial and material priorities, as discussed in Chapter Six.) The meanings and functions associated with urban greenspace did, however, become distinctively and self-consciously divergent in this period. The postwar convergence of so many agendas and actors in this seemingly straight-forward area of architecture-planning practice super-charged the professional, political, and popular agency of greening. This effectively created a set of conceptual conditions that would continue to shape and complicate greening and beautification efforts until the collapse of the Soviet Union in 1991, despite the otherwise wrenching changes to Soviet architecture and urbanism wrought by Khrushchev’s policies of de-Stalinization and construction industrialization.

Images

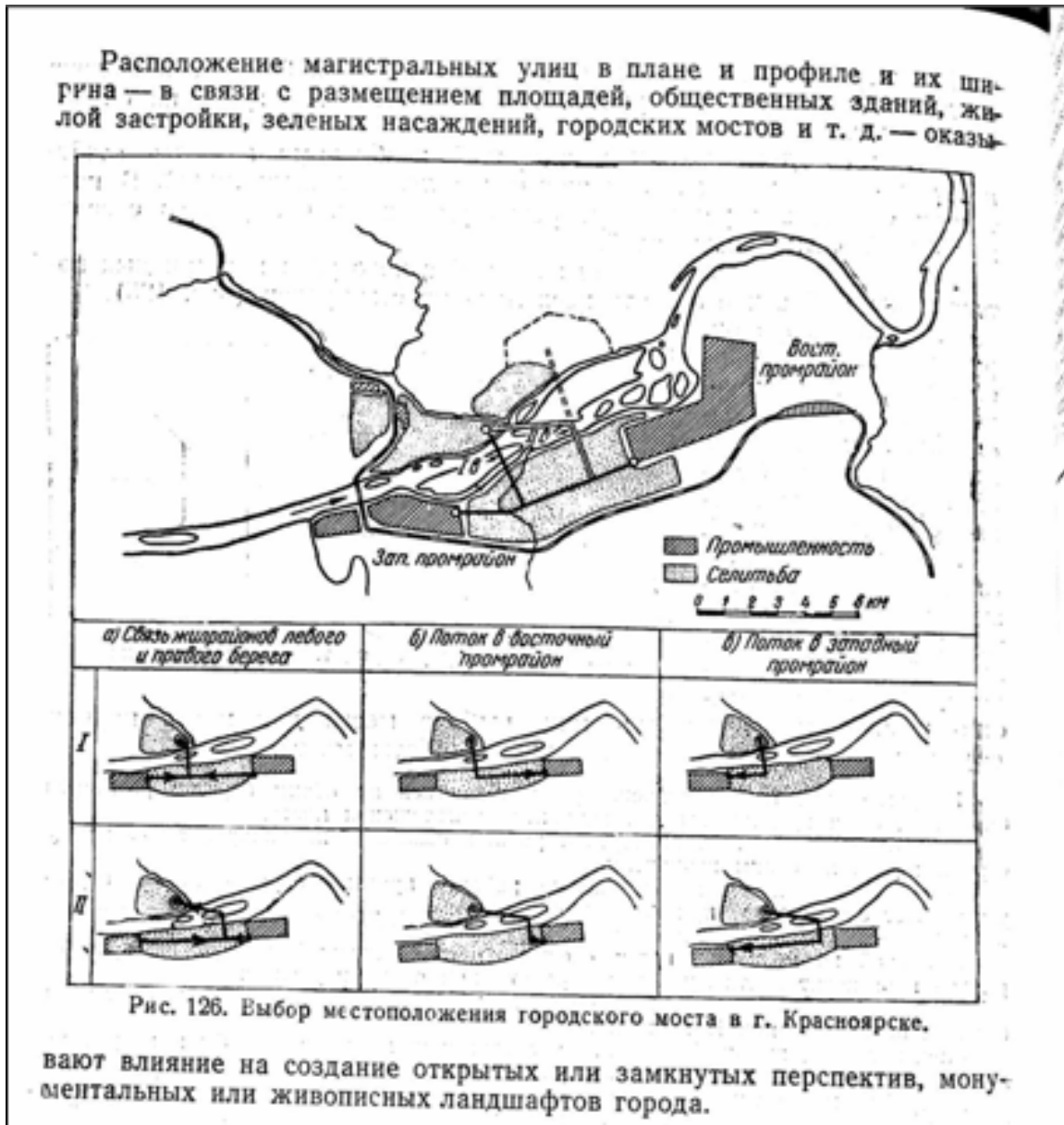


Figure 5.1 "Choosing a location for the city bridge in Krasnoyarsk" from Davidovich, *Spatial Planning of Cities*, 1947⁷⁷

Framing text reads:

"The placement of major streets in the plan and in profile, and their width—in connection with the placement of plazas, civic buildings, residential development, green plantings, city bridges, etc.—has an effect on the creation of open or closed prospects, monumental or picturesque landscapes [*zhivopisnykh landshaftov*] of the city."

⁷⁷ Davidovich, Vladimir Georgievich. *Planirovka gorodov: Inzhenerno-ekonomicheskie osnovy*. Moscow, Leningrad: Izdat' MinKomKhoz RSFSR, 1947. Page 215 (fig 126)

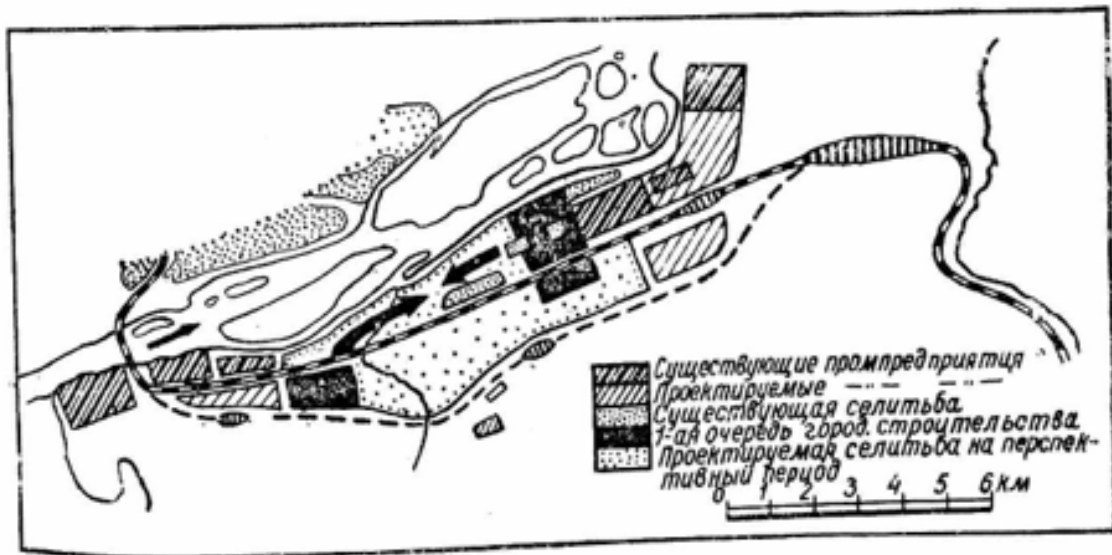


Рис. 167. Очередность освоения правобережья г. Красноярска.

Figure 5.2 "Development sequencing of Right-bank Krasnoyarsk" from Davidov, *Spatial Planning of Cities*, 1947⁷⁸

Categories, from top:

Existing industrial enterprises;

Planned-for ind. enterprises

Existing settlements

1st-order city construction

Planned-for settlements in the time window.

**Notes: here planners' interest in lessening the distance between settlements by developing the districts between two industrial zones leads eventually to the 'ringing' of those residential districts by factories.

⁷⁸ Davidovich, Vladimir Georgievich. *Planirovka gorodov: Inzhenerno-ekonomicheskie osnovy*. Moscow, Leningrad: Izdat' MinKomKhoz RSFSR, 1947. p263 (fig 167).



Figure 5.3 Photograph of Right-Bank Krasnoyarsk, showing prospect *Krasnoiarskii Rabochii*, new housing, and park. 1950s-60s⁷⁹

⁷⁹ from "1950s-1960s" folder at Krasnoyarsk Krai State Universal Scientific Library, local studies department. Decorative statues suggest this was prior to 1954 / 1955



Figure 5.4 Photograph of street scene with amenities, Central Krasnoyarsk by Forest Technical Institute 1950s⁸⁰

⁸⁰ from folder at State Scientific-Universal Regional Library, marked “1950s-60s”



Figure 5.5 Cover page from 1951 article "On the Greening of Cities in Siberia" with winter photograph showing monument to I.V. Stalin in factory administration plaza of Stalinsk, and epigraph from 'garden-city' poem by V. Mayakovsky.⁸¹

Text from "Kuznetskstroï" poem by V. Mayakovsky :

"I know the city will be,
I know, a garden will bloom
when in the land of Soviets
there are people like these!"

⁸¹ G.M. Kazakovtsev, "K Voprosu Ozeleneniia Gorodov Sibiri" *Arkhitektura Sibiri*, Ezhegodnik Novosibirskogo Otdeleniia Soiza Sovetskikh Arkhitektorov, July 1951, pp65-80; poem is "Tale of Khrenov about Kuznetskstroï and of the people of Kuznetsk" (1929)



Figure 5.6 Page from "Greening Siberian Cities" 1951 article, showing entrance to Garden of Metalworkers and model street planting mix of coniferous and deciduous trees⁸²

Top photo: "Stalinsk. Sculpture at the entrance to the Garden of Metallurgists"

Drawing: "Stalinsk. Prospekt im. Molotova. Combination of needled species with deciduous (Karagach)"

⁸² from G.M. Kazakovtsev, "K Voprosu Ozeleneniia Gorodov Sibiri" *Arkhitektura Sibiri*, Ezhegodnik Novosibirskogo Otdeleniia Soiza Sovetskikh Arkhitektorov, July 1951, pp65-80.



Figure 5.7 Soviet informational / motivational poster "Let's Green Our City" Omsk, 1951⁸³

Text in red reads:

“In support of participants in the mass planting of trees and shrubs
GREENING OUR CITY

The working people of Omsk! Amicably and orderly conduct mass planting of trees
and shrubs in yards and on the streets!”

Main text and drawings indicate how to properly plant trees in street pits. Images at top depict the envisioned future effect of the greening efforts.

⁸³ Originally published by newspaper *Omsk Pravda*. 1951. Print run 2000 copies. Posted for sale on ebay.uk, last updated 9 October 2017 . https://www.ebay.co.uk/itm/1951-Russia-Omsk-Stalin-Era-Propaganda-Poster-Greening-our-City-Tree-Planting-/121077381100?nma=true&si=uAtCtGV8%252BeqHBF2yjgQA3P0IufU%253D&orig_cvip=true&rt=nc&_trksid=p2047675.l2557 Approx. size 850 x 650 mm



Figure 5.8 Photograph of Krasnoyarsk River Station (*Rechnoi Vokzal*), completed in 1952, showing street amenities (*blagoustroistvo*) in foreground⁸⁴



Figure 5.9 Photograph from Opening Day rally at Krasnoyarsk River Station, 27 July 1952⁸⁵

⁸⁴ Architect Aleksandr Golubev. Built between 1948-1952. Photograph from “Krasnoyarsk 1950s-60s” folder in KK GNUB, local studies department.

⁸⁵ Photographs from KKKM collection, no author listed.



Figure 5.10 Photograph of "Festival of Song in Krasnoyarsk" held on Leisure Island (*ost. Otdykha*), June 1953⁸⁶



Figure 5.11 Photograph of new housing blocks and park along prospect *Krasnoiariskii Rabochii*, 1954⁸⁷

⁸⁶ Photograph by S. Malobitskii, from newspaper *Gazeta Krasnoiariskii Rabochii*, 06-23-1953

⁸⁷ Photograph by S. Malobitskii, published 24 October, 1954



Figure 5.12 "Pioneers at Leisure" Photograph of Soviet Communist Party childrens' organization members posed in woods with a bear cub, 1953⁸⁸

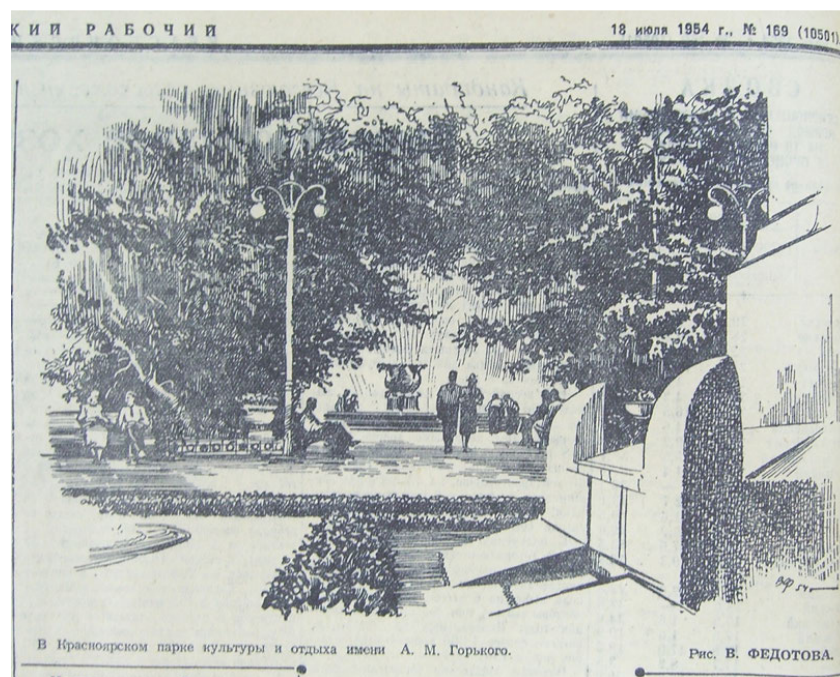


Figure 5.13 Drawing of Krasnoyarsk "Gorky" Central Park of Culture and Leisure, 1954⁸⁹

⁸⁸ Photograph from *Gazeta Krasnoyarskii Rabochii*, July 19, 1953. The House of Pioneers was located in the city outskirts in order to avail the children of fresh air, etc.

⁸⁹ Drawing by V. Fedotov, published in *Gazeta im. Krasnoyarskii Rabochii*, July 18, 1954

Садовод-любитель



Многие красноярцы, проходя мимо одноэтажного дома на проспекте имени Сталина, № 123, не подозревают, что за небольшим забором раскинулся обширный фруктовый сад. Здесь более ста различных плодоносящих деревьев. Кусты ранета, вишен, сморо-

дины, малины, крыжовника образуют густые заросли.

Некоторые сорта яблонь и ранета выведены хозяином сада — старейшим красноярским садоводом-любителем Михаилом Александровичем Дьяконовым.

— Вот попробуйте это небольшое яблочко, — обращается Михаил Александрович к гостям. — Этот сорт выведен мною. Сейчас он проходит испытание на Красноярской плодово-ягодной станции.

Старый садовод с любовью по-прежнему называет каждое дерево. Вот это посажено еще в 1924 году и до сих пор плодоносит. Эти яблонки чуть не померзли в лютую зиму 1930 года, с большим трудом удалось их спасти.

В этом году Михаил Александрович получил обильный урожай яблок и ранета. Ветки деревьев склонились до самой земли под тяжестью плодов.

Труды Мичурина и Дарвина давно стали настольными книгами садовода, многое он в них почерпнул и применил на практике.

Михаилу Александровичу 76 лет, тридцать пять из них он проработал в депо станции Красноярск. Старейший железнодорожник уже давно на пенсии и теперь всю свою неистощимую энергию отдает садоводству. Он — постоянный участник выставок плодов садоводов-любителей Красноярской железной дороги, за свой труд имеет много дипломов и благодарностей.

На снимке: М. А. Дьяконов в своем саду.

Фото Л. МИХАЙЛОВА.

содержатель Мало ную нти-лом для гов-ной

со-бли там шла вал л в им, нна ар-ке-сти

ан-гут к са-лю, на те-

лю, ги-нее ра-в

ку-ки ро-ен-нт-нт-

Улучшить работу

Figure 5.14 "Gardener-Enthusiast" Profile of local Michurinist and gardener in Krasnoyarsk, October 1954⁹⁰

From framing text:

"...The old gardener shows off each tree with love. This one was planted back in 1924 and still bears fruit. These apples almost perished in the winter of 1930. They were saved only with the greatest of difficulty..."

⁹⁰ Photo by L. Mikhailova, in *Gazeta Krasnoyarskii Rabochii*, 1954-10-01



Figure 5.15 Photograph of street greening on Krasnoyarsk' Right Bank, 1954⁹¹



Figure 5.16 Photograph of "New Park of the Voroshilov Factory Works" Krasnoyarsk, 1954⁹²

⁹¹ Polzunov Street on the Right bank of Krasnoyarsk, 1954. Photo by Malobitskii (KKKM)



Figure 5.17 Photograph of Krasnoyarsk embankment near River Station, June 1955⁹³

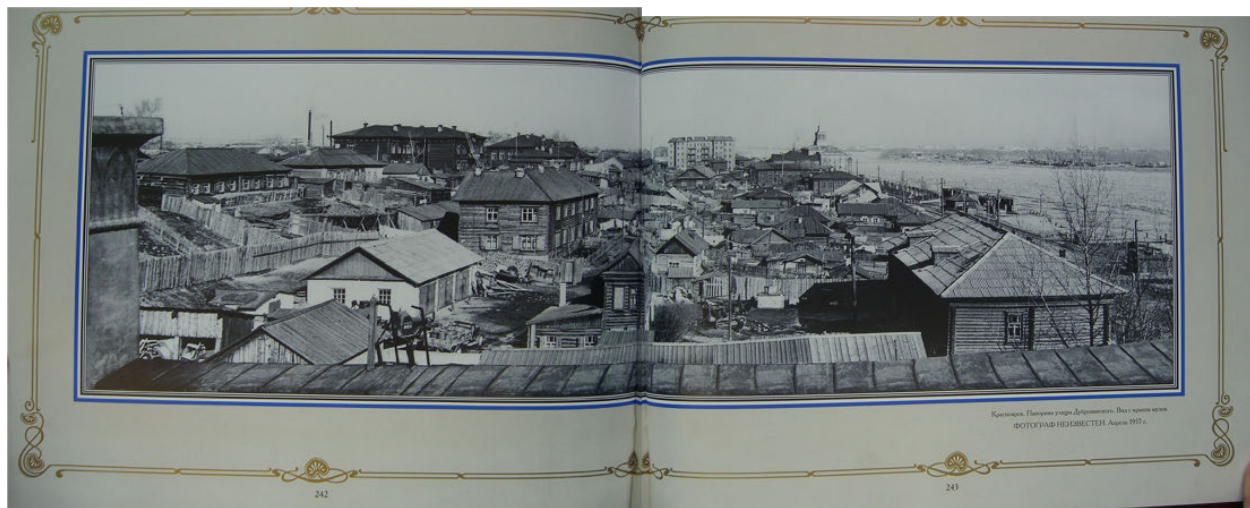


Figure 5.18 Photographic panorama of area near River Station in Krasnoyarsk, April 1957⁹⁴

Full caption reads: “Krasnoyarsk: Panorama of Dubrovinskii Street. View from the roof of the museum.”

⁹² Photo by Malobitskii, in KKKM collection

⁹³ Photo by Maniafov. June 1955: “At the docking of Steamship Matrosov.” In KKKM collection.

⁹⁴ V.V. Cherkashin, S.G. Koptsev, Fotoal'bom: Eniseiskaia Guberniia, Krasnoiarskii Krai. Istoriia v Fotografiiakh 1870 -1970gg. Krasnoyarsk: Polikor, 2011. pp242-43



Figure 5.19 Photograph "Installation of the Television Factory Park" October 1958, Krasnoyarsk⁹⁵

⁹⁵ Photo by A. Alekseev, titled in full "Installation of the Television Factory Park, in honor of the 40th anniversary of the Leninskii Komsomol, October 1958." in KKKM collection.

Chapter 6.

Hygienic, Efficient and Green: Designing City-Nature Fusion after Stalin

The task of greening settlements cannot be completely resolved under capitalist conditions, under which cities develop spontaneously and the interests of owners of separate land parcels prevent the realization of greening measures.¹

Joseph Stalin died in early March 1953. In the years that followed, the ebullient new General Secretary of the Communist Party, Nikita Khrushchev, gave a pair of key speeches that transformed the built and political environments of the Soviet Union. The first speech was Khrushchev's 1954 speech to the Soviet Builder's Conference. The second speech was his address at the 1956 Twentieth Congress of the Communist Party (CPSU). Both speeches criticized Stalinist "excesses," which were declared to be—in politics and in architecture alike—vestiges of a period that had ended.

These speeches signaled a degree of official openness to critiques of Stalinist practices, if not of Stalin himself. Taken together, the speeches unleashed a surge of political and material de-Stalinization. They produced what became known as Khrushchev's "Thaw" on the one hand, and on the other, the iconic socialist cityscapes of "Khrushchevki" (five-story concrete-panel housing blocks, arranged in micro-districts or *mikroraiony*).² Between the mid-1950s and Khrushchev's ouster in 1964, industrial aesthetics, materials, production techniques and "modern" standardized efficiency replaced the late Stalinist emphasis on heritage, decoration, and ensemble-oriented architectural design.

There are a number of reasons to assume that architect-planners in the post-Stalin period would have had little interest or time for landscaping. Stalinist architecture-planning discourse

¹ Great Soviet Encyclopedia, 1954, 2nd Edition, entry on Greening (ozelenenie)

² For those unfamiliar with the term, the "micro-district" is roughly comparable to the neighborhood unit or modernist superblock—the latter being urban spatial planning concepts that were widespread but unevenly implemented in mid-century Western architecture and planning. Osborn and Reiner, "Soviet City Planning: Current Issues and Future Perspectives."; Frolic, "The Soviet City."; *Mikroraion = Microrayon*. Proekt Rossiia = Project Russia, (Moskva: A Fond, 2002). The evolution of city block morphology is discussed in detail in Jean Castex et al., *Urban Forms: Death and Life of the Urban Block* (Boston: Architectural Press, 2004).

on the eve of Khrushchev's stylistic revolution had emphasized the decorative and "diverse" [*mnogoobraznyi*] qualities of urban green plantings. The rhetoric around urban greening planting dominant at that time loudly celebrated their architectural-artistic worth. Specifically, urban greening was prized in the postwar reconstruction period for its capacity to provide the cultured and restful parks, shady boulevards, and monumental squares that Soviet citizens had earned through their sacrifice and hardship in the Great Patriotic War.³ These aspired-to qualities came with certain costs and material requirements.

Then, in 1954, Khrushchev explicitly denounced qualities of decorative embellishment and monumentality. He similarly downgraded the postwar celebration of architectural heritage, including the pre-Revolutionary parks and gardens around Leningrad. Emphasized instead were qualities of rapid change, "progressive," forward-looking approaches, industrial production methods and "contemporary" functional aesthetics. Khrushchev's re-valuation of adornment and heritage suggest that the pursuit of "decorative" urban greenery in the Beaux-Art mode would have been considered a Stalinist excess to be liquidated. This was not the case, however. Urban greening continued to inform and influence Soviet urbanism.

This chapter focuses on evolving practices of urban greening in relation to Khrushchev's continued restructuring of Soviet architecture and urbanism. First I examine official support for urban greening on either side of Khrushchev's 1954-55 turn to architectural modernism and industrial aesthetics. Next, I consider greenery's relationship to the various architectural and urban-scale developments initiated in the late 1950s as part of Khrushchev's mass housing campaign, and dominating socialist cityscapes thereafter. Urban greening is shown in relation to evolving concepts of everyday life, urban morphology, and the Soviet Union's position in the international cultural competition that paralleled the military and political tensions of the Cold War. In the new professional and political landscape of destalinization, Soviet urbanists and associated specialists were able to rotate the "bundled" characteristics and values that accrued to urban greening and greenery in the post-war period to their continued advantage. Finally, I analyze how Soviet concepts of city-nature relationships shifted after the 1958 adoption of the *mikroraion* or microdistrict as the preferred fundamental unit of urban development. Between 1961 and 1964, in particular, urbanism in the Soviet Union operated according to a discourse of city-nature fusion

³ For example, L.B. Lunts, "Predislovie" *Proektirovanie Gorodskikh Zelenykh Nasazhdenii*. Leningrad: Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR, 1953.

that drew on established cultural and urban patterns but gained new presence in the post-Stalin era.

In this chapter I consider architect-planners' theorization and design of urban greenspace in relation to Khrushchev-era official directives regarding the character and aspirations of Soviet urbanism. Why was the Stalinist engagement with "green decoration" and "green finery" not rejected as an excess, the way that carved depictions of nature were in the post-Stalinist era? What characterized the Khrushchev-era approach to urban greening, as Soviet urbanism reoriented itself around the standardized ambitions of mass housing? What relationship did greening have to the ambitions and anxieties of the time, particularly the Cold War competition between the "two camps" of the Soviet Union and the United States? The evolving political-cultural cues evinced in Khrushchev's bombastic speeches and other official policy pronouncements communicated the officially preferred meaning of the built environment, which was theorized as an engine of progress in "building communism." The changing material and spatial structures of the post-Stalinist city, meanwhile, were indicators of the Soviet Union's capacity to provide living conditions befitting a Cold War superpower, to be read simultaneously by domestic and international audiences. Urban greenery and greening played an important role in mediating between these concurrent phenomena.

In a period usually interpreted in terms of concrete, standardization, and Cold War competition, I find that urban greening enjoyed a surprising degree of durability and site-sensitivity. Khrushchev-era urban greening was envisioned by Soviet urbanists as a multi-purpose tool of mitigation and modernization. It afforded them a means of addressing widely recognized problems of the standardization and industrialization of the mass housing campaign, e.g., monotony in and between cities, the excessive monumentality of Stalinist civic buildings and spaces, poor construction quality, scarcity of consumer commodities, and popular apathy or cynicism. Although the preferred forms of urban greenery shifted relative to the Stalinist period, I argue that the ideal concept of a city "awash in greenery" continued to shape Soviet urbanism. Despite or perhaps because of the ruptures Khrushchev initiated in other areas of built environment production, greening survived into the 1960s as an "inextricable" part of Soviet urban design praxis, maintaining its political-ideological status as both harbinger and infrastructure of the communist good life.

Ruptures, Rhetoric and Resilience

Khrushchev delivered his so-called “Secret Speech” on February 24, 1956, at the 20th Party Congress to fellow Party member-delegates. In it, he denounced Stalin’s “cult of personality” and “violations of socialist legality.”⁴ The text of the speech, while presumably intended for the ears of fellow Party member delegates only, was quickly leaked and circulated in the international press.⁵ It is this year of 1956, more than 1953, that in many ways marked the advent of a new period in Soviet politics and culture: The Thaw.⁶ The turning point in Soviet architecture and construction, however, dates to 1954, when Khrushchev famously intervened in the field of architecture and construction.

Khrushchev’s 1954 closing address to the National Builders’ Conference was delivered to an audience of some 2,200 conference participants.⁷ The conference convened from November 31 to December 7, 1954. Khrushchev’s speech came in the morning of the last day. Ten thousand copies of a “condensed” version of the conference proceedings were published in Russian, amplifying its reach even beyond the usual concurrent re-publication of main points in newspapers.⁸

In his address, since termed a “manifesto of modernism,” Khrushchev condemned the architectural, spatial, and material excesses of the preceding era. Architectural critic and Russia-

⁴ A brief subject essay by historian Louis Siegelbaum on this speech and its political repercussions at home and abroad can be found at <http://soviethistory.msu.edu/1956-2/Khrushchevs-secret-speech/> [Accessed February 08, 2016]. More detail is given chapter 11 “From the Secret Speech to the Hungarian Revolution: 1956,” pp.270–299 of William Taubman, *Khrushchev: The Man and His Era*, 1st ed. (New York: Norton, 2003).. See also “The Khrushchev Period, 1953-1964,” in *Cambridge Histories Online: The Khrushchev period, 1953-1964* (Cambridge University Press, 2006).

⁵ Thomas P. Whitney, ed. *Khrushchev Speaks: Selected Speeches, Articles, and Press Conferences, 1949-1961* (Ann Arbor,: University of Michigan Press, 1963).

⁶ Relevant framing works on the Thaw and DeStalinization include Stephen V. Bittner, *The Many Lives of Khrushchev's Thaw: Experience and Memory in Moscow's Arbat*. (Ithaca: Cornell University Press, 2008); Polly Jones, ed. *The Dilemmas of De-Stalinization: Negotiating Cultural and Social Change in the Khrushchev Era*, Basees/Routledge Series on Russian and East European Studies (New York: Routledge, 2006); D. A. Kozlov and Eleonory Gilburd, eds., *The Thaw : Soviet Society and Culture During the 1950s and 1960s* (Toronto: University of Toronto Press, 2013); Feliks Novikov and Vladimir Belogolovskii, *Soviet Modernism, 1955-1985* (Yekaterinburg: Tatlin Publishers, 2010); Sheila Fitzpatrick, "Afterword: The Thaw in Retrospect," in *The Thaw : Soviet Society and Culture During the 1950s and 1960s*, ed. D. A. Kozlov and Eleonory Gilburd (Toronto: University of Toronto Press, 2013).

⁷ For excerpts in English with commentary by Bart Goldhoorn, see 'On the extensive introduction of industrial methods, improving the quality and reducing the cost of construction: excerpts from a speech by Khrushchev at the National Conference of Builders, Architects, Workers in the Construction Materials and Manufacture of Construction and Roads Machinery Industries and Employees of Design and Research and Development Organizations of December 7, 1954' in François Blanciak et al., *The Block: With as Supplements Mass Housing Guide, Supersudaca Reports #1, Microrayon Living*, Volume 21 (Amsterdam, the Netherlands: Stichting Archis, 2009). For a contemporaneous view on the speech and its significance, see R. W. Davies, "The Builders' Conference," *Soviet Studies* 6, no. 4 (1955).

⁸ See *Sokrashennyi Stenograficheski Otchet: Vsesoiuznoe Soveshchanie Stroitelei, Arkhitektorov I Rabotnikov Promyshlennosti Stroitel'nykh Materialov, Stroitel'nogo I Dorozhnogo Mashinostroeniia, Proektnykh I Nauchno-Issledovatel'skikh Organizatsii: 30 Noiabria - 7 Dekabria, 1954*. Moscow: Rus Gos idz-vo literatury po stroitelstvu, arkhitekture i stroitel'nym materialam, 1955. The speech transcript is found on pages 379–410.

specialist Bart Goldhoorn asserts that the speech was

...subsequently instrumental in fundamentally changing the Soviet building industry in general and Soviet architecture in particular. As a manifesto of modernism it should be compulsory reading for any student of architecture—and not just in Russia.⁹

The significance of Khrushchev's "interventions" in architecture and construction is similarly asserted by Catherine Cooke, who argues that "these interventions arguably had more impact on the lives of Soviet citizens than any of the grand political topics."¹⁰ The turn to recognizably modernist building styles and standardization effected by Khrushchev's 1954 speech transformed the Soviet built environment. Goldhoorn notes that "[t]oday more than 70% of Russians live in buildings this industry created."¹¹

The degree to which Khrushchev-modern should be considered as part of international modernist architectural practice is debated.¹² The effects of the new mode on Soviet built environments, however, were undeniably immense and long-lasting. In the place of Stalinist monumental ensembles and Classically ornamented facades, Khrushchev called for a new, "progressive" approach to architecture and construction. Soviet building practice would from then on be predicated on the industrialization of construction materials and methods, standardization, simplicity, "laconic" architectural style, efficiency, and speed. Where the communal apartment had been the social and spatial distillation of Stalinist daily life, the new standardized housing blocks with their small yet separate apartments, all organized into *mikroraiony* or micro-districts, became the new international face of socialism. As urban geographer and Soviet specialist R. A. French observed just after the collapse of the Soviet Union, despite the failure to build community infrastructure in the micro-district or micro-region, "the physical structure of the microregion has come to represent, perhaps, the most evident legacy of the planning era in the post-Soviet

⁹ {Goldhoorn, 2009 #2523 @36}

¹⁰ Catherine Cooke (with Susan E. Reid) "Modernity and Realism: Architectural Relations in the Cold War" [173] published posthumously in Blakesley and Reid, *Russian Art and the West: A Century of Dialogue in Painting, Architecture, and the Decorative Arts*, 172-94.

¹¹ {, 2009 #2523 @36}

¹² Khrushchev's intervention is also frequently referred to as a "return" to modernism, reflecting the dominance of Constructivist and other avant-garde approaches during the late 1920s and early 1930s.) In mainstream architectural history, however, the import of Khrushchev's "about-face" is often understood primarily as "a qualified rehabilitation of Russian constructivist architecture" in which "stylistic superfluties" were eliminated and modern prefabrication of components increased, but a general "rigidity of conception" carried over from the Stalinist period. See, for instance, *Architecture Culture 1943–1968: A Documentary Anthology*, edited by Joan Ockman with the collaboration of Edward Eigen. Columbia Book of Architecture: Rizzoli 1993. Taking as evidence the Soviet section at Brussels Expo '58, a mere 3-4 years after the radical reorientation was made official, Ockman comments in the introduction to a condensed transcript of Khrushchev's speech that "The projects displayed in Brussels reflected a stripped-down facade treatment and fewer obligatory symmetries, but in rigidity of conception remained very similar to the work carried out under Stalin." [184] On Soviet participation in Brussels Expo '58, see Lewis Siegelbaum, "Sputnik Goes to Brussels: The Exhibition of a Soviet Technological Wonder," *Journal of Contemporary History* 47, no. 1 (2012)..

city.”¹³

For the most part, this chapter will discuss the concepts and imagined outcomes that structured post-Stalinist Soviet urbanism, rather than the as-built results. In an aspirational society such as the USSR, expectations characteristically exceeded reality.¹⁴ Nonetheless, there is value in considering the vision as well as its realization. For instance, Christopher Burton, in his study of Khrushchev-era public health policies, argues that a focus on regulatory failures in the field of public/environmental health “obscured scientific flaws” as an object for activism and intervention.¹⁵ His research offers an analytic model of how rewarding it can be to focus on the concepts, flawed and otherwise, that shaped outcomes, rather than concentrating exclusively on the line (or chasm) between theory and implementation. This is especially pertinent given that health experts and architects at the highest levels agreed on the importance of greening as a sanitary-hygienic matter.¹⁶

Given that the late 1950s were a moment of relatively public and critical discussion of public health hazards, it is likely that the architect-planners tasked with the spatial realization of prophylactic environmental health measures were both participants in and recipients of the reforms and reactions discussed by Burton. Hygienists and other specialists in communal health were consistent members of the broader urban design-planning community in the USSR. In the Stalinist period Professor A. Sysin, Director of the Institute of General and Communal Hygiene

¹³ French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*.

¹⁴ The phrase “aspirational society” has been applied to the Stalinist 1930s by Orlando Figes, *The Whisperers: Private Life in Stalin's Russia* (New York: Metropolitan Books, 2007).. In chapter 3, “The Pursuit of Happiness (1932–36),” Figes notes that the material and social rewards promised by the regime were available immediately to a select few, and “in the future, when Communism had been reached,” to the rest of the population. I would assert that the phrase can also be applied to the Soviet system of urban design and construction in all periods. Improved conditions in the form of experimental and prototype development projects or buildings were available *sooner* in discrete instances and *later* for all the rest. Mark Smith, in his discussion of Khrushchev-era housing, identifies a shift in the mid- to late-1950s from a model of housing provision based on “sacrifice” to one based on “paradise.” *Property of Communists: The Urban Housing Program from Stalin to Khrushchev*.

¹⁵ Burton, “Destalinization as Detoxification?: The Expert Debate on Industrial Toxins under Khrushchev,” 237-57. Burton also notes that Siberia was a special case in both environmental terms, with its rivers and proliferation industries, and as a space of “freer” discourse among health professionals—several of the most pointed critiques of the *status quo* in health regulation having come from health experts located in Siberia. Burton identifies the late 1950s as a moment in which “internal” critiques of environmental health *doxa* were publicly shared in the national and popular press. Likewise, Osborn and Reiner, “Soviet City Planning: Current Issues and Future Perspectives,” 247. note that this period saw in-press discussion of “the negative impact of industrial enterprises on their immediate neighbors and on the municipal economy and environment.” Unlike Burton, however, they locate the significance of such critiques not in the material effects of industrialization per se, nor its spatial and legislative framing/interventions by Soviet arch-planners. Instead they focus on the gap between planning vision and built reality. “What is interesting is not so much that the side effects of industrialization which have plagued all nations have come to affect Soviet cities too, but that the plethora of control instruments has not guaranteed better conditions.”

¹⁶ A shorter stenographic account was published in September 1960. An even shorter version was published as Kurashov, S. V. “Providing Public Services, Landscaping, and Improving the Sanitary Conditions of Cities,” *Pravda*, June 8, 1960, p. 4 (Condensed text in CDSP, XII, no. 23, 19-20).

of the Academy of Medical Science of the USSR, acting member of the Academy of Medical Science of the USSR, gave a similar presentation in 1938.¹⁷ He also wrote a foreword to Lunts' 1948 text on the beautification and greening of factory territories,¹⁸ In this period, S.V. Kurashov, Minister of Public Health, likewise presented a report [*doklad*] on "Beautification, Greening and the Betterment of Sanitary Conditions of Cities" at the All-Union Session on City-building, 7–10 June 1960, Moscow.¹⁹ Such inter-disciplinary and sustained interest in urban greening by communal hygiene specialists gives context to the scientific claims of Soviet urbanists, which were in keeping with claims within health science fields.²⁰

Sunlight Seems Plentiful, But...

Much has already been written about the “indoor” history of the Cold War and the Soviet mass housing campaign.²¹ The nuanced insights of recent works push back against earlier generalizations. Despite this work, the period’s reputation remains dominated by standardization of building designs and materials. Whether known as *panelak*, housing estates, *plattenbau*, or “Khrushchevki,” the evolving building styles and construction methods triggered by Khrushchev’s speech to the builders are often subsumed under a single, undifferentiated category, collapsing any nuance of change over time, or variation across space. As memorably depicted in the 1970s film *Ironiia Sudby (S Legkim Parom)*, the standardized housing blocks, uniform to the point of being indistinguishable, tromped across a wide-range of climates and national cultures. The urban form and spaces produced by this housing campaign and concurrent policies persist as a synecdoche for “State socialist” indifference to human scale, diversity, and comfort.²²

¹⁷ (“Sanitarno-Gigienicheskie Voprosy V Praktike Planirovki Naselennykh Mest”) at the III plenuma pravleniia Soiuza sovetkikh arkhitektorov SSSR: *Planirovka i stroitel'stvo gorodov SSSR* (Moscow: Izdatel'stvo Vsesoiuznoi akademii arkhitektury)

¹⁸ L.B. Lunts, (1948) *Blagoustroistvo i Ozelenenie Territorii Zavodov*: [Moscow] Moskovskii rabochii.

¹⁹ [Kurashov in CDSP] Kurashov, S. V. “Providing Public Services, Landscaping, and Improving the Sanitary Conditions of Cities,” *Pravda*, June 8, 1960, p. 4 (Condensed text in CDSP, XII, no. 23, 19-20).

²⁰ For an extended discussion of the influences on Russian and Soviet communal health policies, see Geisler, “The Soviet Sanatorium: Medicine, Nature and Mass Culture in Sochi, 1917-1991.”

²¹ Recent histories include Varga-Harris, *Stories of House and Home: Soviet Apartment Life During the Khrushchev Years*; Smith, *Property of Communists: The Urban Housing Program from Stalin to Khrushchev*; Harris, *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin*.

²² Consider, for instance, the argument in favor of architectural preservation of Soviet buildings and styles put forth by Kopec and Lord, 2010 [emphasis added]: “Bartlett’s familiar quotation sums up the issues associated with the loss of **designs created during the rule of the Soviet Union**: “Those who cannot remember the past are doomed to repeat it.” Thus we can say with some certainty the attempt to eradicate the architecture of the period is worthy of serious study and analysis. Furthermore **the design styles created during this period need to be preserved and studied** from the perspectives of architectural history, preservation, and environmental psychology **in order to prevent the future rule of a similar government.**” Emphasis added. Kopec and

Zsuzsana Gille describes a similar pattern in her work on industrial waste in socialist Hungary. “In reading American news about the region (circa 1989–1991),” Gille recalls being struck “by the persistence of the metaphor of waste” and an accompanying suite of visual tropes: greyness, the misdistribution of excess and scarcity, official indifference. In her words:

State socialism was described as having been a wasteful economic order and polluted to the extreme by its wastes. Visual representations of state socialism invoked the image of the state socialist landscape most familiar in the West—a gray still life composed of shoddy goods. [...] the juxtaposition of images [...] tell[s] a story about state socialism that has been told for many decades, portraying it as megalomaniac yet outdated industrialization that left society in poverty, generated tremendous amounts of waste, and caused environmental destruction.²³

Soviet housing after Stalin is accordingly castigated as undifferentiated, grey, monotonous, inefficient, utopian in its ambitions, and slipshod in its implementation.²⁴ But what of the actual landscapes of this “gray still life”? What little has been written on urban outdoor space in the Khrushchev years has focused on the seemingly neutral and bounded topic of sports and recreational facilities, giving less consideration to the comprehensive and multi-scalar systems of urbanist theory in which greening operated.²⁵ French’s limitation, in the same passage, of the legacy of greening to the visual impact of street trees and parks is evocative of the blindspots that seem to have obscured interest in Soviet greenspace as a more-than-cosmetic urban phenomenon.²⁶

In the post-Stalin era, the “unalienable unity of green plantings to the design and building of [communist] cities” was identified as a fundamental principle of Soviet architecture and city-building. In addition to providing a pleasant view from the interior of the apartment (as in the immediate postwar era), the design and production of greenspace adjacent to the new mass housing apartment buildings was meant to provide exterior space for everyday life. Soviet urban au-

Lord, "Scars of Communism: Architectural and Design Remnants of an Ideology," 437.

²³ Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*, 1-2.

²⁴ Such generalizations are widespread in popular and scholarly literature on the Soviet Union outside specialist literature on Soviet planning and architecture, where recent work has complicated the picture. To give one representative example from a general audience history of Siberia: “As in all the gargantuan construction projects that had dominated Siberian life since the 1920s, people took a distant second place to steel, concrete, and machines at Bratsk and the power stations that followed it. [...] What workers’ housing was built continued to follow the predictably ugly pattern that had scarred the Soviet urban landscape since the days of Stalin. ‘It is a beautiful country,’ one commentator wrote of the Saiano-Shushenskoe lands that Lenin had once called the ‘Siberian Italy.’ ‘It is to be hoped that its natural beauty will not be destroyed by the tasteless industrialization characteristic of Soviet development.’” Lincoln, *The Conquest of a Continent: Siberia and the Russians*, 382.

²⁵ Shaw, "Achievements and Problems in Soviet Recreational Planning.," "Recreation and the Soviet City."

²⁶ “Not far behind in its present-day visual impact are the results of the stress on greenery and green space, which was always maintained, and which led to the general planting of trees along streets and the establishment of parks. The process of greening towns has perhaps been the most successfully implemented of all the 1920s concepts of the ideal city.” French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 93. Note that here the impact of the mikroraiion is physical and evident, but the impact of greenery and greenspace is visual and processual.

thorities expected apartment dwellers, regardless of their age or occupation, to spend significant amounts of non-work time *outside* the home, conducting their individual lives in shared spaces. Specialists at the Central Research Institutes, for instance, called “for increased research on the time budgets of various age groups, in order to define “how many hours in a day, week, [or] year citizens of this or that age can spend amidst greenery.”²⁷ The pursuit of urban greening and greenspace by Soviet architect-planners was actively endorsed by Khrushchev himself as well as by other political-administrative authorities. This political imprimatur actively shaped the era’s professional approaches to urbanism and component residential environments.

Consideration of the Khrushchev-era agenda for eliminating the differences between town and country reveals that the supposedly essential “ideals in concrete” of the late Soviet built environment were in fact the product of architecture-planning professionals’ attention to, rather than disregard for, urban greening and its supposed capacities. As demonstrated in the following sections, professional handbooks and textbooks produced in the course of the late 1950s give evidence of how urban planners and other design specialists deployed green plantings and greenspace to mitigate the features most often criticized in the Soviet cityscape. In the Khrushchev era of the mass housing campaign, that included apartments’ small size, poor sound and thermal insulation, and aggregate visual monotony.²⁸

The infamously small dimensions of the Khrushchev-era apartments have become one of the best known aspects of Soviet housing, contributing to the reputation of the mass housing program. Some other characteristics have similarly become commonplace in descriptions of Soviet urbanism. Generally, critiques of the post-Stalinist built environment were multi-pronged, combining two or three issues from this list. Domestic and foreign commentators alike commented on the threat of monotony produced by standardization and industrialization of building materi-

²⁷ Ivanova, O. A. (1963) “Zelenye Nasazhdeniia v Gorode (Green Plantings in the City)” in *Landshaftaia Arkhitektura: Sbornik Nauchnykh Trudov* [Landscape Architecture: Collection of Scholarly Works], edited by L.S. Zalesskaia. p6. Vera L’vovna Ruzhze is a potential link to this research, given that Shaw describes survey research on Leningrad park use/hours as early example of Soviet quantitative sociology. Shaw, “Achievements and Problems in Soviet Recreational Planning.”; “Recreation and the Soviet City.”

²⁸ On noise and size issues in the separate apartment see Steven E. Harris, “I Know All the Secrets of My Neighbors”: The Quest for Privacy in the Era of the Separate Apartment,” in *Borders of Socialism: Private Spheres of Soviet Russia*, ed. Lewis Siegelbaum (New York: Palgrave Macmillan, 2006); *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin*; Zarecor, *Manufacturing a Socialist Modernity: Housing in Czechoslovakia, 1945-1960.*; on the peculiarities of Soviet district-wide heating infrastructure see Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics.* Planning historians Javier Monclús and Carmen Díez Medina, in the course of noting similarities between housing estate morphology in Western and Eastern Europe, note that these were issues that became more acute with time. “Problems associated with prefabrication became evident in the large estates built in the 1960s. In the Khrushchev [*sic*] era the commitment to industrialization and prefabrication led to well-known consequences in the urban forms of estates.” Javier Monclús & Carmen Díez Medina, “Modernist housing estates in European cities of the Western and Eastern Blocs,” *Planning Perspectives* 31:4 (2016): 533-562

als. Outside observers in particular criticized the seemingly inefficient and “grandiose” spatial dimensions of between-building spaces. While Soviet architects also readily acknowledged the need to combat monotony, outside observers did not necessarily recognize the hygienic and functional aspirations of the spaces set aside for urban green plantings.

Outside commenters today are also more likely to link characteristics of the built environment to the Soviet political character, a pattern less commonly found in contemporary accounts. For instance, Russian architectural historian A. Ikonnikov focused in a retrospective analysis on monotony, insufficient construction density, and spatial indeterminacy:

The minimal number of types of flats and apartment houses was adopted.... The density of the construction was not high and the houses “floated” freely in space, without organizing that space. All these circumstances taken together generated a drab monotony of the residential environment.²⁹

In contrast, a comprehensive textbook on environmental planning and design for English-speaking students written in the same year strikes a darker tone. “In the Soviet Union,” claims the author, “government planning produced grim totalitarian cities dominated by wide roads and high blocks, set far apart.”³⁰ As shown in this chapter, the selection of these specific forms was heavily influenced by features “external” to the apartment itself, but not to the concept of everyday residential life and comfort held by Soviet architect-planners at the time.³¹

Western observers in the early 1960s generally interpreted the presence or lack of greenery in a residential district as an aesthetic issue, one that influenced the affective relationship between resident and dwelling and by extension might be seen as representative of the relationship between Soviet populace and the Communist Party or Soviet state. For instance, an American architect who visited the USSR in the early 1960s was dismissive of the open green spaces incorporated into every *mikroraion*, describing them as repetitive and “conventionally” landscaped. While “sunlight seems plentiful,” he elaborated, “that the result thus far has been monot-

²⁹ quoted in Monclús and Medina, “Modernist Housing Estates,” 2016, p547-48. The quote “The minimal number... a drab monotony of the residential environment” comes from A. Ikonnikov, *Russian Architecture of the Soviet Period*. Moscow: Radugacop, 1998 p282.

³⁰ Tom Turner, *Landscape Planning and Environmental Impact Design*, 2nd edition, 2004. Originally published 1998. Quote from conclusions. (Accessed online Feb. 2017 via books.google.com, not paginated.) In the same passage, Turner glosses “government planning” in the USA as having taken “the form of over-investment in roads, rigid land-use zoning and under-investment in public space. Western Europe compromised between these extremes, keeping its ancient town centres but surrounding them with a mixture of Soviet and American planned development.”

³¹ These factors included the need for light and air as required by the Rules and Norms of 1958, the belief that everyday access to natural areas was a basic right, a preference for a view of nature rather than other apartments, and a lingering emphasis on gaps between buildings as a fire-prevention measure—an acute concern owing to the wooden structures and limited water infrastructure in the not-so-distant past.

onous and uninspiring hardly needs saying.”³² Nowhere does he indicate awareness of architects’ being constrained or, more generously, guided by the insolation norms that regulated access to that seemingly plentiful sunlight, or the political emphasis placed on equity rather than diversity of built environments.³³

The monotony of standardized, mass-produced housing was a risk noted at the time by renowned Modernist architect and town planner Ernst May in his comments following a spring 1959 tour by German housing experts to Leningrad, Moscow and Minsk. “[T]he great danger in any mechanization of residential construction is particularly apparent to any visitor to the Soviet Union, namely, the unrelieved monotony of entire districts.” May, who had himself been involved in the design and planning of mass housing in interwar Germany and the USSR, including participation in the “Green City” design competition of 192X, proposed a solution. “This [danger of monotony] is especially true where the buildings have not been erected in accordance with modern ideas of proportioning and landscaping.”³⁴

Proportioning was another way of discussing scale, and spatial interrelations between buildings and environs. Consider the complaint that public areas in Soviet-planned towns were too open, their shops, plazas, and architectural promises being all “empty” at some fundamental

³² Willen, "Architecture in the Soviet Union: A Report for the Use of Specialists in the Field of Architecture Planning to Visit the Soviet Union," 12-13..

³³ The impact on residential block structure of post-1958 normative requirements for insolation (*insolizatsiia*) is discussed later in this chapter. The need for insolation dictated the spacing and orientation of all residential buildings, whether architecturally standardized or experimental. By requiring additional gaps between the buildings located in a given block, the new 1958 Planning Rules and Norms sought “to provide insolation not only to the facilities but also to the inner-block territory (plazas, courtyards, gardens),” thereby improving the quality of outdoor and indoor everyday environments alike” p 83 in B.I Vargazin, and L.B. Velikovskii, *Osnovy Planirovki I Blagoustroistva Naseleennykh Mest I Promyshlennykh Predpriiatii* [Fundamentals in the Layout and Beautification of Settlements and Industrial Enterprises], 1959. This required gap between residential buildings changed with the form, height, and solar orientation of buildings, as well as the latitude North of the settlement. Here the authors refer to the detailed discussion of insolation issues found in the 1949 book “Architecture of civic and industrial buildings” tome III, by L.A. Serk, K.N. Kartashov, and V.N. Vargazin (Stroiizdat). Note that *insolation* is not a common term in Anglophone urban planning discourse. It refers instead to the degree of solar access: does sunlight reach a given building interior for a set period of time? The need to provide insolation is connected to public health concerns regarding infectious diseases such as tuberculosis. While such concerns may seem Victorian, they persist among present-day Russian architects and urban planners. When asked in 2006 why all apartment buildings needed to be 18 meters wide, a Russian architecture student informed me it was necessary “for insolation.... to kill the microbes.” On the diversity of national urban responses to public health concerns, see Niemi, *Public Health and Municipal Policy Making: Britain and Sweden, 1900-1940..* On the persistence in building codes of health and other truisms in US planning, see Ben-Joseph, *The Code of the City: Standards and the Hidden Language of Place Making*; Eran Ben-Joseph and Terry S. Szold, eds., *Regulating Place: Standards and the Shaping of Urban America* (New York: Routledge, 2005).

³⁴ Ernst May, “Cities of the Future” *Survey*, no38 (October 1961) pp179–185. May had been actively involved in the late 1920s planning of Soviet industrial cities. He names “Magnitogorsk, Nizhni Tagil, Kuznetsk (now Stalinsk), Karaganda, [and] Leninsk (formerly Alexandropol)” as “the principle ones.” (p180). May and his brigade left the USSR around 1932. Barbara Engel and others identify May as promoting gardens and other forms of urban greenery during his initial time in the USSR. “One architect who was strongly influenced by the idea of the Garden City, was the German Ernst May, who in his plan for the Moscow concentrated the city within the garden ring and planned a number of small garden towns outside the city.” “Public Space in the Blue Cities in Russia,” *Progress in Planning* 66, no. 3 (2006): 151.

level at which the moral and the material merged. This is a commonplace of Western and retrospective critiques of the Soviet post-Stalinist model of *mikroraion* urbanism. Whereas the urban design of the Stalinist era was simultaneously too grand and too restricted in its reliance on closed perimeter blocks and “ensemble” based design, the openness of free-plan *mikroraion* blocks was equally vulnerable to accusations of “grandiosity” and other irresponsibly scaled choices. As R.A. French notes from a post-Soviet perspective:

Grandiose streets more than a hundred meters wide were disagreeable to cross in winter blizzards, as one tracked from one empty shop to another, especially for the elderly and disabled. [...] Public preference for “human scale” was not incorporated until the “twilight” years of the USSR.³⁵

The disagreeably “grandiose” streets mentioned by French, for instance, reflected in their dimensions a combination of several more-than-aesthetic concerns, including the protection of dwellings from road noise and vehicle exhaust.

According to the urban planning Rules and Norms of 1958, “Residential buildings located along arterial streets must be separated from sidewalks by green belts 6 to 15 meters wide [20–30 feet].”³⁶ Similar regulations stipulated distances between residences and shops, residences and playgrounds, and residences and schools or medical clinics. In each case the space in between buildings was to be filled as much as possible with vegetation, thereby providing the utmost protection from noise (with its mental health impacts), smells, dust from playing fields, and infectious disease vectors. Such measures were instantiations of a general interest in using spatial and biotic measures to combat public health threats under the heading of “communal hygiene” and sanitation. Specifically, Soviet urban planners saw opportunities to use adjacent plantings to create a health-giving and progressive “facade” for residential buildings at a cost much less than that spent in the Stalinist-era of elaborate plaster facades.

Lastly, the *mikroraion* and its unnumbered apartment buildings seemed inhospitable to outside commentators. American urban planning scholars Osborn and Reiner, following their 1959 visit to the USSR, lamented that “little weight is given to making a micro-district’s facilities attractive or convenient to outsiders.”³⁷ For the planners and residents of these micro-

³⁵ French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*, 95. French leans on a Soviet commentator to lay the blame for this grandiosity on architects. “Perhaps not least among the weaknesses of the Soviet planning system was its heavy reliance, mostly total reliance, on architects to compose the plan. They tended to think in terms of architectural compositions rather than efficient functioning from the point of view of the citizen.” Here French cites A.V. Stepanenko, *Goroda v Usloviyakh Razvitogo Sotsializma [Cities in the Condition of Mature Socialism]* Kiev: Naukova Dumka, 1981 p264. Without looking at this source, it is hard to tell if Stepanenko was himself an architect-planner, sociologist, or outside critic.

³⁶ Vargazin and Velikovskii, *Osnovy Planirovki i Blagoustroistva*, 1959 p85

³⁷ Osborn and Reiner, “Soviet City Planning: Current Issues and Future Perspectives,” 246.

districts, however, the degree of convenience or attractiveness with regard to non-residents was a non-issue.³⁸

More important was the Khrushchev-era imperative to provide improved, or at least equally distributed, amenities to residents in the places where they lived, in self-proclaimed contrast to the cities of the capitalist West with their inequality among neighborhoods and destination shopping districts.³⁹ Residents of a *mikroraion* were expected to access that block's centrally-located school, clinic, and other facilities by pedestrian routes, with distances constrained by a designated "service radius." The arterial streets with their through-traffic of buses and cars that defined the borders of a given micro-district were not intended to be crossed regularly; rather residents were expected to make use of those buses to travel to work or central "All-City" facilities, everything else they might need being provided within the local district.⁴⁰

De-Stalinization was a spatial as well as political intervention. Without specifically naming Stalin or neo-Classical "empire" style urban design, Union of Architects First Secretary A.Vlasov, in a speech at a late November 1961 Conference on Landscape Architecture, criticized the prior practice of building "street corridors built to the lot lines [*po krasnoi linii*] without addressing spatiality and its opening to the sides, without greening in the necessary scale."⁴¹ In the new scale of greening there was indeed a kind of spatial monumentality, the inverse of the architecturally monumental buildings and central parks prioritized under Stalin. These were not monuments of "empty" space, however. The expanded greenspaces of the post-Stalin Soviet city were filled, even overfilled, with aspirational concepts and functions, even as they remain admittedly disagreeable to navigate in a blizzard, for the young, able-bodied, and elderly alike.

³⁸ As recollected by a sociologist in St. Petersburg, there was no reason to walk down a street or into a *mikroraion* that wasn't yours, unless you were visiting someone. And in that case they would meet you at the bus stop (or top of the metro escalator) and walk you to their building. (Personal Conversation, 2004)

³⁹ There was a long history within Soviet urbanist discourse of commenting on the supposed inequalities of the Western cities, often framed in spatial and environmental terms. Recall: "The capitalist city provides amenities [*udobstva*] only to the bourgeois. Workers and laborers live in slums, lacking light, air, and necessary conveniences." Valevskii, N. *Za Blagoustroistvo Gorodov*. Narkom Kommunal'nogo Khoziasstva RSFSR. Moscow: izdat-vo "Vlast' Sovetov" pri prezidiume VTsIK, 1935. p5

⁴⁰ This was a shift from the Stalinist approach to facilities/resource distribution, which relied more on the system of "All-City" or District centers, scaled to meet the needs of larger groups in a relatively more centralized location. In terms of parks and green-space, the post-Stalinist shift from "Culture Two" centralization and verticality to the "Culture One" horizontality and distribution [to use Paperny's terms] played out in a shift of emphasis away from the Central Parks of Culture and Rest. These, which had often been planned as vast and singular destination leisure sites, were replaced by the micro-district garden—small, simple, but one in every block.

⁴¹ Quoted in "Soveshchanie po landshaftnoi arkhitekture [Conference on Landscape Architecture]" Article in *Arkhitektura SSSR* 1962:01 pp59–60 (no author given)

Looking Backward: The Agrogorod Campaign

Khrushchev's 1954–64 interventions in urbanism are best understood in comparison to an earlier initiative of his: the *agrogorod* or agro-town. In the late 1940s and early 1950s, following his 1949 return to Moscow from Ukraine, Khrushchev led the Soviet campaign of rural settlement amalgamation. Generally referred to as the *agrogorod*, or *agri-town*, the amalgamated settlements would have consolidated existing collectivized farms into larger, more architecturally urban units in the name of increased efficiency and rural modernization. The *agrogorod* thus aspired to the elimination of any villages and village forms of life that had survived the first Stalinist collectivization campaign of the 1930s.

Sometimes referred to as “the second collectivization,” official support for this campaign peaked with a 1951 *Pravda* article by Khrushchev titled “On Building and Improvements on the Collective Farms.”⁴² The peak proved short-lived. The following day, *Pravda* published an editorial addendum, clarifying that the article had mistakenly been published without its proper heading: “solely for discussion purposes.” Khrushchev's political status was dented, but proved durable.

After the 1951 retraction, the *agrogorod* concept was officially “consigned to oblivion,” at least according to political scientists (who, appropriately enough, have directed little attention to their spatial and programmatic legacy). Khrushchev's involvement in the abortive campaign to implement the *agrogorod* model across the USSR is often mentioned in passing as yet another “hare-brained scheme,” and prime example of Khrushchev's industrial and agricultural optimism.⁴³ In contrast, one recent work argues that the amalgamation campaign, while rarely studied in depth, “offers a unique opportunity for the historian to reexamine Khrushchev's beliefs about the Soviet countryside and the specific context in which they emerged,” thereby giving insight into Soviet agricultural policies and “the fundamental differences between Stalin and Khrushchev.”⁴⁴

⁴² This translation from the CDSP. Whitney, *Khrushchev Speaks: Selected Speeches, Articles, and Press Conferences, 1949-1961*, 40.. Improvement was likely “*blagoustroistvo*” in the original.

⁴³ Berg, “Reform in the Time of Stalin: Nikita Khrushchev and the Fate of the Russian Peasantry.”; Roy Aleksandrovich Medvedev and Zhores A. Medvedev, *Khrushchev: The Years in Power* (New York: Columbia University Press, 1976), 52-53.. Medvedev states that it was “consigned to oblivion” after the retraction, having served its purpose in the internecine power struggles between Malenkov, Beria and Khrushchev at this time. A middle path is taken by Melvin , who does consider the history of Soviet architectural design of rural settlements in detail, but again in the historiographical context of rural and political reforms. Neil Melvin, *Soviet Power and the Countryside: Policy Innovation and Institutional Decay*, St Antony's Series (New York: Palgrave Macmillan, 2003).

⁴⁴ Berg, “Reform in the Time of Stalin: Nikita Khrushchev and the Fate of the Russian Peasantry,” 19.

Considered from the perspective of urban and landscape planning history, Khrushchev's 1951 statement reveals substantial continuities between the *agrorod* concept, the 1930s rhetoric of rural modernization and collectivization, and the "green city, garden city" practices that shaped Soviet urbanism from the 1960s on. In 1961, as detailed in a later section of this chapter, Khrushchev declared a future of communist settlements in which environmental amenities fused with "all that is best in the modern city."⁴⁵ Modern city living, under communism, would be improved by the addition of landscape features (lakes, ponds, greenery, clean air). During that same speech—which rehearsed the contents of the 3rd Party Program—Khrushchev had posed the question, "what will typify the countryside in its advance along the road to communism?" His answer was, in part, that "agricultural labor will develop into a variety of industrial labor."⁴⁶ Quantitative details followed regarding the productive destinies of state farms (*sovkhoz*) and collective farms (*kolkhoz*). Although agricultural production techniques and targets were discussed at length in the Third Party Program, the "village" as a spatial-material entity was not.⁴⁷

The disappearance of the village from high profile political rhetoric (though not in actuality) began much earlier, in tandem with the 1930s collectivization and de-kulakization campaigns. At the so-called Congress of Victors in 1934, Stalin had announced the advent of a "new type of village," replete with modern technological and cultural amenities:

The old village with its church at the highest point and its best houses belonging to the policeman, priest and kulak to the fore and the half broken down huts of the peasants behind is beginning to disappear. In its place a new type of village is developing which has communal buildings, clubs, the radio, cinemas, schools, libraries and kindergartens, and tractors, combines, threshing machines and cars.

In 1951, Khrushchev quoted this Stalinist vision of progress, which makes no mention of landscape amenities or spatial relationships. It served to establish the lineage of the concept of village improvement and demonstrate, at least rhetorically, the progress already made. By the time of its postwar revival, Khrushchev's version of new agricultural settlements made no mention of churches, huts, priests, kulaks or other targets of State violence from the 1930s. Instead, he focused on opportunities for improvement of existing collective farms through greater efficiency,

⁴⁵ see page 34 of the 38 page transcript of the report announcing the new Party Program, as translated and published by the Current Digest of the Soviet Press [CDSP], No. 44, Vol.13, November 29, 1961, p18].

⁴⁶ page 16-17 VOL. XIII, NO. 44 *The Current Digest Of The Soviet Press* [CDSP], No. 44, Vol.13, November 29, 1961

⁴⁷ Pages 12 – 17 of the original 28 page CDSP translation concern "The Development of Agriculture and Social Relations in the Countryside." Khrushchev's comments about future "green" urbanism occur in the following section, "Improving the People's Well-Being and Achieving the Highest Standard of Living" (p33 (p17 of CDSP)

"What will typify our countryside in its advance along the road to communism?" [p16-17) VOL. XIII, No. 44 *The Current Digest of the Soviet Press*

standardization, and changes in settlement layout.

The new entity was to be neither a new type of village, nor in fact an *agrorod* with its – *gorod* [city] suffix. Although the term agro-town or agro-city had been widely used in Ukraine, under his supervision, Khrushchev states that “it seems to me this cannot be considered apt.”

Distinctions must be maintained:

The name “city” [*gorod*] implies a great deal. If it is to be a city, everything here must meet the high requirements of urban culture. [Instead...] the name “collective farm settlement” would be very fitting.⁴⁸

Urbanity was, for Khrushchev, a question of culture and cultural facilities rather than density or market activities per se.

In the section “On Design and Planning Agencies’ Tasks,” Khrushchev rehearsed many of the opportunities and concerns associated with his eventual mass housing campaign.⁴⁹ The process of designing and building the new collective farm settlements was to entail the “correct selection of a site,” relying thereafter on “standard designs [and] standard layouts.” The use of standardized model plans with their reproducibility and centralized production seemed to afford control over cost and quality. The new settlements and structures were to combine “economy and simplicity of construction with conveniences in the structures to be erected.” Notably, Khrushchev appears aware of the risks of mass-production. He advised that “the houses need only be skillfully placed, avoiding great disharmony and also monotony.”⁵⁰

Khrushchev closed the article with a rousing call to participation and belief. Satisfactory production of the vision would require interdisciplinary skill and passion, and the enthusiasm of the avant-garde. In Khrushchev’s words:

A noble and majestic task confronts our farmers, architects, engineers and builders! For the first time in history learned scholars are concerning themselves with building villages. In our socialist conditions this is no fantasy, but an actuality.⁵¹

Although the *agrorod* actuality was returned to fantasy the following day with the *Pravda* editorial retraction, I assert there were many continuities between this initial campaign and Khrushchev’s later interventions in Soviet built environments. Moreover, following Khrushchev’s ascension to Soviet leadership, he had the authority to intervene in cities proper as well as villages.

⁴⁸ Khrushchev 1951 in Whitney, *Khrushchev Speaks: Selected Speeches, Articles, and Press Conferences, 1949-1961*, 52.

⁴⁹ Khrushchev, 1951 in *Ibid.*, 44-48.

⁵⁰ Khrushchev, 1951 in *Ibid.*, 46.

⁵¹ Khrushchev in *Ibid.*, 52.. This invocation of having a plan as the equivalent of a new reality is echoed in the Krasnoyarsk 1954 New Year’s editorial in the *Gazetta Krasnoiiarskii Rabochi*, “Let’s Dream.” It closes by stating “all this shall be. Because it’s not a dream but a plan.”

Indoor/Outdoor Communism

[] Fig. __ from Ivanova & Makhrovskaiia 1959 in *Planirovka Zastroika i Blagoustroistvo Zhilykh Zaionov* [p5]

[] Fig. __ Petrov 1960 ArkhSSSR no4: mass housing / outdoor life⁵²

Above all, it should be taken as a rule that the area in the interior of a block [*kvartal*], whether an individual parcel or a communal garden, is an inalienable part of the dwelling.

If we consider the within-block territory as inseparably linked with housing, its organization must necessarily be given forethought as deep as that given to the design of residential units. Here also we must continue the struggle for rational use of every square meter of area with broad application of all elements of beautification and greening, thereby providing healthy, convenient living conditions for the population.⁵³

The Central Committee of the Communist Party and Council of Ministers of the USSR formally announced the mass housing campaign on July 31, 1957. The 1957 decree included ambitious temporal and qualitative parameters. In addition to declaring that the housing shortage would be extinguished “within 10–12 years,” the promised housing would be “convenient, attractive, and affordable” [*udobnye, krasivye i deshevye*]. It would be produced by industrial methods and materials, and use “progressive” approaches to the architectural-planning organization of territories for settlement.⁵⁴

The apartments that resulted are infamous for their small size and shoddy construction quality. Western commentators often compare the dimensions and other physical qualities of these “small-measured apartments” as they were known at the time to the average dwelling size in the UK or the USA, despite some differences in statistical and conceptual measurement.⁵⁵ In the context of the Cold War politicization of everyday quality of life, particularly its residential manifestations, the lesser size and limited appliances of the typical Soviet separate apartment were

⁵² O.A. Ivanova, and A.V. Makhrovskaiia, "Planirovka i blagoustroistvo zhilykh kompleksov" *Planirovka Zastoika i Blagoustroistvo Zhilykh Raionov* Edited by V.A. Vitman and B. V. Murav'ev. Academy of Construction and Architecture, Leningrad branch. Leningrad: GosIzdat Lit po StroiarhIStroiMat, 1959.

⁵³ “*Prezhde vsego sleduet priniat' za pravilo, chto vnutrikvartal'naia ploshchad', bud' to individual'nyi uchastok ili obshchestvennyi sad, iavliaetsia neto'emlemoi chast'iu zhilishcha. [...] obespechivaiushchikh zdorovye, udobnye usloviia zhizni naseleniia*” O.A. Ivanova and A.V. Makhrovskaiia, "Planirovka i blagoustroistvo zhilykh kompleksov" *Planirovka Zastoika i Blagoustroistvo Zhilykh Raionov* Edited by V.A. Vitman and B. V. Murav'ev. Academy of Construction and Architecture, Leningrad branch. Leningrad: GosIzdat Lit po StroiarhIStroiMat, 1959. Both Ivanova and Makhrovskaiia had achieved the status of *kandidats* in Architecture. They worked at the Leningrad branch [filial] of the Academy of Construction and Architecture in this period. Ivanova had been a member of ASNOVA under the direction of N.A. Ladovskii, along with such prominent architects and landscape specialists as K.S. Mel'nikov, El Lizitskii, M.P. Korzhev, L.S. Zalesskaia, and M.I. Prokhorova. Vronskaya, "Urbanist Landscape: Militsa Prokhorova, Liubov' Zalesskaia, and the Emergence of Soviet Landscape Architecture".

⁵⁴ Vitman, V.A. and B. V. Murav'ev, eds. *Planirovka Zastoika i Blagoustroistvo Zhilykh Raionov* (Academy of Construction and Architecture, Leningrad branch). Published by GosIzdat Lit po StroiarhIStroiMat, Leningrad: 1959: p3 (In preface)

⁵⁵ Alexander Block, "Soviet Housing: Some Town Planning Problems," *Soviet Studies* 6, no. 1 (1954); "Soviet Housing. The Historical Aspect I. Problems of Amount, Cost and Quality in Urban Housing," *Soviet Studies* 5, no. 3 (1954). The focus in Western and Soviet literature on the key metric of “square meters of living space” per person or as a cost measure reflected in part the lack of other statistical data (or direct observation).

taken as material representation of the limited benefits and lesser comforts provided under socialism.⁵⁶ This was the background of competition and domestic “keeping up” that gave such potent edge to the much-publicized Nixon-Khrushchev “Kitchen Debate” in 1959 at the American National Exhibit in Moscow’s Sokolniki Park.⁵⁷

Yet while consumption was the dominant metric from the American side, too tight a focus on commodity consumption and other “Western” metrics of standards of living obscures the broader Soviet interpretation of “living conditions” as the preferred metric of such Cold War competitions.⁵⁸ Along these lines, recent historical scholarship on Khrushchev-era housing has shown the complex motivations of the architects responsible for the apartments’ designs, who intentionally limited their size in order to preclude multi-family use.⁵⁹ The typical draw-backs of the apartments, e.g. their size, lack of privacy, limited appliances, noise, and draftiness, also appear in a different light when considered from the perspective of the architect-planners responsible for shaping the residential districts in which the apartment buildings were built.

In keeping with the Soviet tradition of architectural education in which town planning (*gradostroitel'stvo*) and landscape design/organization (*ozelenenie*) were taught as a single spe-

⁵⁶ Recent historical scholarship on Khrushchev-era housing has shown, however, the complex motivations of the architects responsible for the apartments’ designs. The equally complex reception of these apartments by residents, including those who received one and those who remained waiting in their communal flats, has also been studied at length. Historian Steven Harris maintains that the size of these apartments reflects an architectural response to the problem of the multi-family Stalinist *kommunal'ka*, was intended as an advantage rather than a flaw. Varga-Harris in chapter 4 discusses the “liminal spaces” of courtyards, stairwells and their use in “reviving socialist society,” e.g. by increased emphasis on residents’ maintenance of these spaces, including planting and care for vegetation. In contrast to this dissertation, V-H focuses on the perspective and subjectivity of residents, not architect-planners or the spatial and environmental repercussions of said courtyards and planting activities. Harris, *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin*; Varga-Harris, *Stories of House and Home: Soviet Apartment Life During the Khrushchev Years*; Smith, *Property of Communists: The Urban Housing Program from Stalin to Khrushchev*; Sigrist, “Governing the Commons around Urban Homes an Ecological Study of the Design, Management and Use of Moscow Yards.”

⁵⁷ On ANEM see: Susan E. Reid, “Who Will Beat Whom?: Soviet Popular Reception of the American National Exhibition in Moscow, 1959,” *Kritika: Explorations in Russian and Eurasian History* 9, no. 4 (2008); Cristina Marie Carbone, “Building Propaganda: Architecture at the American National Exhibition in Moscow of 1959” (PhD Dissertation, University of California, Santa Barbara, 2001); on the “Kitchen Debate” and the importance of kitchens to domestic and political de-Stalinization, see Reid, “Cold War in the Kitchen: Gender and the De-Stalinization of Consumer Taste in the Soviet Union under Khrushchev.”; “The Khrushchev Kitchen: Domesticating the Scientific-Technological Revolution,” *Journal of Contemporary History* 40, no. 2 (2005); “Who Will Beat Whom?: Soviet Popular Reception of the American National Exhibition in Moscow, 1959.” The importance of household / domestic consumption is further asserted in Greg Castillo, “Domesticating the Cold War: Household Consumption as Propaganda in Marshall Plan Germany,” *Journal of Contemporary History* 40, no. 2 (2005); *Cold War on the Home Front: The Soft Power of Midcentury Design*; Christine Varga-Harris, “Homemaking and the Aesthetic and Moral Perimeters of the Soviet Home During the Khrushchev Era,” *Journal of Social History* 41, no. 3 (2008); *Stories of House and Home: Soviet Apartment Life During the Khrushchev Years*. A transcript in English of the exchange between Nixon and Khrushchev is available at the website www.TeachingAmericanHistory.org, accessed February 2013.

⁵⁸ Donald A. Filtzer, “Standard of Living Versus Quality of Life: Struggling with the Urban Environment in Russia,” in *Late Stalinist Russia: Society between Reconstruction and Reinvention*, ed. Juliane Furst, Basese/Routledge Series on Russian and East European Studies (New York: Routledge, 2006).

⁵⁹ Harris, *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin*.

cialty, the task of organizing buildings and inter-building territories were theorized as a single design problem.⁶⁰ As O. A. Ivanova elaborated: “Socialist everyday life [*byt*] will entail completely new relations to the dwelling. This understanding includes more than the building, but also the adjacent territory, which must be organized just as meticulously as the separate apartments.”⁶¹ Outdoor and indoor living environments were one. Amenities including privacy, quiet and pleasant temperatures that were not available inside the walls of the separate apartment would be provided in the outdoor spaces and associated communal facilities of post-Stalinist residential districts.

In his report to the June 1960 All-Union Town Planning Congress, Chairman V. A. Kucherenko of the U.S.S.R. State Construction Committee asserted that the new model of urbanism included an “expanded” notion of apartment dwelling.⁶² In the post-Stalin era, everyday life would extend beyond the confines of an apartment’s walls to the communal facilities of the micro-district, including multifunctional outdoor green spaces.⁶³ Such spaces contributed simultaneously to “sanitary-hygienic” and “quality of life” needs. As one central textbook stated,

The presence within a block of a green mass, along with protection from strong winds and dust, affords improved microclimate and allows the creation of good places of leisure for the population.⁶⁴

For reasons of economy and ideology such benefits were envisioned as shared among residents, although the degree to which communal facilities might produce communal sensibilities was debated at the time.⁶⁵

⁶⁰ Willen, "Architecture in the Soviet Union: A Report for the Use of Specialists in the Field of Architecture Planning to Visit the Soviet Union," 06. The other two departments found at Soviet architectural schools in the early 1960s were “Housing and Civic Design” and “Industrial Design.” Architectural and planning education was highly centralized, with limited numbers of specialists produced at two main schools in Leningrad and Moscow. Increased attention was paid to “landscape architecture” as distinct from “urban greening” or “green construction” in the mid-1960s, taking its cues from Zalesskaia’s 1964 *Kurs Landshaftnoi Arkhitekturoi*, but the field was still considered an subfield of city-building. See "Liubov' Sergeevna Zalesskaia" *Arkhitektura SSSR* (1968:03): 43.

⁶¹ O.A. Ivanova. quoted in *Arkhitektura SSSR* 1962 no1 59 .

⁶² Andrusz, *Housing and Urban Development in the USSR*. describes Kucherenko as the most influential bureaucrat of the building industry at this time.

⁶³ Quoted in English in Osborn and Reiner, "Soviet City Planning: Current Issues and Future Perspectives," 246.: As Kucherenko wrote, the apartment “expands” to include facilities for child care, dining, education, and so forth.” See Kucherenko "Vstupitel'noe slovo predsedatelia Gosudarstvennogo komiteta Soveta Ministrov SSSR po delam stroitel'stva tov. Kucherenko V. A." pp7-83, in *Vsesoiuznoe soveshchanie po gradostroitel'stvu (All-Union Conference on CityBuilding: Shorter Stenogram, 7–10 June, 1960)* Gosstroizdat: Moscow, 1960. p14. Compare to Deborah A. Field, “Everyday Life and the Problem of Conceptualizing Public and Private during the Khrushchev Era” pp163–180 in *Everyday Life in Russia Past and Present*, 2015. For an example of American “expanded” residential life, see Paul Groth, *Living Downtown: The History of Residential Hotels in the United States*, University of California Press, 1999.

⁶⁴ Vargazin and Velikovskii, *Osnovy Planirovki I Blagoustroistva*, 1959 p85

⁶⁵ These debates discussed briefly below, in the section on Greening and the Micro-District. On Strumilin’s role, see Frolic, "The Soviet Study of Soviet Cities."

The outdoor public-private realm this created is best understood as a distributed domestic sphere, as much a part of the mass housing program as its better-known kitchens. In the transition to full communism, quality of living experience relied on indoor and outdoor spaces alike.⁶⁶ The program assigned to the adjacent territory of mass housing apartment buildings included many forms of personal life. Socializing, child-rearing, courting, leisure and recreation—all were to be conducted in the distinctively socialist “public privacy” of the block interior and adjoining greenspace.⁶⁷

The idea of apartment living in which indoor-outdoor boundaries were visually and programmatically minimized harkened back to avant-garde design practices of the late 1920s and early 1930s. Thereafter, such ideas fell out of favor. Ideal Stalinist apartment décor was characterized by heavy drapes and other cues to interiority. With Khrushchev’s return to modernist idioms of style, the interior of the separate apartment was once more expected to be spacious and clean-lined, with living areas that fused seamlessly into each other. The Soviets strove for a comparable visual and functional fusion or “melting” of built urban object into greenery at the collective scale.⁶⁸ Mediating between the scale of the separate apartment and the broader urban or national collective was the standardized unit of the *mikroraion*.

Synthesis and Standardization: the Mikroraion

In the layout of residential apartment districts, ideological and economic considerations have converged in the *mikroraion* or micro-district. It is claimed that everyday needs (except employment) can be best satisfied in such areas. The micro-district includes standard four- or five-story apartments, closely linked to shops, child care centers, elementary (and sometimes secondary) schools, other communal facilities, clubs, indoor and outdoor recreation space, and access routes; this concept favors the systematization of community facilities.⁶⁹

In 1958, the 5th Congress of the International Union of Architects (UIA) in Moscow spurred much discussion of urban design issues, including new town construction and the design of residential districts.⁷⁰ At the end of that year the “Regulations and Norms for the Planning and

⁶⁶ Cartoons and newspaper discourse on urban greenery and greening were one means of promoting (or merely noting) the blurred boundaries between indoor and outdoor realms. Varga-Harris, "Green Is the Colour of Hope?: The Crumbling Facade of Postwar Byt through the Public Eyes of Vecherniaia Moskva."

⁶⁷ On the Soviet phenomena of public privacy and private publicity see {Gerasimova, 2002 #4184; and *Everyday Life in Russia Past and Present*, edited by Choi Chatterjee, David L. Ransel, Mary Cavender, Karen Petrone. Indiana University Press, Jan 29, 2015.

⁶⁸ Buchli notes the same was true with respect to Ginzburg’s interwar design of the Narkomfin apartment building. Buchli, "Moi-sei Ginzburg's Narkomfin Communal House in Moscow: Contesting the Social and Material World."

⁶⁹ Osborn and Reiner, "Soviet City Planning: Current Issues and Future Perspectives," 246.. Fn33: "See for example the discussion of micro-districts by G. Gradov, director of the Public Buildings and Structures Institute (9)."

⁷⁰ The UIA (L'Union Internationale des Architectes) should not be confused with CIAM (Congrès Internationaux d'Architecture

Construction of Cities,” which replaced those previously adopted in 1954, designated the *mikro-raion* model as the preferred fundamental “unit” of Soviet town planning and construction: ‘It is recommended that the *mikro-raion* be adopted as the basic form of organization of housing build-up for construction of new territories and for the urban renewal of all blighted residential areas.’⁷¹

According to the 1958 *Rules and Norms*, each residential district [*mikro-raion*] was required to have the following communal outdoor amenities:

one or more central garden, up from norms of 2–3 square meters of greenery per person. The garden should include adult sports areas, places for rest [*otdykh*] and strolling paths, while maintaining an area of green plantings no less than 70% of the area of the garden. The garden should have a service radius of 500 m.⁷²

Any potential conflicts between these uses and user-groups, such as noise from the sports-fields reaching the areas of quiet rest for elderly residents, were to be mitigated through spatial and vegetal means. Alongside prescribed distance between uses, residential norms and rules for housing detailed how different species of trees and shrubs should be used to create visual and aural screens, controlling the movement of unwelcome noises, smells, even disease vectors just as they controlled the views and movement of strolling residents.⁷³

The degree of convergence between “Western” and “Eastern” mass housing patterns was and is subject to debate among housing and spatial planning experts.⁷⁴ To some extent differ-

Moderne), despite both being international architectural professional organizations taking their acronyms from the French. CIAM, founded in 1928 with the influential participation of Le Corbusier and other European architects (including many who, like Le Corbusier, shared a direct engagement with Soviet architecture and planning of the late 1920s), disbanded in 1957–1959. The “death of CIAM” was formally announced in September 1959, although “the spirit of CIAM” was claimed to continue in such groups as Team 10. For details on the end of CIAM as an organization, see Eric Paul Mumford, *The CIAM Discourse on Urbanism, 1928-1960* (Cambridge, Mass.: MIT Press, 2000), 258–65. See Miles Glendinning, “Cold-War Conciliation: International Architectural Congresses in the Late 1950s and Early 1960s,” *The Journal of Architecture* 14, no. 2 (2009). for more on UIA 1959. The mutual influence of Soviet and European architectural avant-gardes in the interwar period is widely discussed by architectural historians, although the direction and heft accorded to the lines of influence varies. See, for instance, Mumford, *The CIAM Discourse on Urbanism, 1928-1960*, chapters 1 and 2; “CIAM and the Communist Bloc, 1928-59.”; Kopp, “Foreign Architects in the Soviet Union During the First Two Five-Year Plans.”; Jean-Louis Cohen, *Le Corbusier and the Mystique of the USSR: Theories and Projects for Moscow, 1928-1936*, trans. Kenneth Hylton (Princeton, N.J.: Princeton University Press, 1992); Bosma, “New Socialist Cities: Foreign Architects in the USSR, 1920-1940.” Another well known Modern architect with ties to the USSR, Ernst May, discussed his return to the USSR here: “Cities of the Future” *Survey*, no38 (October 1961) pp179–185.

⁷¹ Frolic, “The Soviet City,” 387 fn11. citing 1959 ‘Regulations and Norms for the Planning and Construction of Cities - USSR’ (translation of *Pravilu i normy plantirovki i zastroiki gorodov*, Moscow, 1959) Joint Publications Research Service (JPRS), No. 9891, September, 1961, No. 40 (hereafter referred to as Norms and Regulations of Planning, PiNP)

⁷² Vargazin and Velikovskii, *Osnovy Planirovki i Blagoustroistva*, 1959 p85

⁷³ The problem of noise- and heat-transfer as a side effect of light panel construction was raised along with other “problems to be solved” at the April 1959 session of the Academy of Construction and Architecture. See “Khronika” *Arkhitektura SSSR* 1959 no6 pp63–64. The issue of noise transfer is discussed in Harris, “I Know All the Secrets of My Neighbors”: The Quest for Privacy in the Era of the Separate Apartment.” On the use of greenery and spatial interventions for noise protection, see L. Makrinenko, “Arkhitekturno-Planirovochnye Metody Bor’by s Gorodskimi Shumami” *Arkhitektura SSSR* 1962 no1 pp33–36.

⁷⁴ Examples include Alexander Block, “Soviet Housing. The Historical Aspect: Some Notes on Problems of Policy. I,” *Soviet Studies* 3, no. 1 (1951); “Soviet Housing; the Historical Aspect: Some Notes on Problems of Policy. Pt. II,” *Soviet Studies* 3

ences of opinion have followed national Cold War lines.⁷⁵ In the words of American planners Thomas A. Osborn and Robert J. Reiner, “ideological and economic considerations have converged in the *mikroraion* or micro-district.” In terms of the districts’ ideological significance in the USSR, they note that “a relation between a micro-district unit and the communal ideal is sought.”⁷⁶

The search for design approaches to residential districts appropriate to de-Stalinization occasioned “considerable public debate,” primarily in reference to a proposal by Stanislav Strumilin published in *Novyi Mir* (July 1960) and *Oktyabr’* (March 1960).⁷⁷ The debate centered on the yet-to-be-determined conjunction of “workers’ daily life,” “communism,” and the material environment of residential life.⁷⁸ Strumilin advocated a relatively communal vision of the *mikroraion*, in which the planned-for provision of local services (“dining halls, club rooms, and boarding schools”) would satisfy an individual’s needs outside of work hours. He maintained that the location of such activities and facilities in close proximity to work and housing in a given micro-district or set of buildings according to employment in a given factory or enterprise would allow resident “Communards” to easily achieve “a single economic and social collective.”⁷⁹

(1952); "Soviet Housing: Some Town Planning Problems."; "Soviet Housing. The Historical Aspect I. Problems of Amount, Cost and Quality in Urban Housing."; J. D. Tetlow, "Sources of the Neighbourhood Idea," *Journal of the Town Planning Institute* 45 (1959); Mumford, "CIAM and the Communist Bloc, 1928-59."; Miles Glendinning and Stefan Muthesius, *Tower Block: Modern Public Housing in England, Scotland, Wales, and Northern Ireland* (New Haven: Published for the Paul Mellon Centre for Studies in British Art by Yale University Press, 1994); Glendinning, "Cold-War Conciliation: International Architectural Congresses in the Late 1950s and Early 1960s."; "Multifaceted Monolith: The Hidden Diversity of Mass Housing," *Social Analysis* 54, no. 2 (2010).

⁷⁵ For instance, Tetlow, "Sources of the Neighbourhood Idea," 113. cautioned that “the term has passed into planning jargon and has been used to describe residential patterns which vary widely in their conceptions from the type of the pre-war housing estate with the addition of a pathetic ration of shops to the almost self-sufficient unit—in effect a town within a town.” Later in the same article he discounts interwar claims to a Soviet indigenous neighborhood unit as “curious... it was clear that Dr. Kaufman, who had been Director of Housing at Frankfurt-am-Main [and used examples drawn from Magnitogorsk] knew nothing of the work of Perry and Unwin.” [p114] Instead, Tetlow reasserts a consistently Anglo-American axis of origination for the idea, citing Ebenezer Howard in passing then lingering in more depth on the work of Sir Raymond Unwin and Barry Parker in England and Clarence Perry in the USA, with early examples being Radburn, the New Deal Greenbelt Towns, Hampstead Garden Suburb, and post-war developments in British neighborhood theory and planning legislation. In contrast, Monclus and Diaz Medina (2016) identify a spectrum of variations on the basic idea of a neighborhood unit or housing estate, which they analyze in primarily morphological terms.

⁷⁶ Osborn and Reiner, "Soviet City Planning: Current Issues and Future Perspectives," 246.

⁷⁷ Ibid.. Other evidence of this debate cited by Osborn and Reiner include critical responses by Kolmanovsky and others (*Novyi Mir* Feb 1961), and Strumilin, S. G. “Communism and the Working People’s Life,” *Novyi mir*, no. 7 (July, 1960), 203-220. #32. “Thoughts About the Future,” *Oktyabr’*, no. 3, March, 1960, 140-146 (Complete text in CDSP, XII, no. 15, 11-14); and Kolbanovsky, V. N., “The Workers’ Daily Life and Communism,” *Novyi mir*, no. 2 (February, 1961), 276-282.

⁷⁸ Ibid., 240.

⁷⁹ Quote given in Frolic, "The Soviet City," 286.. Frolic cites a different title for what is presumably the same article (or a different one from the same journal issue): “S. G. Strumilin, 'Family and Community in the Society of the Future' *Novyi mir*, No. 7, 1960 (*Soviet Review*, 11 No. 2, February, 1961, pp. 3-29). Frolic discusses Strumilin’s proposals for a City of the Future as being admittedly utopian with their “Communal Palaces” of apartment buildings, but at the same time “still the more authoritative and probably the most official of Soviet blueprints for future cities. His city serves the useful function of more clearly outlining plau-

While the degree of official support for such all-encompassing utopianism was inconclusive, it seemed clear to Osborn and Reiner that there was “official blessing for the idea of a service-oriented residential community.” They declared such a community to represent “a welcome change from the demands of Stalinist days for pretentious architectural ‘ensembles.’”⁸⁰ Visits to early *microrraion* districts by other foreign experts representing all ends of the urban design spectrum (e.g. modernist Ernst May and Garden City activist Frederick J. Osborn⁸¹) similarly led to expressions of concern over some details of implementation, but these visitors largely saw the “modern” mass housing campaign and its *microrraion* spatial scaffold as an improvement over typical Stalinist ensembles.⁸²

The debate among Soviet authorities regarding the degree to which the *mikroraion* could be expected to effect the “City of the Future” and true “Communards” reflected an underlying trust in the ability of socialist environs to produce socialist subjectivity. These debates operated upon the same basic set of values and tensions as those concerning the separate apartment, or the best design of a street. The micro-district, which existed conceptually as the social link between individual households or apartments and the society as a whole, was also a physical-spatial or morphological unit.

This shift from the aesthetic design of individual buildings or ensembles to the “progressive” design of neighborhood-scale complexes occurred in conjunction with a shift in the scale of responsibility for housing production. Khrushchev supported increased regionalization and local

sible socialist goals in the immediate present. Thus, while it is economically impossible for the Soviet Union to combine work, leisure and sleep within one unit, the general concept of ‘organic’ integration is being partially attempted with the construction of residential areas (microrayons) with their own commercial and communal centres.” [p287] “The essence of Strumilin’s City is its communal character. Total liberation from the fetters of individuality is the cherished goal. Every worker, mother, child and housewife eagerly becomes submerged into, and then a part of, the all-embracing social fabric of the community.” [p286].

⁸⁰ Ibid., 240.

⁸¹ Frederick James Osborn was the author in 1946 of *Green-belt Cities*. (London,; Evelyn, Adams & Mackay. Republished in 1969) among other works in the tradition of Ebenezer Howard and the British garden city movement. (F.J. Osborn should not be confused with his contemporary, the American planning scholar Robert J. Osborn.) F.J. Osborn is described as having been, at least in the 1920s, “one of the fundamentalists in the movement.” Dennis Hardy “The Garden City Campaign: An Overview” pp187–209 in *Garden City: Past Present and Future* edited by Stephen Ward. quote on p198. F.J. Osborn visited the USSR in May-June 1958 as part of a group of six architects in an exchange for a 1957 visit by Soviet architects to the UK. Ward, “Soviet Communism and the British Planning Movement: Rational Learning or Utopian Imagining?.”; Cook, Ward, and Ward, “A Springtime Journey to the Soviet Union.”

⁸² See May “Cities of the Future” 1961; Willen, “Architecture in the Soviet Union: A Report for the Use of Specialists in the Field of Architecture Planning to Visit the Soviet Union.”; F.J.Osborn in “Soviet City Development in 1958” describes “the considered layout of groups of dwellings, up to the ‘neighbourhood’ scale” as a “good fashion that has recently spread round the world”. (p391, 393) On the range of facilities provided in the USSR, he comments that “though the five-storey dwellings that prevail can be very forbidding when closely massed, there are many schemes where planting and open effects are attained at moderate density.” “Tree planting,” continued Osborn, “has recently been done on a colossal scale in town and country, to the immense benefit of both.” [393]

control in some ways. For instance, he oversaw the strengthening of the position of Chief City Architects. He also oversaw a consolidation of the building industry. The previous system had involved the construction of individual buildings or blocks by a wider array of builders, often associated with a given factory or Ministry. The mass production of housing was increasingly conducted under the auspices of newly reorganized building institutes and trusts, which could and did build whole districts at once. While theoretically more efficient in the use of materials and time, this system of building agencies increased the scale of standardization, contributing to the threat of monotony. In such a context, architects' insistence that even standardized neighborhood plans should reflect local terrain and climate features, thus introducing variety, suggests a conscious attempt to use the less-easily standardized medium of greenery to combat an undesirable side-effect of the standardization of buildings and layout plans.

In their comparison of perimeter, parallel, free, and block-less planning approaches to residential areas, Vargazin and Velikovskii describe the perimeter model with its resulting "system of closed or partly-closed courtyards" as widespread in the USSR during the postwar years (1945–1955). According to them, it was motivated by pursuit of "parade-dress" [*paradnyi*] continuous street facades. By the late 1950s, they noted, planners (and politicians such as Khrushchev) had identified "a number of substantial failings" with the perimeter model. These failings covered the gamut of architecture-planning concerns but were particularly problematic in terms of the indoor-outdoor relationships they produced. The perimeter model, it was allowed, might be preferred in certain specific "climatological circumstances" including those associated with high winds, small settlements, and low-rise buildings—characteristics associated with towns and settlements in Central Asia—but was generally to be avoided for the sake of environmental health (i.e. communal hygiene) and construction efficiency.

... in general the [perimeter] model means that a significant portion of buildings may possess an unpleasant solar orientation; the corner residential sections on interior corners will be poorly insulated; the half- and fully-closed courtyards are strongly shaded and poorly ventilated, besides which, the use of residential buildings with U- and L-shaped building footprints complicates and worsens the conditions for use of assembly cranes during construction, and significantly increases the number of standardized construction elements [large blocks, panels, etc.] in buildings.⁸³

The drawbacks to the perimeter model listed here concern the qualities of the buildings and courtyards in relation to access to natural light (insolation) and ventilation.⁸⁴ The third factor,

⁸³ Vargazin and Velikovskii, *Osnovy Planirovki I Blagoustroistva*, 1959 p92.

⁸⁴ *Ibid.*, 83

greenery or greenspace (*espace* and *verdure* in the writings of Le Corbusier) is implied in the mention of courtyard “shading” as problematic. While not mentioned explicitly in this passage, access to greenery was a significant factor in the selection of the open-layout block model, as will be discussed below. Here I seek to show how, at the neighborhood or district scale, the “landscaping” and organization of inter-building spaces was a driving factor in the siting and orientation of residential buildings instead of an afterthought or subsidiary task. The increasingly large gaps between residential buildings arranged within a block or *kvartal*—a shift that distinguished this period from the closed perimeter-block layout of housing ensembles preferred before Stalin’s death—were similarly active spaces, meant to provide the environmental preconditions for public health and well-being.

The principle of “insolation” or access to sunlight was one of the most basic and under-recognized influences on residential building morphology in the USSR. For Soviet architect-planners, the open spaces between buildings were technically known as “sanitary intervals” [*sanitarnye razryvy*]. The size of these intervals and their presence between buildings was “designated from such a calculation so that buildings do not obstruct the appearance of sun beams in the window of the first floors for at least 2–3 hours in a day.”⁸⁵ While apartment layouts and dimensions were driven by purely ‘human’ concerns, regardless of location, the insistence that residences should have regular access to sunlight entailed a connection to the non-human material world at a fundamental regulatory level.

The perceived (and regulated) need for outdoor air circulation was another environmental health concern that affected the layout and spacing of residential buildings. The draftiness of individual apartments is a familiar complaint in descriptions of Soviet housing, and it was a source of frustration for residents. The draftiness of *mikroraiony*, on the other hand, while equally frustrating or unpleasant for residents and visitors in winter, was a quality that architect-planners actually desired. They believed that outdoor ventilation or windiness [*provetrivanie*] would prevent the “stagnant air” of Stalinist-era housing:

The inner-block space must have through- or corner-ventilation [*skvoznoe ili uglovoe provetrivanie*], preferably from two directions. Such ventilation is achieved by means of building layout that includes intervals along the perimeter of the block or the inner-block courtyard. Closed courtyards and built-up corners, on the other hand, create stagnant air [*zastoi vozdukha*] in the interior of a block.⁸⁶

⁸⁵ Ibid., 82

⁸⁶ Vargazin and Velikovskii, *Osnovy Planirovki I Blagoustroistva*, 1959: p84

In the accompanying illustration, two exemplary block layouts are shown. On the left, the well-spaced distribution of simple rectangular apartment blocks typical of this period—endorsed by Vargazin and Velikovskii as better for insolation “as well as easier to construct with progressive industrialized methods”—is shown with wind-lines moving freely across the block.⁸⁷ The wind-rose located to the right of each block, a standard element of Soviet planning documents, indicates the direction and strength of prevailing winds.⁸⁸ The layout on the right, showing a combination of vegetated and built masses (dotted and hatched, respectively) shows how greenery might be used when protection from wind was desired rather than its promotion in cases of low-rise construction, small settlements, and/or areas of high wind. This right-side image represents a case where “greenery is used to protect both buildings and inner-block spaces from prevailing winds, even on occasion at the cost of insolation, as is done in Baku with its hot climate and strong winds that carry fine dusts.”⁸⁹

In both diagrams, the spatial and vegetated interventions were intended as direct responses to environmental and climatic conditions, incorporating natural agents like wind or greenery to improve the experience and health-outcomes of mass housing. The result was a form of environmental design in which functional and aesthetic goals merged, as technology and environment were meant to coalesce in the new post-Stalinist urbanism.

In early 1960s city plans and other visual representations of the “space” of Soviet cities at the urban scale, the micro-district appears as a unit that is liminal in concept and scale, connecting the household to the community, and placing that community relative to the city. In depictions of housing and district design, the *microraiion* is the whole of the depicted universe, with

⁸⁷ *Ibid.*

⁸⁸ For reasons worth investigating, a wind-rose is much less commonly included in site- and city planning documents in the US. The gap in research between German-speaking and English-speaking planning communities regarding urban climate and design is discussed by Michael Hebbert and Fionn Mackillop, “Urban Climatology Applied to Urban Planning: A Postwar Knowledge Circulation Failure,” *International Journal Of Urban And Regional Research* 37, no. 5 (2013). Hebbert and Mackillop do not include any discussion of Soviet planning practices, beyond mentioning that a foundational text in urban climatology, Albert Kratzer’s 1937 *Das Stadtklima [City Climate]*, “illustrates a complete separation of upwind ‘dwelling-cities’ from downwind ‘work-cities’ in the Soviet new town of Magnitogorsk, designed by Ernst May, former city architect of Frankfurt.” [1544]. Kratzer’s book was republished in revised edition in 1956 in German, and translated in 1962 into English by the American Meteorological Society Translation Service, US Air Force Cambridge Research Laboratories, in Bedford, MA. Hebbert and Mackillop do not mention (may not be aware of?) the translation into Russian of *Das Stadtklima* in 1958, where it was cited *inter alia* by L.O. Mashinskii, “K Voprosu o massovom ozelenenii gorodov” (Regarding the Issue of Mass Greening of Cities) in *Problemy Sovetskogo Gradostroitel'stva* (1960) p61, 71; and by Ivan Nikolaev, *Promyshlennye Predpriiatia V Gorodakh; Razmeshchenie, Planirovka, Blagoustroistvo*. Moscow: Izd-vo lit-ry po stroitel'stvu, 1965: 217. Other recent related articles that similarly overlook Soviet planning history include Michael Hebbert “Climatology For City Planning in Historical Perspective” *Urban Climate* 10 (2014) 204–215, and Vladimir Jankovic “A historical review of urban climatology and the atmospheres of the industrialized world” in *WIREs Climate Change* 2013, 4:539–553.

⁸⁹ Vargazin & Velikovskii, *Osnovy Planirovki i Blagoustroistva*, 1959: p84, emphasis added.

nothing beyond but the empty space of the white page. In depictions of cities, the arterials that bound a *mikroraion* are the boundary of what is visualizable; these images show nothing within but the concept of a replicable unit. While ideologues like Strumilin debated the significance of the ideal micro-district neighborhood unit as a socio-political intervention, urban design-planners debated its ideal morphology.

The choice of what block structures and forms would comprise the “neighborhood unit”—whether it would be one block or many, how to group the buildings, how to orient them—were thus doubly liminal issues. They linked scales from individual to community/society on the one hand, and on the other, the design of these new neighborhood units needed to mark a transition from Stalinist to post-Stalinist urbanism, while continuing to distinguish Soviet and Western approaches to modern urbanism.⁹⁰ And as this chapter asserts, attitudes toward urban greening and related choices affecting the design and interpretation of residential districts contributed to the eventual selection of the *mikroraion* as the official “planning unit” of Soviet urban development, and to the determination of its shape.

Territorial Balance: The Future is Fusion

In 1958, when Khrushchev had firmly consolidated power and the mass housing campaign was in full swing, the overall urban population of the USSR was approaching 50%. (This tipping point of majority urbanization was reached globally only in 2007 or 2008.⁹¹) The Soviet definition of what it meant to be “urban” however, was changing.⁹² As the population of the USSR became more urbanized, the built fabric of Soviet cities loosened its weave. An influential shift in the design of residential greenspace was registered in the “balance of territory” as regulated in the Rules and Norms of 1958.⁹³ In the designs produced in Leningrad for new microdis-

⁹⁰ See O. Smirnova “Contradictions Of Capitalistic American Cities and their Reflection in Spatial Planning and Architecture” *Problemy Sovetskogo Gradostroitel'stva* no3 (1952): 151–175; E. Vol'fenzon, *Voprosy Planirovki i Zastroiki Gorodov Za Rubezhom*. Moscow: Gos izd-vo literatury po stroitel'stvu i arkhitekture, 1957. Catherine Cooke, in “Modernity and Realism” (2007) notes that the professional “Iron Curtain” separating Socialist and Capitalist urbanism was in some ways closer to a one-way mirror. Writings from the West were frequently translated into Russian and other languages for specialists’ use. Even though that use was mostly to criticize, Soviet architect-planners were aware of Western developments to a greater extent than vice versa.

⁹¹ <https://data.worldbank.org/indicator/sp.urb.totl.in.zs?end=2017&start=2003>

⁹² My focus here is on the physical-spatial qualities associated with urbanity; the economic-administrative criteria used by Soviet authorities to distinguish a “city” or town from a settlement point (or GULag camp) also changed over time, as discussed by Brandenburg and others.

⁹³ According to Gary Hausladen, by 1985, more than 70% of Siberia’s 30 million residents were living in large cities. Hausladen, *Siberian Urbanization since Stalin*, Appendix 3, 102..

tricts, 50% of the territory was to be occupied by green plantings.

This shift marked a change in how statistical measures of urban quality were calculated; earlier metrics and propaganda had focused on the overall hectares of greenspace within a given city and discrete, heterotopic, sites of greenery: namely, parks, squares and boulevards. It also marked a celebration of a half-planted, half-built living environment that in previous periods might have been called village-like and been a source of embarrassment for the Soviet quest to overcome a state of urban and industrial backwardness. Now, rather than vestiges of a rural past, those vegetated territories would be a sign of progressive architecture-planning, left intentionally unbuilt in order to provide access to nature.

The aspiration of this new model of planning was to achieve urban territorial equality between built and unbuilt space through its 50% green requirement. At the city or inter-city scale, a similar goal was targeted through the promotion of the so-called satellite city [*gorod-sputnik*]. As described at the time:

the [Planning Rules and Norms] of 1958 do not appear to aim at “gradual abolition of the distinction between town and country.” Instead of calling for sprawling suburbs or small loosely connected urban settlements, they stress compact cities. In fact, Soviet literature on city planning now quotes Lenin to the effect that the abolition of the distinction in a physical sense is unnecessary. [...] Satellite towns to hold 30,000-50,000, and under no circumstances more than 80,000 residents, are to be built around the huge cities within a radius of 25 to 30 miles. **Their purpose is not, however, to bring urban amenities to the rural populace but rather to upgrade metropolitan life by scattering some places of employment and residence over more picturesque and wholesome environs.**⁹⁴ [emphasis added]

Care for the “more picturesque and wholesome environs” of the post-1958 city was assigned to the residents as means of simultaneous cost control and fostering participatory enrollment in the “communal project” of building communism. Accordingly, the Union of Architects and other professional organizations “must depend on the broader society, because the development of the noble cause of urban greening is only possible with its help.”⁹⁵ This continued the 1930s pattern of using rhetorical appeals to affect to solicit “voluntary” participation, encouraged from the top and organized by municipal and professional authorities, to lower the costs of greenspace instal-

⁹⁴ Emphasis added. Zigurds L. Zile, “Programs and Problems of City Planning in the Soviet Union,” *Washington University Law Review* 1963, no. 1 (1963): 41. Zile (1927–2002) was a Latvian-born American professor of law at the University of Wisconsin, specializing in Soviet land planning law. Zile adds that “The idea [of satellite cities] admittedly has been borrowed from Western Europe, especially England,” indicating the connections between the Soviet satellite towns and British new towns of the period, many built in direct reference to the Garden City tradition there. Not mentioned by him but also relevant would be the Russian avant-garde debates over “urbanist” and “disturbanist” approaches to settlement distribution in the 1920s.

⁹⁵ “Soveshchanie po landshaftnoi arkhitekture” *Arkhitektura SSSR* 1962 no1: p59–60. See also *Arkhitektura SSSR* article “On a Societal Basis [na obshchevennykh nachalakh]”

lation and maintenance.⁹⁶

The expected agency of urban green space as a hybrid between public and personal space derived from using plants to produce appropriate material-spatial conditions of possibility through which to arrive at communism. The superiority of communist living conditions rested in part on visual and spatial affordances, creating “harmonious” access to nature, rather than the provision of consumer goods.

In architectural-artistic relations, open-layout planning affords the creation of picturesque and multi-form architectural compositions, harmoniously combining buildings with nature, greenery, and the landscape [*zastroika s prirodoi, zelen'iu, landshaftom*].⁹⁷

In these and similar statements we see an underlying commitment to the concept of nature-society fusion, typically couched in Marxist-Leninist discourse as the elimination of differences between town and countryside. This commitment influenced the spatial design of mass housing and residential districts. At the peak of the housing campaign this desire for fusion and balance between nature and buildings was also seen at the scale of the city and above.

DeStalinizing the City Block

In 1956, Soviet authorities had announced the goal of providing a separate apartment for every family “in 10–12 years.” Architects knew that standardized [*typovye*] building designs and industrial components/methods would be required to achieve that goal; they had been working to develop more prototypes and incorporate their use since the Second Congress of the Union of Architects in 1955.⁹⁸ Nevertheless neither the use of standardized designs nor the provision of

⁹⁶ The beautification campaigns of the 1930s are discussed at length by Heather DeHaan with respect to Nizhni Novgorod (chapter 8). The organization of “volunteers” at that time was primarily by place of work. By the 1950s, the locus shifted to the place of residence. The ubiquity and continuation of such volunteer care for local plantings is discussed throughout many works on residential life, community organization/politics, and subject-state relationality [e.g. in Theodore H. Friedgut, *Political Participation in the USSR*, Studies of the Russian Institute, Columbia University (Princeton, N.J.: Princeton University Press, 1979); DeHaan, *Stalinist City Planning: Professionals, Performance, and Power*.. These in passing mentions rarely discuss what type or kind of plantings, their spatial distribution, or the eventual political repercussions — the themes and outcomes of interest to this dissertation.

⁹⁷ Vargazin and Velikovskii, *Osnovy Planirovki i Blagoustroistva* 1959: 100. In full, their assessment of free [*svobodnaia*] arrangement system reads: “[It] involves the arrangement/distribution of buildings in the most advantageous and attractive combination with natural conditions [*s prirodnymi usloviiami*] e.g. solar orientation by cardinal directions, links to topographical relief, combination with greenery and water spaces etc), without supporting their distribution with strict geometrical connections and not building up city arterials with a continuous building front. ... [It] affords the best possible sanitary-hygienic living conditions, convenient uses of inner-block spaces for gardens, childrens and school facilities and squares; with separation for safety of automobile traffic. Mixed system layouts are also acceptable “in these or other local conditions.” p98-100. Similar statements were made by Ivanova at the 1961 Conference (quoted in *Arkhitektura SSSR* 1962:01 pp59-60.

⁹⁸ {Davies, 1956 #5082; I. Petrov, “Bol’she Vnimaniia Ozeleneniiu Gorodov [More attention to greening]” *Arkhitektura SSSR* no11 (1955): 37–39; Iu. Krugliakov, “Zelen’ v Gorode: Zametki o Normirovanii Ozelenennykh Territorii [Greenery in the City: Notes on the Normative Regulation of Territorial Greening]” *Arkhitektura SSSR* no11 (1956): 30–32; Butsenko, A. “Tipovoe Proektirovanie Ozeleneniia Goroda [Standard Designs for Urban Greening]” *Arkhitektura SSSR* no10 (1957): 49–52

cultural-everyday facilities and greenspace within a set radius from those apartments (according to frequency of use) were necessarily associated with the idea of the *mikroraion* housing district. Nor did the use of standardized designs and a nested hierarchy of services automatically dictate a specific form or morphology for said district.

In the years leading up to the official 1958 adoption of the *mikroraion* model, venerable architecture-planning institutions such as the Leningrad branch of the Academy of Construction and Architecture of the USSR [ACiA] developed a series of “experimental” residential block prototypes, using standardized building plans.⁹⁹ They sought to identify the most “progressive” and cost-effective approaches to the design of blocks, residential districts, and cities. To do so they created a number of “variants” or contrasting approaches for which statistical data and experience (if and when they were built) could then be used to establish the “correct” or “rational” solution. Such proto-scientific efforts were then publicized widely as guides for the various entities responsible for the design and construction of new housing and urban development in specific locales. The Leningrad Academy’s evaluations included a number of criteria for choosing among variants, including the quality and quantity of greenspace, the height and orientation of buildings, and the character of the street. The overall size and layout of the residential block or district was also subject to experimentation.

In the preface to their published findings, corresponding-member of ACiA V. A. Vitman asserted that “the most rational approach involves increasing the dimensions of the residential block to 40–60 hectares and treating it as a unitary complex (i.e. the *mikroraion*). The “previously adopted approach” —which readers would surely have understood to mean Stalinist urbanism— was dismissed by Vitman on multiple grounds. It was, according to him, based either in the formation of city arterial streets and “monumental ensembles,” or the “abstract” arrangement of blocks [*kvartal*] “without accounting for the goal-oriented distribution of service facilities and

⁹⁹ It was standard practice to “test out” new planning or architectural approaches in prototype developments, for instance the well-known “Cheremushki” district. Crawford, “From Tractors to Territory: Socialist Urbanization through Standardization.” This practice can complicate efforts to establish a clear chronology of when shifts in urban morphology should be said to begin. Many of the policies Khrushchev adopted and encouraged as his platform had their origins in post-war Stalinist initiatives. For a thoughtful, extended discussion of the difficulties of periodization with regard to mass housing, see Smith, *Property of Communists: The Urban Housing Program from Stalin to Khrushchev*. Smith designates 1951–1957 as “The launch of the mass housing program” and 1958–1964 as a new stage. See also Paul M. White, “Urban Planning in Britain and the Soviet Union: A Comparative Analysis of Two Planning Systems,” *The Town Planning Review* 51, no. 2 (1980); *Soviet Urban and Regional Planning: A Bibliography with Abstracts*; French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*.

often with violations to the sanitary-hygienic regulations.”¹⁰⁰

The layout of the *microraiion* was, like so many forms and concepts in Soviet urban design, intended to advance multiple goals. The experimental design research of the Leningrad ACiA sought to identify the optimal spatial structure of such micro-districts according to the following general parameters: “mutual connectivity of residential and public buildings with organization of all open space [*svobodnaia prostranstvo*] and the crisp division of functionally distinct parcels, affording the best living conditions.” The conclusions of its researchers (including O.A. Ivanova) were that the design approach that best met these needs while providing the most flexibility was the “open-layout” development approach [*priem svobodnoi zastroiki*].¹⁰¹ “Open-layout planning” (*svobodnaia planirovka*), as it was also called, entailed a retreat from the “red line” that marked the boundary of a city land parcel and gave architects freedom/control (*svoboda*) over the placement and orientation of individual buildings.¹⁰²

Svobodnaia planirovka might also be translated as “free-planning.” It was associated by proponents with progressive, modern, functional aesthetics.¹⁰³ Its adoption in the spatial planning of residential micro-districts entailed a decisive shift away from the symmetric layouts and perimeter block structure of late Stalinist residential ensembles. The open-layout block plan was also a rejection of interwar block arrangements in which apartment buildings or other structures were arranged in parallel rows, a method known as linear or *strochnaia* spatial planning.¹⁰⁴ By 1959 perimeter block housing was generally preferred to linear layouts, but the latter was still used in some situations. The researchers of the ACiA sought to replace both (although they acknowledged that a “mixed” approach combining free and parallel layouts would at times be the

¹⁰⁰ Vitman, V.A. and B. V. Murav'ev, eds. *Planirovka Zastoika i Blagoustroistvo Zhilykh Raionov* (Academy of Construction and Architecture, Leningrad branch). Leningrad: GosIzdat Lit po StroikiStroiMat: 1959, p3

¹⁰¹ *Ibid.*, Unmentioned by Vitman in this foreword, perhaps because it would've been taken for granted by professional and lay readers in the USSR, was the guiding principle of insoliatsiia or daylighting, a form of required “natural” infrastructure that directed many Soviet town planning decisions regarding the layout, density, and orientation of residential buildings, regardless of their architectural style or apartment composition.

¹⁰² For discussion of the ways that “*svoboda*” is and is not the equivalent of “freedom” see Caroline Humphrey “Alternative Freedoms” *Proceedings of the American Philosophical Society* Vol. 151, No. 1 (Mar., 2007), pp. 1-10.

¹⁰³ On the international movement away from perimeter blocks to more ‘open-layout’ urban morphology, see Castex et al., *Urban Forms: Death and Life of the Urban Block*. The history of Soviet open-plan interior decoration is discussed by Reid, “The Khrushchev Kitchen: Domesticating the Scientific-Technological Revolution.”; “Khrushchev Modern - Agency and Modernization in the Soviet Home (Home Building),” *Cahiers du Monde russe* 47, no. 1-2 (2006); “Communist Comfort: Socialist Modernism and the Making of Cosy Homes in the Khrushchev Era,” *Gender & History* 21, no. 3 (2009); “Consumption and Everyday Culture after Stalin,” *Russian Studies in History* 48, no. 1 (2009); Field, *Private Life and Communist Morality in Khrushchev's Russia*. and, indirectly, Dunham, *In Stalin's Time: Middleclass Values in Soviet Fiction*. See also Richard Stites, “Crowded on the edge of vastness: observations on Russian space and place” in Smith, *Beyond the Limits: The Concept of Space in Russian History and Culture*.

¹⁰⁴ Similar to the German zeilenbau, devised to optimize solar access throughout the day.

correct solution.¹⁰⁵

According to a 1959 textbook for specialists in civic and industrial architecture, the “architectural-artistic solution” appropriate to standardized [*tipovye*] buildings “has its specificity (*osobennost*’).” In such cases, the location and orientation of buildings would, ideally, be developed “in connection with the greening and topographical relief of a site.”¹⁰⁶ These measures with their increased sense of place were declared another means of spatial de-Stalinization. For instance, in a critique by P. Volodin of the Institute of Theory and History of Architecture and Technology, “denial of natural topography” appears alongside such “vestiges of Stalinism” and “obsolete methods of planning” as axial symmetry and perimeter block layout.¹⁰⁷ Residential blocks and *mikroraions* designed with attention to the landscape in the free-planning mode would be standardized, but would provide visual interest thanks to “rhythm” and “creative groupings” of building-types.

Among the qualities to be avoided were “[m]onotony and uniformity in the distribution of buildings.” Architect-builders were also cautioned to avoid “arrangements of “courtyard-corridors” and “courtyard-wells.”¹⁰⁸ This was another way of precluding the past styles of buildings arranged or composed as a continuous perimeter around an enclosed *dvor* (the courtyard as well), or the corridor-shaped *dvor* that resulted when buildings were arranged in parallel lines. Comments such as these presume that architects maintained control over environmental aesthetics at the scale of the district, even if they were no longer able to “compose” ornate building facades. While the “ensemble” approach to architectural production at the building level may have fallen out of favor in the post-Stalin period, it was still recommended at the scale of the residential district. These were to be created “according to a unified architectural concept, creating a mutually connected architectural ensemble of the whole residential *raion*.”¹⁰⁹

A “progressive” emphasis on naturalism in exterior residential spaces was seen as an essential feature of the post-Stalinist socialist city: “Every new epoch requires new forms of art,

¹⁰⁵ e.g. in Vargazin and Velikovskii, *Osnovy Planirovki i Blagoustroistva*, 1959.

¹⁰⁶ *Ibid.*, p90–92. This textbook was part of a study program approved in 1955 by the Ministry of Higher Education. It took as its main reference point the 1958 “Rules and Norms for the Layout and Building of Cities” approved in that year by the Council of Ministers for Architectural Affairs. The authors worked at the “Kuibyshev” Engineering-Building Institute in Moscow, as did L.B. Lunts, at least later in life.

¹⁰⁷ Quoted in Osborn and Reiner, “Soviet City Planning: Current Issues and Future Perspectives,” 246 fn34, citing Volodin (37)..

¹⁰⁸ Vargazin and Velikovskii, *Osnovy Planirovki i Blagoustroistva*, 1959: 90–92. “*monotonost i odnoobraziia v razmeshchenii zdanii*”

¹⁰⁹ *Ibid.*, p92

including in green architecture" asserted A. Vlasov, First Secretary of the Union of Architects in 1961.

Nature must influence the work of architects completely differently (in these conditions of contemporary architecture development). Facades used to have very immediate significance. Now the creation of environs, in which the building is located, has much greater significance and is a more complex task.¹¹⁰

By providing ample, accessible, and economical greenspace to residents of a *mikroraion*, architects could redeem themselves from their Stalinist excesses of expensive buildings, decorative facades, and obscure neo-classical referents. (Khrushchev, in his Builders' Conference of 1954, had called out Vlasov, like his colleague the architect Arkady Mordvinov, by name and roundly criticized for adhering too long to the tenets of the old epoch, including Stalinist decorative excess).

A New Quality, Distinct

In multiple areas of post-Stalinist Soviet discourse, efforts were made to distinguish the USSR and socialist practices from a double baseline: Stalinism and capitalism. Soviet architects used outdoor space and greenery as criteria by which to criticize Western architectural-planning practices and distance themselves from those "excesses." The looseness and flexibility of the open-layout of buildings in a *mikroraion* were said to be better at supporting certain types and increased levels of residential greenspace: a primary benefit of the approach.

Open-layout planning has led to the increased role of green plantings not only in the organization of internal territory of the micro-district, but also in the formation of arterial [streets], giving them a new quality, distinct from the characteristics of arterials in capitalist cities.¹¹¹

Thus, more greening in the vicinity of buildings and more greening on the streets would not only improve environmental health conditions but also reinforce spatial-vegetal contrasts with past and present capitalist examples of urbanism.

Writing in a 1960 volume of *Issues in Soviet City-building (Problemy Sovetskogo Gradostrotel'stvo)*, then *kandidat* in biological science L.O. Mashinskii drew just such a contrast between the overly dense, unhealthy cities of capitalism, and the improvements that suitable greening would afford. Recognition of greenery's role as "one of the most effective means of improving urban living conditions" he asserted, had arisen in the late 19th century, the "period of

¹¹⁰ Vlasov, quoted in "Soveshchanie po landshaftnoi arkhitekture [Conference on Landscape Architecture]" in *Arkhitektura SSSR* 1962:01 pp59–60.

¹¹¹ Vitman, *Planirovka Zastoika i Blagoustroistvo*, 1959: p3

intensive growth of capitalist cities.” Since then,

The sharp worsening of the sanitary-hygienic conditions of large cities, which, as a result of the over-densification of buildings, approach conditions of stony deserts (high temperatures of city air with extremely low relative humidity), have given great urgency to the search for more economical and accessible means of improving the living conditions of the urban population. Facts have shown, that the role of green plantings in these relations is exceptionally great, especially when plantings are distributed in the city evenly and in sufficiently large masses.¹¹²

By changing the balance of territory and withdrawing buildings from the perimeter of blocks, instead placing them “free-range” in the block interior, these architects saw themselves creating places for everyday life that were neither “grandiose” nor “floating” but new, health-giving, and distinctively socialist. Both changes made it easier to provide greenspace “evenly and in sufficiently large masses.”

Within urban greenspaces, the new era of economy meant an end to the “excesses” of regular, or formal, layout plans. Formal layouts, with their parterres, flowerbeds, and shaped shrubberies were criticized for being too expensive, too difficult to maintain, and for presenting less favorable (less naturalistic) growing conditions for the plants. The fact that they were also the preferred aesthetic mode of the Stalinist “Empire” style, now anathema, went without saying. The advantages of *paysage* or free-form layout style—Mashinskii repeatedly writes both, as in *peizazhnaia (svobodnaia) planirovka*—were, predictably, mirror images of the flaws of regular layouts.¹¹³

There is absolutely no doubt, that the approach of *peizazhnoi planirovi* contains in it the greatest potential for satisfactory resolution of the task of creating gardens and parks that are long-lived, hardy, beautiful, simple in realization and inexpensive in construction.¹¹⁴

Thanks to the use of existing features and topography, the *paysage* approach required minimal site grading. In place of the broad parterre-lawns and flowerbeds of the Stalinist formal park or garden, a *paysage* park offered meadow expanses, flowering perennials, “painterly masses, groves and large groups of trees.” These provided “not only a maximal approximation of nature [*priblizhenie k prirode*] that is so desirable for residents of cities, especially large cities” but also, at the same time, was more economical when it came to installation and maintenance work. “Besides which,” continued Mashinskii, “*peizazhnaia* layouts contribute to extend-

¹¹² L.O Mashinskii, “K Voprosu o massovom ozelenenii gorodov” in *Problemy Sovetskogo Gradostroitel'stvo*, no8 1960, p61.

¹¹³ The word *peizazh*, from the French *paysage*, connotes a landscape scene in the sense of landscape painting. A separate word, *zhivopis*, literally life-written, indicates painting in general. I have chosen to translate the latter as “painterly” rather than “picturesque,” given the complexity of the latter term in Anglophone art and landscape design.

¹¹⁴ Mashinskii, “O massovom ozelenenii” 1960 p90

ing the lives of the plantings, given that the plants find themselves in conditions of propagation that are closer to nature.”¹¹⁵ Cheaper, easier, more aesthetic, and mutually beneficial to city plants and city humans, the naturalistic “paysage” planting style was recommended for everything but the most high-traffic or high status sites.

In addition to providing more natural, more free-form planting plans, and visibly and experientially effecting a contrast with capitalist urbanism, post-Stalinist city greening sought to further erode differences within cities between different types of districts. As O. A. Ivanova, lead designer of some of the era’s model experimental designs, stated at the December 1960 Session of the Academy of Construction and Architecture of the USSR,

"In a socialistic city, where living conditions must be healthy and comfortable, green plantings should be distributed everywhere, where a person lives, works, studies, and relaxes— in residential blocks, on the streets, on embankments, in gardens and parks, and on the territory of industrial enterprises, educational facilities and so forth."¹¹⁶

No longer would urban green plantings be walled in by park fences or perimeter block buildings, and limited to “places of communal use.”

Like the water channels or canals to which they were frequently compared, green spaces in the *microraiion* era would flow freely through and into/out of towns and cities. Use-patterns, classifications, and the morphology of urban greenspace would all change in tandem. As Ivanova noted,

Given the "open" [*otkrytom*] character of building and contemporary organization of life it is hardly justifiable to establish a border between green plantings of so-called communal and limited use. It is apparent, that the existing classification of urban green structures [*ustroistv*] has become obsolete and must be reworked. [...] In other words, the system of greening must be developed analogously to the other service systems of urban populations (cultural-everyday, trade, and so on and so forth).¹¹⁷

Functionally, the proposed designation of city greening as one among many forms of “stepped” service systems within the socialist city—i.e. an infrastructural public work—meant that abundant, accessible, free-flowing urban greenspace was further established as a fundamental “amenity” of the Soviet good life.

Conceptually, the linked transformations of greenspace scale, distribution, politicization, and character had an additional consequence. Whereas the greenspace of a park or garden in the

¹¹⁵ Mashinskii, “O Massovom Ozelenenii” 1960 p90.

¹¹⁶ O.A. Ivanova, "Sovremennye Printsipy Ozeleneniia Gorodov" presentation, transcript in *Trudy VI Sessii akademii Stroitel'stva i arkhitektury SSSR po voprosam gradostroitel'stva* held 7-9 December 1960. p478 of pp478–490. Gosizdat lit po Stroitel'stvu, Arkhitekture i Stroitel'nyim Materialam. Moscow: 1961

¹¹⁷ Ivanova, “Sovremennye Printsipy” 1961 p484

“historical” or Stalinist urban fabric might still have been termed a heterotopic space given its defined borders, ritualized uses, and formal visual aesthetics, the new greenspace had become more like a field or zone of mixed elements, equally attached to nature and buildings. Alternatively, the “heterotopia” had merely expanded, from the scale of the already immense archetypal Central Park of Culture and Rest to encompass the city as a whole.¹¹⁸ Rather than articulating a contrast between “built” and “open” areas within a city, the new green cities of socialism were justified and comprehended only in opposition to the cities of capitalism.

22nd Party Congress: Green Cities, Garden Cities

The pinnacle of Khrushchev’s interventions in the Soviet urban imaginary came in November 1961. At the 22nd Party Congress, Khrushchev declared a new twenty-year horizon for advancing from socialism to full communism. The mileposts by which Khrushchev proposed to measure progress in constructing a fully communist society were ambitious and wide reaching. In particular, Khrushchev proclaimed that the Soviet Union’s perennial housing shortage would soon be ended: “By the end of the following decade every family will have been provided with a separate comfortable apartment.”¹¹⁹ Khrushchev presented this goal for housing as part of a series of targets regarding the quality of daily life, consumer goods, leisure time, public services and facilities. The speech followed an arc of increasing scale from the object to the city to the society as a whole.

Less well-known but also significant is Khrushchev’s declaration in the same speech that the chosen city-scale model for communist towns and cities would thenceforth be “the garden city, the green city.” The open-layout *mikroraion* remained the preferred unit or model for residential districts. Khrushchev’s declaration concerned the character of a city as a whole:

¹¹⁸ This idea deserves further development relative to the extensive literature on Foucault’s concepts of “heterotopia” and “heterotopic spaces” as interpreted in Architectural theory and history. The (Stalinist) Soviet Union, famously, has been described as a place in which there were no heterotopias; I propose that Soviet urbanists and others promoted a vision of the world in which the entire Soviet Union was a heterotopia defined in opposition to the First/capitalist world. Parks, meanwhile, are a canonical example of heterotopic spaces “in a city.” The kind of city is rarely specified. See Michel Foucault, “Of Other Spaces, Heterotopias.” *Architecture, Mouvement, Continuité* 5 (1984): 46-49. (Original Publication: Conférence au Cercle d’études architecturales, 14 mars 1967); Henry Urbach (1998) Writing architectural heterotopia, *The Journal of Architecture*, 3:4, 347-354, Anthony Vidler, M. Foucault and Pamela Johnston, “Heterotopias” *AA Files*, No. 69 (2014), pp. 18-22

¹¹⁹ The Congress took place 17 – 31 October 1961. Quotes given here from Khrushchev and the new Party Programme from the 22nd Party Congress are taken from the published version of his speech, translated into English as “On The Program Of The Communist Party Of The Soviet Union” - Report by Comrade N. S. Khrushchev at the 22nd Congress of the Communist Party of the Soviet Union Oct. 18, 1961” *The Current Digest of the Russian Press* (CDSP), No. 44, Vol.13, November 29, 1961, page(s): 3-28].

While preserving large cities as industrial and cultural centers but at the same time preventing their excessive growth, we must develop and build small and medium-sized towns having all amenities. Our communities should increasingly conform to the concept of ‘green cities,’ ‘garden cities.’ They will combine all that is best in the modern city—up-to-date dwellings, transport thoroughfares, communal services, children’s and cultural institutions and sports facilities—with all the best that rural localities have to offer—abundant greenery, lakes and ponds, and clean air.¹²⁰

If Khrushchev’s ambitious vision was to be believed, a new, greener, more communist society in which “nature” and “urbanity” would be fused was just over the horizon.

Khrushchev’s speech promoting the “green city, garden city” model came roughly fifty years after the publication of *Goroda Budushchago* [“Cities of the Future”], the Russian translation of Ebenezer Howard’s influential monograph *Garden Cities of To-morrow*.¹²¹ Interest in the garden city as a historical phenomenon within Russia and the Soviet Union was revived around this time by a series of articles by Vera Lvovna Ruzhze, part of a larger historiographic recovery of the architecture and urbanism of the 1920s.¹²² While it is far-fetched to assume Khrushchev would have read those specific articles, such texts would have been available to Soviet urbanists. Khrushchev, for his part, had an established history of interest in the combining of urban and rural site amenities, what Howard described as the “marriage of town and country.”¹²³

¹²⁰ The garden city comment appears among other measures on roughly page 34 of the 38 page transcript of the report announcing the new Party Program, as translated and published by the Current Digest of the Soviet Press [CDSP], No. 44, Vol.13, November 29, 1961, p18]. EXTENDED QUOTE: “Within the next decade all Soviet people will be able to acquire a sufficiency of consumer goods, and in the following decade the demand for them will be met in full. [...] ¶ ...The demand for public laundries and shops for the repair of clothing, footwear and articles of cultural use will be satisfied. We must expand all types of public services, so that all who wish can rely on them instead of doing household work themselves. ¶ The Communist Party and the Soviet government attach particular importance to the final solution of the housing problem. Not one social system has been able to solve this problem. ... We must put an end to the housing shortage within this decade. By the end of the following decade every family will have been provided with a separate comfortable apartment. This means that the country’s housing must be approximately tripled in 20years’ time. ... [...] The draft Program provides for further reduction of the working day, thus giving the people scope for the rapid advancement of their cultural and technical level, for the useful employment of their leisure time...” On Soviet sport and recreation planning see Shaw, “Recreation and the Soviet City.”; “Achievements and Problems in Soviet Recreational Planning.”

¹²¹ Translated by British-based architect Aleksandr Blokh or Block, resident in England. The exact date of publication seems to vary. Catherine Cooke states 1911 for the Alexander Blokh translation [St Petersburg]; Starr (1976) gives 1905 for a Moscow publication, but doesn’t specify the translation. For more on the depth and longevity of the garden city movement’s influence in Russia, the USSR and globally, see Richard, “The Garden City in Russian Urbanism.”; Starr, “The Revival and Schism of Urban Planning in Twentieth-Century Russia.”; Cooke, “Russian Responses to the Garden City.”; Robert Fishman, *Urban Utopias in the Twentieth Century: Ebenezer Howard, Frank Lloyd Wright, and Le Corbusier*, 1st MIT Press pbk. ed. (Cambridge, Mass.: MIT Press, 1982); Miller, “Garden Cities and Suburbs: At Home and Abroad.”

¹²² Ruzhze authored at least two articles and her dissertation on the history of the Russian Garden City [1961a, b]. Later she was among the authors of an oft-cited work of urban sociology on the structure of the family. She was interviewed by Eric Richards as part of his 1972 undergraduate thesis at Princeton on the Russian garden city; Princeton also being where Professor Frederick Starr (Richard’s advisor) worked at that time.

¹²³ Howard’s Russian translator, Aleksandr Blokh, referred to this as unification of “*gorod*” (city or town) with “*derevnia*” (village).

Not Greenery in a City, But Cities in Greenery

Khrushchev's declaration that communism would be achieved "in the main" within twenty years effected a new set of parameters for urban and architectural production. An occasion for those involved in greening and other urban specialists to respond to Khrushchev's new direction came soon thereafter. In December 1961, roughly a month after the 22nd Party Congress, representatives of the Union of Architects of the USSR convened at a conference on "Garden and Landscape Architecture" at the Moscow House of Architects [*Dom Arkhitekatora*]. It was one of the first times that the relatively international term "landscape architecture" had been used, rather than "greening" "green construction" "green architecture" or "garden-park art."¹²⁴

This conference afforded opportunities to voice disciplinary responses to the 3rd Party Program. This the speakers did, at length. While a formal stenogram of the conference does not appear to have been published, polemics and position papers from the conference circulated thereafter in a range of publications. The conference received considerable coverage in the professional and academic journal of record, *Arkhitektura SSSR* (Architecture of the USSR). Versions of conference papers were published in 1962, particularly during the spring and summer months (issues no.1, no.3, and no.6). Material from the conference, or in response to it, was also published in two book-length collections: a *Landscape Architecture: Collected Works* (Zalesskaia *Sbornik* 1963); and a thick journal: *Problemy Sovetskogo Gradostroitel'stvo* (*Issues in Soviet Citybuilding*) 1963 no14 theme issue on "Ozelenenie Gorodov" [Greening of Cities].¹²⁵

In his introductory address to the conference, the First Secretary of the Administration of the SSA, A. Vlasov, highlighted the political urgency of the moment. Vlasov noted that this was the first major gathering of architects across specialties following the 22nd Congress. It was therefore a chance to articulate and consolidate new directions in general, not just within garden and landscape architecture. Given Khrushchev's identification of "garden cities" as the model for

¹²⁴ In 1964, a new textbook by Liubov Zalesskaia titled *Landshchafnaia Arkhitektura* marked the advent of a new course of study for Soviet architects and city planners, but a separate degree was not awarded in Russian design institutions until the early 21st century. The Soviet perspective on international trends as of the early 1960s is captured in Gutsalenko, V. "O mezhdunarodnoi federatsii landshaftnykh arkhitektorov" in *Landshafnaia Arkhitektura: Sbornik Nauchnykh Trudov* [Landscape Architecture: Collection of Scholarly Works], edited by L.S. Zalesskaia, (1963) pp284–290, which discussed the 1961 Congress in Amsterdam of the International Federation of Landscape Architects, founded in 1948. See Sylvia Crowe and Geoffrey Jellicoe, eds. *Space for Living: Landscape Architecture and the Allied Arts and Professions*, International Federation of Landscape Architects.; Amsterdam, Djambatan, 1961. The circulation of the "landscape planning" approach described by Gutsalenko is suggested by the presence of Sylvia Crowe's 1958 book, *Landscape of Power*, in the Krasnoyarsk Union of Soviet Architects library holdings.

¹²⁵ The quotes used in discussing the conference, unless otherwise noted, come from the summary of the conference published in *Arkhitektura SSSR* 1962 no1 pp59-60 .

communist urbanism, it seemed that green plantings, greening, and landscape architecture were to play a correspondingly “very great” role in the sphere of city-building.¹²⁶

In light of the adoption of the 22nd Congress Program of the CPSU even greater grows the significance of green plantings of a city, which create pleasant conditions for a person’s life.¹²⁷

This triangulation of political goals, green plantings, and everyday environments, frequently voiced in speakers’ recognition of the new opportunities and pressures facing “*landshchafnaia arkhitektura*,” was familiar from the early days of the Soviet state. It was the shape, and extent, of those “green plantings... pleasant conditions” that were now slated for change.

Participants at the conference recognized that the new Communist Party Program marked a fundamental shift in how cities would be designed, built, and used on the path to communism. In Vlasov’s words: “In 20 years we must construct cities, that respond to the living conditions of people of a communist society.” The task of urban greening during the Stalinist period had for the most part focused on the provision of hierarchically categorized, physically bounded sites. As stated by architect and *kandidat* Olga Ivanova of Leningrad,

Green construction has marked a new step: until recently, the leading place was occupied by green plantings of communal use: gardens, parks, and boulevards. More significant now is mass greening [*massovoe ozelenenie*]: the greening of residential and industrial territories, territories of educational institutions and childrens’ facilities.¹²⁸

The new greenery, in contrast, would be everywhere, dissolving the boundary between landscape and cityscape, town and country. As O. A. Ivanova, lead designer of some of those experimental designs, stated in 1961: "

In the designs for a new microdistrict, 50% of the territory will be occupied by green plantings. The open-layout approach to which our city-building practices have shifted permits the organic connection of nature with built-up areas."¹²⁹

“All this demands a completely different understanding of the city,” continued Ivanova. “We must no longer speak of greenery in a city, but of cities in greenery.”¹³⁰

This phrase “cities in greenery” indicates a reversal in hierarchy from cities containing green space to urban areas contained within greenery. For Ivanova the new, “completely different” understanding was also a prompt for the De-Stalinization of regulations and implementation of new norms for professional practice: “In connection with this it is necessary to correct the

¹²⁶ *Arkhitertura SSSR* 1962 no1 p59, “Conference on Landscape Architecture” [pp59–60]

¹²⁷ Ibid.

¹²⁸ Ivanova, quoted in *Arkhitertura SSSR* 1962 no1 p59, “Conference on Landscape Architecture” [pp59–60]. Ivanova’s other publications around this time included scholarly and popular works. See bibliography.

¹²⁹ “*pozvoliatut organicheski coshetat’ prirodu s zastroikoi.*”

¹³⁰ *Arkhitertura SSSR* 1962 no1: p59 “ne o zeleni v gorode, a o gorode v zeleni”

norms for greening. The new system of building organization has overturned/upset the existing classification.” It is likely that Ivanova, as a former member of ASNOVA and student of Ladvovskii, was aware of the revolutionary pedigree of the slogan “cities in greenery,” which is similar to the motto of architect and planner Mosei Ginzburg: “not green in the city, but the city in green plantations!”¹³¹ Ginzburg, who worked with Ernst May and corresponded with Le Corbusier, was a central figure in the Green City competition of the late 1920s and in the concurrent “great debates” of interwar Soviet urbanist and disurbanists.

In the mass greening idyll imagined under Khrushchev, built elements of entire neighborhoods and cities were to combine organically with nature.¹³² The vegetal screening of residential buildings from traffic noise, smells, and sights went the other way as well. Buildings would no longer be visible from the verdant pedestrian pathways, at least in summer. Apartment interiors and residents would be immersed in light, air, and greenery. Environmental amenities would provide protection from too-intense solar radiation, wind speed, and the noises and smoke of those same boulevards, all at costs acceptable to Khrushchevian standards. The “bourgeois” city of hard surfaces, corridor shopping streets, and excessively ornate facades was a vestige of the past. After years of Soviet urbanists and cultural authorities idealizing cities and districts “awash” or “immersed in greenery” (*utopaiushie v zelen'iu*), the city appeared close to dissolving. Under the influence of approaching communism, all that was solid would melt—not into air, but into greenery, into nature.

Indeed, the phrase *utopaiushchii v zeleni*—literally “drowning” or immersed in greenery—was frequently used at the time to describe ideal urban and residential conditions.¹³³ In Russian, one uses the same root verb (*utopat'*) to describe being “immersed” or “wallowing” in

¹³¹ Engel, “Public Space in the Blue Cities in Russia,” 151. She states: “The first important group among the movements which were much discussed in the early 1920s followed the concept of the ‘Green City’. It was influenced, not surprisingly, by Ebenezer Howard’s Garden City concept. Integration, the retention of natural elements and the rejection of geometric patterns were part of Howard’s holistic idea of the ‘natural beauty of the town’. [...] Within the group there were some advocates of an extreme position who wanted to implement the Marxist principle of the dissolution of the divide between town and country, and these became known as Desurbanists or Deurbanists. [...] One of the most important members of this group is Ginzburg, who imagined the dispersal of the entire population of Moscow and some of its industry. Only the historical zones were to left at the centre, in the middle of an enormous park, together with administrative institutions. The population was to live in planned zones in new communal housing in the nearby woods, connected to the city by bus routes and with their own infrastructure for leisure, sport and culture. Moisej J. Ginzburg’s motto was: ‘not green in the city, but the city in green plantations.’ (Engel cites Andrusz, 1987)”

¹³² Ivanova uses the verb *sochetat'*. Elsewhere the same fusion is described as a *sliianie*.

¹³³ The same phrase appears in Semenov, V. “Zelen' v Gorode” *Krasnaia Niva*, no19 (May 11, 1924): 446-462 and other primary texts of Soviet urbanism. See also K.Korobov, “Pomechtaem, druž'ia, o budushchem!” *Gazeta Krasnoiarskii Rabochii*, 01-01-1953.

luxury (or snow), and being “steeped” in tears. Provocatively, the same sound cluster occurs at the beginning of the word “utopia” or “utopian” when pronounced in Russian (*utopizm, utopist, utopiia*). Trees, meanwhile, were traditionally referred to as “our green friends” or “the people’s green wealth.” Thus, a description of a city with abundant urban plantings carried within it the linguistic echo of abundance, comradeship, and an unattainable ideal place.

The phrase used to describe a city’s fusion with nature, its *sliianie s prirodoi*, likewise carried historical/political resonance. Howard’s “marriage of town and countryside” and the basic Marxist tenet of “eliminating the difference between town and village” would have been early referents. Somewhat later, Lenin and Stalin had each, differently, promoted the alliance or *smychka*, of workers and peasants under the Bolshevik banner. Stalin and Khrushchev advocated the *sliianie* (merger) of nationalities.¹³⁴ Given such a discursive heritage, planners’ discussion of cities becoming suffused with greenery and converging with nature carried within them overtones of ideas central to the transformational ideology of communism—revolutionary in both architectural and political terms. To create true “garden cities” that were simultaneously centers of industry was thus a fulfillment of long-established international ideals—and material proof of Soviet distinctiveness, the ability to do what supposedly could not be done under conditions of capitalism.

The ouster of Nikita Khrushchev in October 1964 interrupted the “spirit of idealism and hope that [he] stoked in the mid and late 1950s.” Initial expectations, fueled in part within science circles by the late autumn removal of notorious ‘geneticist’ Trofim Lysenko and the rehabilitation of classical genetics, were that Khrushchev’s successors, Brezhnev and Kosygin “would continue, if not expand, Khrushchev’s liberalization policies while eliminating the capricious aspects of his rule.”¹³⁵ Reality proved otherwise, and the Soviet Union moved into what is known as the period of “Stagnation.”

Around the same time, the Soviet architectural academy established a new specialization in landscape architecture [*landshaftnaia arkhitektura*], which replaced the earlier engineering and city-building sub-fields of “green construction” and “city greening” [*zelenoe stroitel’stvo, oze-*

¹³⁴ A similar term, *smychka*, or link, was used during the 1920s New Economic Policy period to denote the desired linkages or market exchange between city and countryside. <http://soviethistory.msu.edu/glossary/> The discourse of *smychka* (worker-peasant alliance) as established by Lenin and deployed, differently, by Stalin, is discussed by Lynne Viola in *Peasant Rebels* (1999) pp22-24. “For both leaders,” she states, “the *smychka* was meant to ensure the ultimate destruction of classes.” [p24]

¹³⁵ {Weiner, 1999 #60 @350-351

lenenie gorodov]. To some extent, the focus of experts shifted to the preservation and restoration of imperial parks and gardens, and the construction of massive Victory Parks, while the “everyday” environments of residential, industrial, and civic centers continued to be built according to the models established under Stalin and Khrushchev. A separate profession of landscape architecture was not established until the late or post-Soviet period.¹³⁶ Nonetheless, long after Khrushchev’s five-story concrete “Khrushchevki” had been replaced with much taller 9-, 12- and 16-story slabs and towers, the dream of green cities fused with their landscape settings persisted, bundled as it was with durable aspirations for the Soviet good life.¹³⁷

Knit into systems that contained far more programmatic and spatial functionality than “parks and recreation,” urban greenspace was—this dissertation asserts—effectively a form of biogenic urban infrastructure. Urban green plantings and greenspace were more accessible, more visible, and more symbolically potent than other forms of beautification (e.g. heat, water, electrical systems, communications, transportation). They were also more participatory. With minimal resources, increased industrialization, and no lessening in expectations regarding the cultural, hygienic, and experiential capacity of that greening to contribute to building socialism, architects increasingly relied on the general urban population to install, maintain, and protect urban greenspace.

Urban greenspaces were, meanwhile, increasingly expected to visually and functionally melt into the larger landscape, a process aided by the construction of city greenbelts. For example, consider the following praise for Divnogorsk, a workers’ settlement built adjacent to the Krasnoyarsk Hydro-Electric Station. As described by Vera Ruzhze, the pioneering Soviet historian of the garden-city mentioned earlier, the development of Divnogorsk represented

the idea of the complete fusion of the city with nature (*sliianie s prirodoi*). Nature surrounds the city, enters inside it in the form of large wooded areas, is an integral part of the residential blocks and planned micro-districts...¹³⁸

The basic morphology of Soviet cities—the *mikroraion* block structure, ubiquitous naturalistic greenspace—changed relatively little after the adoption of the mikroraion unit and free-

¹³⁶ Wolfrub, "The Post-Soviet Profession."

¹³⁷ Also, as is discussed in the Coda, urban planners and communal hygiene experts continued to rely on spatial mitigation measures to protect public health in the absence of any meaningful regulatory or technological measures.

¹³⁸ Vera Lvov’na Ruzhze, *Krasnoyarsk: Voprosy Formirovaniia i Razvitiia*, Krasnoyarsk: Issues of Formation and Development, 1966 (173). A few pages later, Ruzhze quotes the TsK KPSS assertion from the 1963 Party Congress that: “Citybuilding [*gradostroitel'stvo*] is one of the principal means of educating the new man, eradicating of the last vestiges of a social structure of everyday life and in the minds of people.” [p187] Ruzhze was trained as an architect in Leningrad, and spent a few years in Krasnoyarsk in the early 1960s.

plan approach to building placement. The spatial and functional expectations embedded in the sanitary norms for settlements and buildings—expectations inseparable from the concepts and aspirations of urban greening—continued to dictate the basic spatial relationships of Soviet cities. The few significant changes, such as increase in building height and inter-building separations, increased the visibility of urban greenery yet further. As with these other infrastructures of modern daily life, the successes of urban greening were taken for granted while failures were impossible to hide.

Conclusions

The combined effect of the 22nd Party Congress (November 1961) and the Conference on Landscape Architecture and Garden Art (December 1961) was to articulate to political and professional audiences an increased emphasis on greening, on an accelerated timeline. The new Party Program of 1961 proposed significant changes in the spatial experience and perceived meaning of Soviet cities. The resulting built environments, particularly the residential districts, contributed decisively to the modern socialist city as a type: both as generally imagined, and as experienced by a majority of inhabitants.

For all that Khrushchev used the conceptual categories of “town” and “countryside,” his vision of “green cities, garden cities,” in which attributes of city and country were to be fused, diverged somewhat from the “marriage of town and country” proposed by Howard and other social reformers at the dawn of the 20th century. Most importantly, Soviet proponents of “green cities, garden cities” maintained an emphasis on urban industry and industrialization even as they advocated the dissolution of the city/landscape dichotomy. The seeming dissonance between these two positions lessens when the emphasis on urban greenery is considered as a reaction to, and attempted mitigation of, the suffusion of industry.

The continued Soviet engagement with the Garden City concept and movement is typically described as “derivative” or some variation thereof.¹³⁹ In examining the professional and spatial ramifications of the Soviet green city model as it emerged in the early 1960s, it becomes clear that architect-planners in the USSR built on and adapted Howard’s schematic vision. Their task, particularly as applied in Siberian cities such as Krasnoyarsk and other “large cities... in-

¹³⁹ French, *Plans, Pragmatism and People: The Legacy of Soviet Planning for Today's Cities*.

dustrial and cultural centers,” was to address the logistical and health consequences of incorporating industrial manufacturing facilities into settlements of all sizes, while maintaining or aspiring to provide “all the amenities.”¹⁴⁰ Whether it was in the construction of new towns in Siberia and satellite towns (each with a local industrial base), or the growth of existing cities due to continued industrial growth and rural-urban population influx, the vision of “green city” urbanism promoted at the highest level by Khrushchev and others had effects that Howard could not have foreseen.

The concrete and space of the post-Stalinist city have been interpreted in relation to ideology, material scarcity and, less often, in relation to architectural theory and praxis.¹⁴¹ In this chapter I have identified a combination of factors that added to the pre-existing bundle of values and functions associated with urban greening and beautification. From on high, urbanists received a series of political cues directing them to eliminate the opposition of town and countryside by providing natural or “country” amenities to urban residents. They were furthermore expected to do so in a way that was distinctively and visibly socialist, part of the Cold War competition to provide better conditions for daily life (the Soviet metric) or standard of living and domestic consumption (the American version). These cues were incorporated into a pre-existing urbanist agenda that bundled together pragmatic concerns over public health, interest in aesthetic variety despite architectural and spatial standardization, and disciplinary self-interest. It was this bundling, more than any one factor in isolation, that was responsible for producing the distinctive spatial-material character of Soviet urbanism in the Khrushchev era.

Khrushchev’s denunciation in 1954 of Stalinist excesses in architecture did not delegitimize urban greening as a fundamental principle of Soviet city design. His identification of “garden cities, green cities” as the new model for communist urbanism did, however, alter the appearance and extent of city greenery. Instead of the formal rigor and species diversity of Stalinist green plantings, communism would be cultivated through naturalistic clumpings [massifs], local species, and a seamless merging of urban greenspace with the surrounding countryside, amidst a massive housing campaign that used industrial methods and industrial materials. Even as the sites of Soviet new town building and urban expansion continued to trend eastward into Siberia,

¹⁴⁰ Zile, “Programs and Problems of City Planning in the Soviet Union.”

¹⁴¹ Notable exceptions include Harris, *Communism on Tomorrow Street: Mass Housing and Everyday Life after Stalin*. and to some extent Collier, *Post-Soviet Social: Neoliberalism, Social Modernity, Biopolitics*..

the imagined city of Soviet urbanism remained lushly verdant.

There was an accompanying switch in urban morphology. Instead of Stalinist “perimeter blocks” in the tradition of 19th century European urbanism, the new mikroraiion model of urban development relied on a system of “open plan” [*svobodnaia planirovka*] in which buildings were located in a pedestrian environment, in the interior of large blocks ringed by transit arterials. This switch, which is usually explained by historians in terms of building technology, was justified at the time by a narrative of greenery-based public health infrastructure. The spaces between the buildings, when filled appropriately with green plantings, were to ensure better air quality despite the continued industrialization of Soviet cities. Architects imagined that the mass plantings would, appropriately enough, be realized through mass participation; the urban populace, drafted into such labor through appeals to affect, national pride and morality, stood to gain places of relative privacy.

This continued reliance on urban greenery to achieve bundled social, political and sanitary goals had two effects in the post-Stalinist era. One was to shape the socialist cityscape as it is generally known to this day: mass produced concrete buildings “floating” in abundant, boundless greenspace. At the time, Soviet proponents spoke of the fusion of city and landscape; outside commentators were and are more likely to describe these spaces as “poorly maintained or overwhelmingly vast.”¹⁴² This divergence gets at the second consequence of the post-Stalinist approach to mass greening. The spatial suffusion of Soviet cities with greenspace was accompanied by the continued cultural-political suffusion of greenspace with patriotic and moral virtue. Good citizens, in such a system, were expected to care about and engage actively in the production and maintenance of urban greenspaces. These spaces were indivisible from the larger landscape both spatially and in terms of the species used and their arrangement. Where Siberian patriots like Chivilikhin wrote in the early 1960s of the innate connection between the Russian people and the Russian forest, urbanists instantiated the idea of modern city-nature connectivity in their plans for the greening of Soviet cities.

¹⁴² Sigrist on Moscow public greenspace in the mikroraiions; <https://www.thepolisblog.org/2010/04/boundaries-of-power.html>

Images



Figure 6.1 "The Industrialization and Economics of City-building" chapter frontispiece from *Contemporary City-building, Main Issues*, 1962¹⁴³

¹⁴³ N.V. Baranov, ed. *Sovremennoe Gradostroitel'stvo: Glavnye Problemy* [Contemporary Citybuilding: Main Issues] Moscow: Gosstroizdat, 1962. p176



Map 6.1 Distribution of fast-growing cities in USSR, assessed from 1926-65¹⁴⁴

Red dots indicate “Cities with quick growth tempos (more than x5 from 1926–1965)

Grey dots indicate “Various old cities”

¹⁴⁴ N.V. Baranov, *Osnovy Sovetskogo Gradostroitel'stva*. 4 vols. Moskva: Stroizdat, 1966. volume 1



Figure 6.2 Photograph of five-storey "Khrushchevki" housing in Krasnoyarsk, 1950s-60s with birch tree and pedestrian path in foreground¹⁴⁵



Figure 6.3 Cover of *Architecture of the USSR* (1962:no3) showing mass housing with birch trees in foreground

¹⁴⁵ Photograph from Krasnoyarsk Krai Universal Scientific Library (KKUNB)



Figure 6.4 Bird's eye perspective sketch of proposed "Bereznik" [birch tree] agri-town, 1950¹⁴⁶



Figure 6.5 Promotional rendering and present-day photograph of the ranch house recreated at 1959 American National Exhibit in Moscow (ANEM), scene of Khrushchev-Nixon "Kitchen Debate"¹⁴⁷

¹⁴⁶ from from 1950 article "Pereustroistvo sela," Udarnaia Brigada, 31 December 1950. Reproduced in Auri C. Berg "Reform in the Time of Stalin: Nikita Khrushchev and the Fate of the Russian Peasantry" PhD Dissertation, University of Toronto, 2012 p122

¹⁴⁷ The house became known as "Splitnik" in reference to the first Soviet satellite, "sputnik." Left, the developer's 1959 rendering; at right, the house today. (Photo: Jake Gorst (right). Illustration by Stanley H. Klein/Courtesy of David Klein (left).) From <http://nymag.com/realestate/features/commack-moscow-2011-5/> Accessed Feb 15, 2017.



Figure 6.6 Original AP Photo image from so-called "Kitchen Debate" between V.P. Richard Nixon and Soviet Premier Nikita Khrushchev in display kitchen of ANEM model home, July 1959

Original caption:

Vice President Richard Nixon and Soviet Premier Nikita Khrushchev (left center) engage in a discussion in front of a kitchen display at the U.S. exhibit at Moscow's Sokolniki Park on July 24, 1959. | AP Photo¹⁴⁸

¹⁴⁸ (photo pulled from <https://www.politico.com/story/2017/07/24/this-day-in-politics-july-24-1959-240769>)

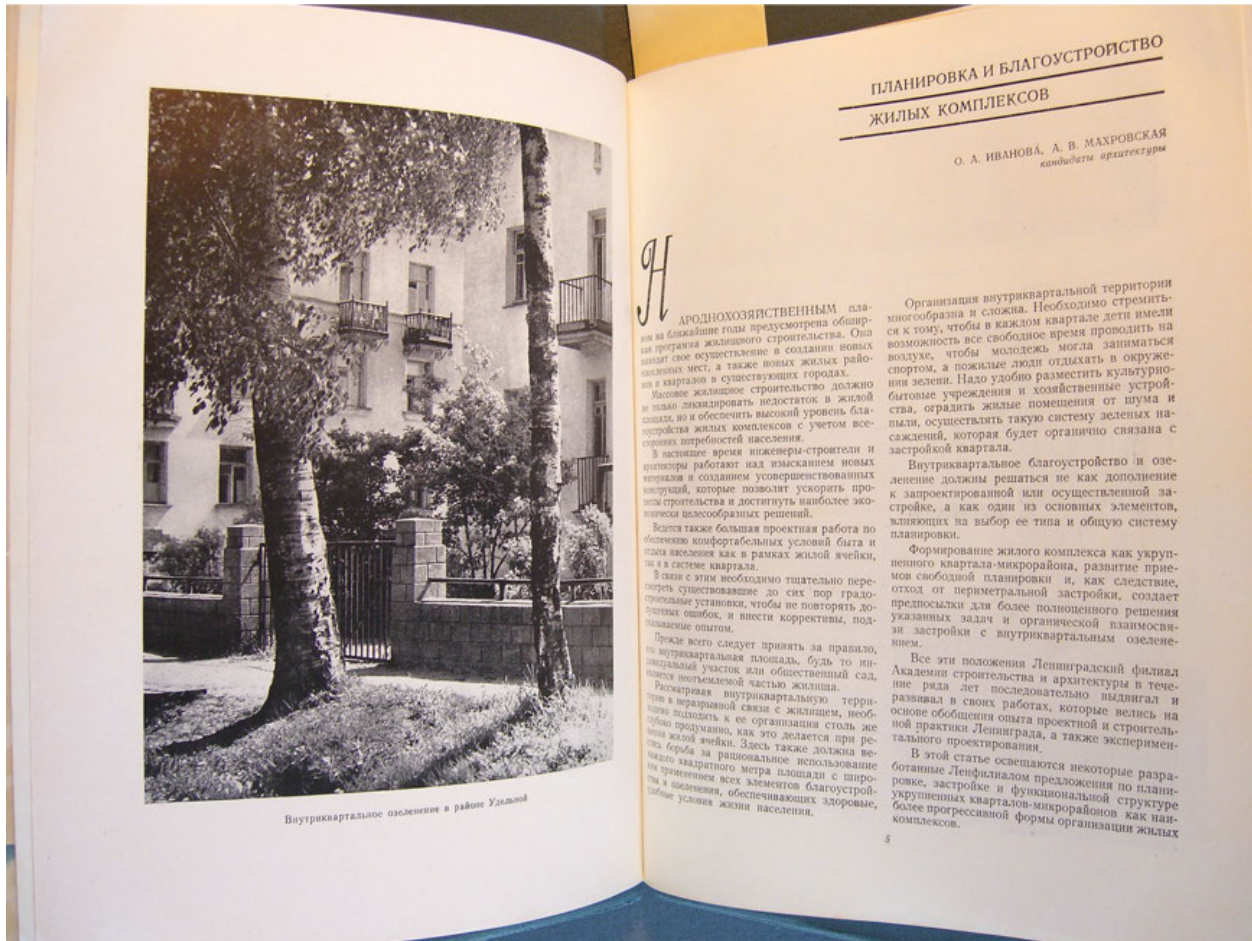


Figure 6.7 Photograph of birch trees in residential courtyard, in "The Spatial Planning and Beautification of Residential Complexes" 1959¹⁴⁹

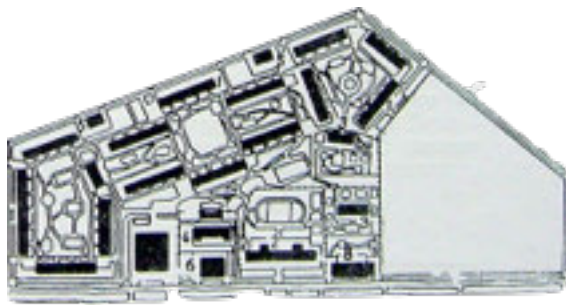


Figure 6.8 Figure-ground diagram of the development of residential 'structural units' (blocks, districts) in Moscow, in 1920s, 1930s, and 1960s

¹⁴⁹ Frontispiece and first page of O.A. Ivanova and A.V. Makhrovskaja, "Planirovka i blagoustroistvo zhilykh kompleksov" in *Planirovka Zastoika i Blagoustroistvo Zhilykh Raionov* Edited by V.A. Vitman and B. V. Murav'ev. Academy of Construction and Architecture, Leningrad branch. Leningrad: Gos Izdat. Lit po Stroitel'stva Arkhitekturoi i Stroitel'nykh Materialakh, 1959



Figure 6.9 Photograph of Novye Cheremushki experimental block no9 and courtyard, from *Arkhitektura SSSR*, 1958¹⁵⁰



The planned layout of Block 9 [above top] is a mix of the Stalinist “closed block” layout and the 1960s “open-layout plan” (diagram above).

¹⁵⁰ from p.3 of S. Turgenev, “Eksperimental’naia zastroika zhilogo kompleksa” [Experimental Building of a Residential Complex] *Arkhitektura SSSR*, 1958 no1: pp3-14

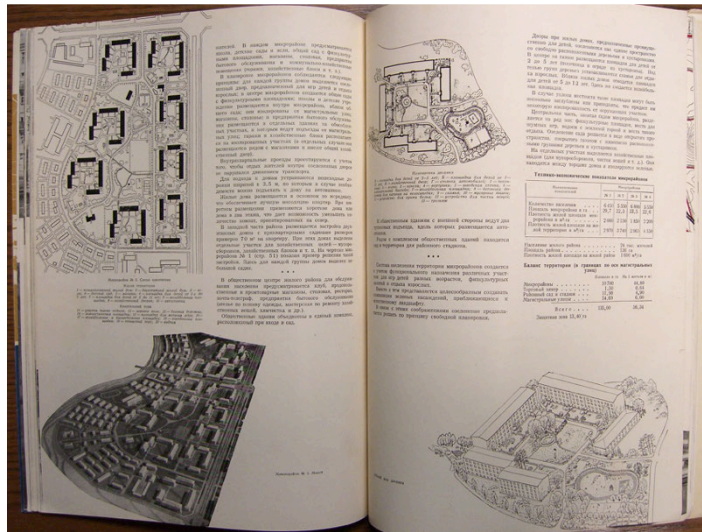


Figure 6.10 Pages from *Arkhitektura SSSR 1958 no6*, showing "experimental projects in the layout of residential districts and blocks"¹⁵¹

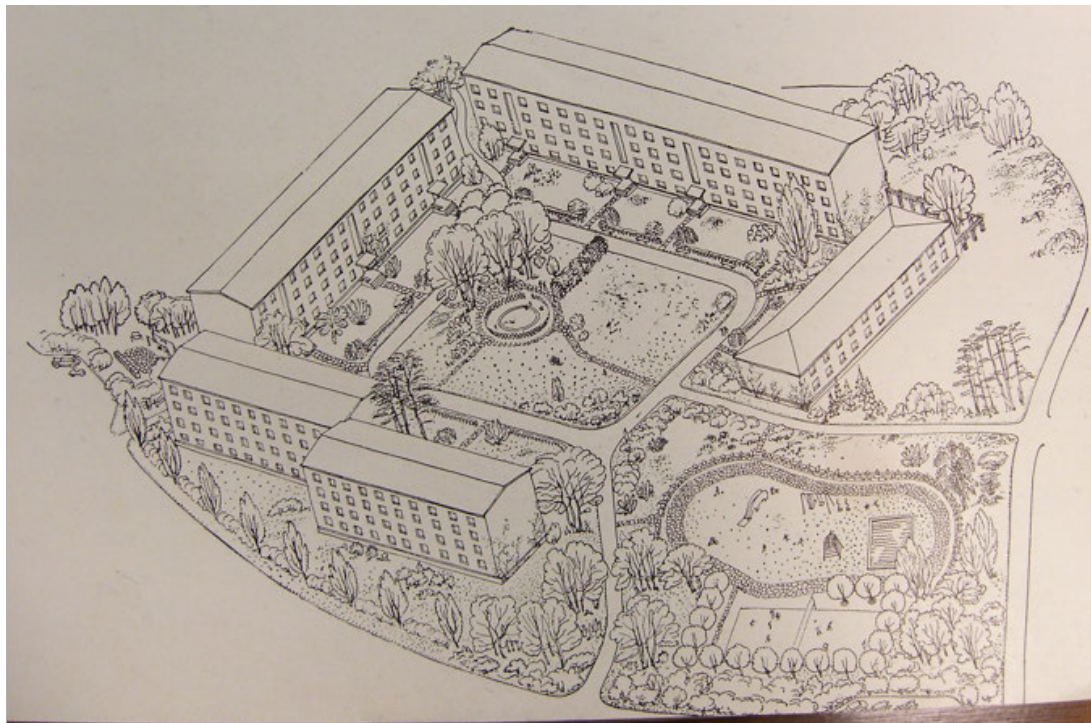


Figure 6.11 Bird's eye view of experimental residential block, showing courtyard programmatic functions, 1958¹⁵²

Framing text: General view of the Small Court [*Dvorik*]. The following programming was proposed: 1. Area for children from 2–5 years; 2. Area for children from 5–12 years; 3. Maintenance yard [*khoziastvennyi dvor*]; 4. Automobile parking. The bottom-right corner of the courtyard featured a) a sandbox; b) a slide; c) swings; d) a merry-go-round [*vertushka*]; e) a Swedish ladder-wall (think vertical monkey bars); f) a wading pool; g) volleyball court. Also indicated are h) concrete path for bicycle riding; i) benches; j) trash bins; k) structure for drying laundry; l) structure for washing things; m) trellis, as fencing to obscure the final three amenities.

¹⁵¹ "Eksperimentalnyi prokety planirovki zhilykh raionov i kvartalov" pp49–71

¹⁵² Detail of *Arkhitektura SSSR 1958*, no6 p52.

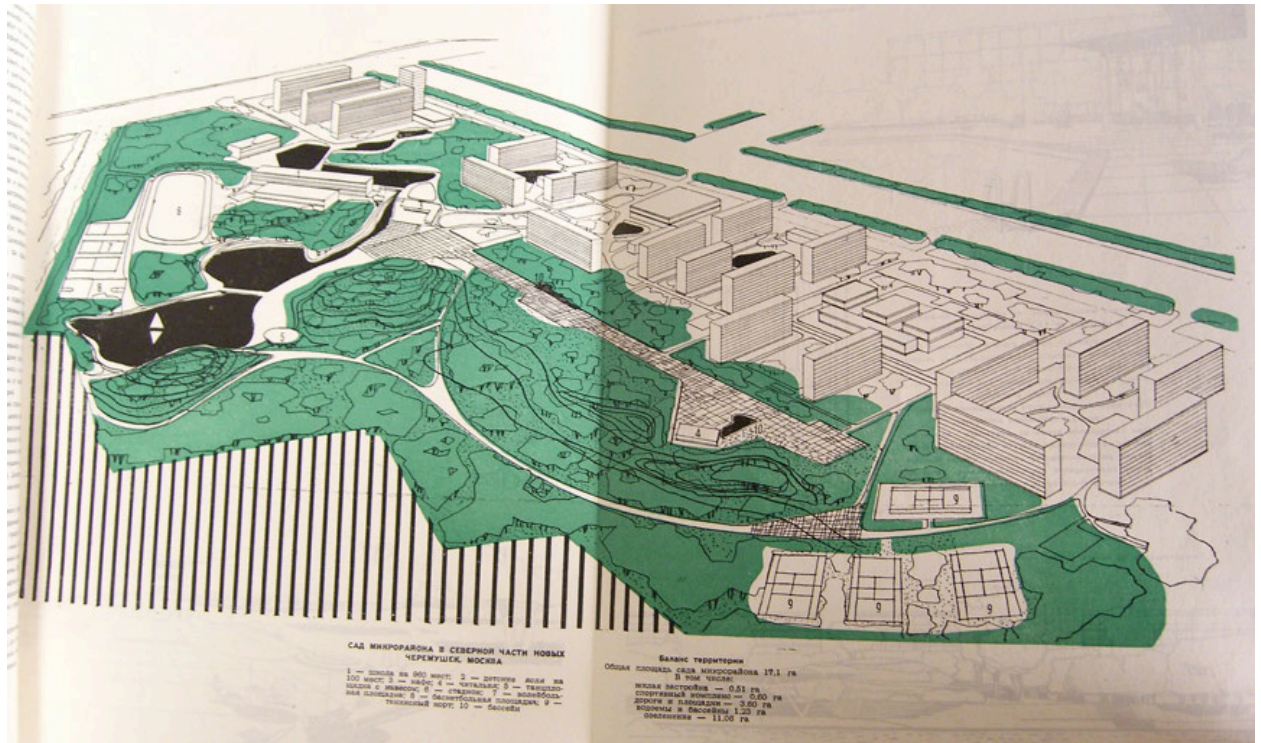


Figure 6.12 Bird's Eye perspective of "garden" in Novyi Cheremushki micro-district [*mikroraion*], from *Arkhitectura SSSR*, 1962 no3



Figure 6.13 Photograph of flowers and other greenery at entrance to mass housing blocks, 1960¹⁵³

¹⁵³ from I. Petrov, "Sovremennaiia Arkhitektura Zelenykh Nasazhdenii [Contemporary Architecture of Green Plantings]" *Arkhitectura SSSR* 1960:04, pp54-58



Figure 6.14 Cover of *Satellite Cities [Goroda-Sputniki]* from the *Praxis of City-building Abroad*, 1958¹⁵⁴

¹⁵⁴ V.L. Vasil'ev, S.M. Verizhnikov, Iu.A. D'iakonov, and G.D. Platonov. *Goroda Sputniki: Iz Opyta Gradostroitel'stva Za Rubezhom; Kharlou, Vizensho, Vellingbiu*. Leningrad: Gosudarstvennoe izd-vo literatury po stroitel'stvu, arkhitekture, i stroitel'nym materialam, 1958.



Figure 6.15 Diagram of "Green Plantings scheme in a Satellite City" from *Suburban Zones of Large Cities*, 1963¹⁵⁵

Key:

- Residential zone,
- Industrial zone (thick vertical hatching),
- City center (the triangle),
- City park,
- Pedestrian alleés,
- Protective greenery (small stipples)
- Forest-Park zones.

¹⁵⁵ V.A. Kamenskii, M.E. Vaitens, M.I. Vasilevskii, V.I. Kalmykov, S.I. Krest'iashin, K.S. Krivtsov, A.V. Makhrovskaiia, N.N. Petrov, and G.V. Charnetskii. *Prigorodnye Zony Krupnykh Gorodov*. [Near-city zones of major cities]. Leningrad: Gosudarstvennoe izd-vo literatury po stroitel'stvu, Arkhitekture i stroitel'nykh materialam, 1963.



Figure 6.16 Photograph of continuous greenspace between courtyard and mikrorayon garden, from O.Ivanova, "Greening of Residential Territories" 1962¹⁵⁶

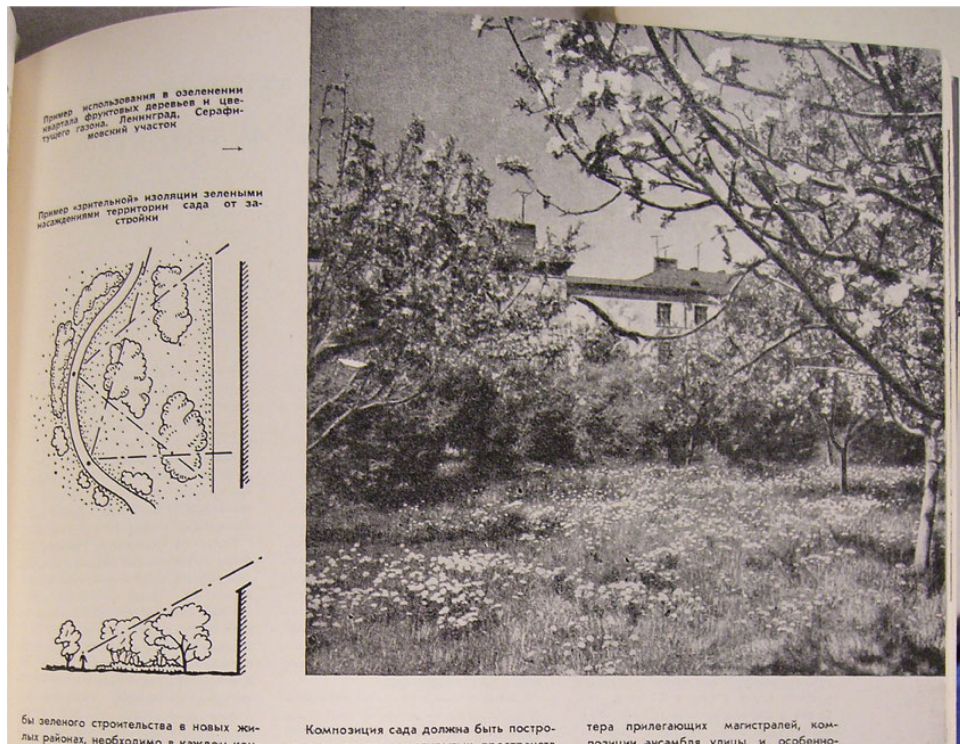


Figure 6.17 Photograph showing "wild" appearance of residential courtyard, with diagrams indicating how plantings obscure buildings from view, 1962¹³

Original captions: Photograph – "An example of using fruit trees and flowering lawn in the greening of a block. Leningrad."; Diagrams: "Examples of visual isolation of the garden territory from buildings using green plantings"

¹⁵⁶ Ivanova, O.A. "Ozelenenie zhilykh territorii [The Greening of Residential Territories]" *Arkhitektura SSSR* no6 (1962): pp32-38

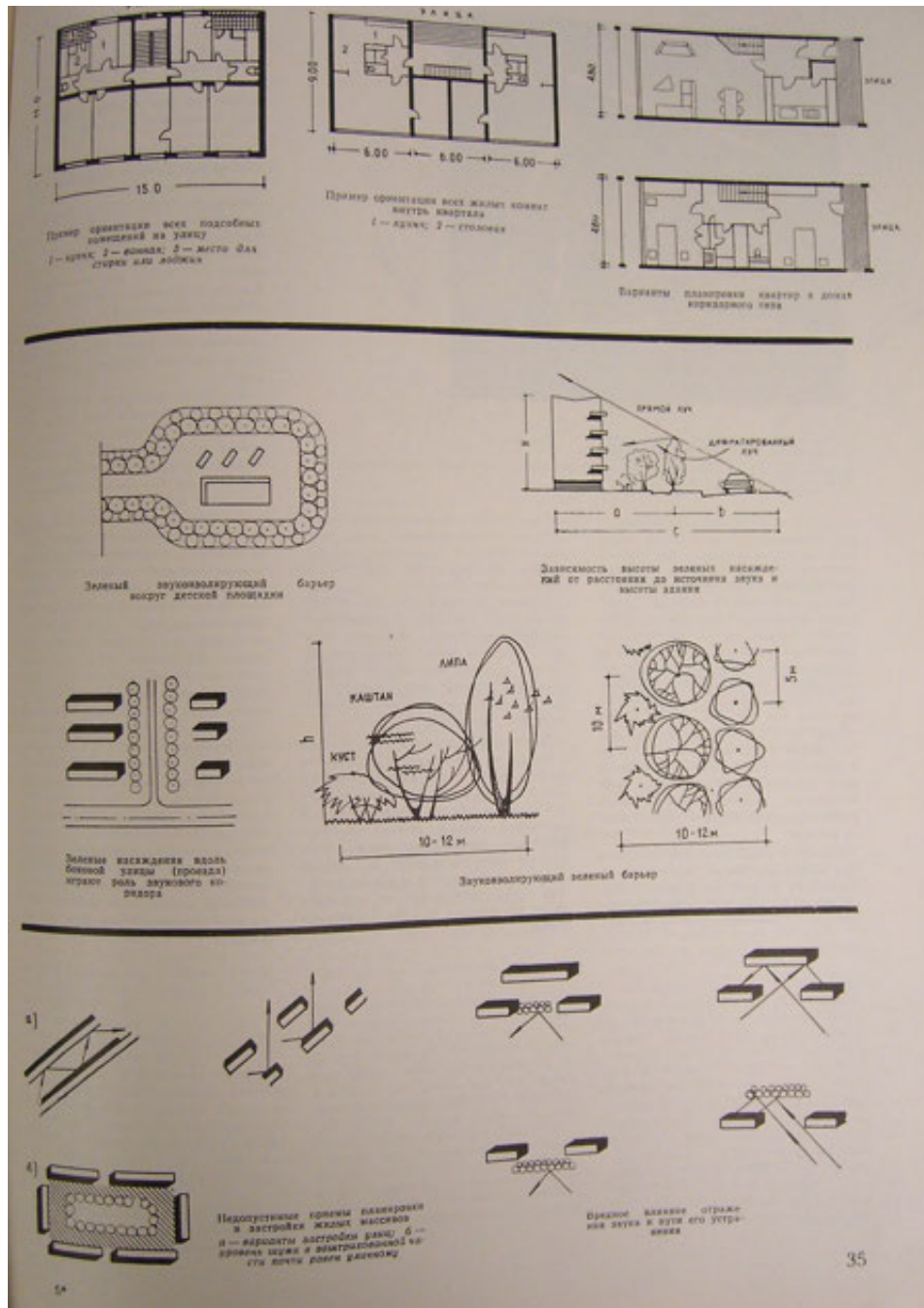


Figure 6.18 Diagrams of trees and shrubs used to block street noise, from *Arkhitektura SSSR* 1962 no1

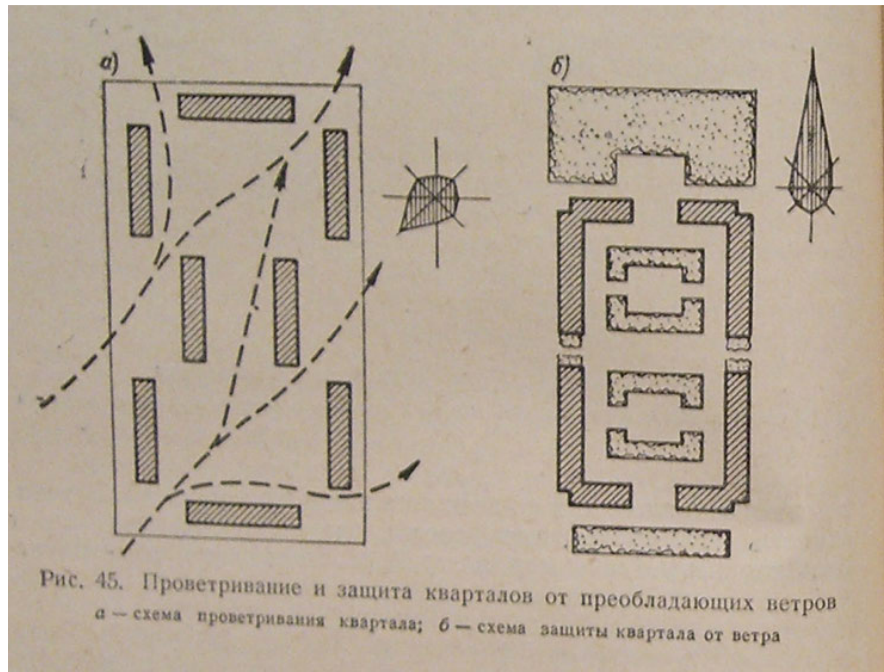


Figure 6.19 Figure-ground diagram of city block morphology, showing the "ventilation and protection of blocks from prevailing winds" using layout and plantings, 1959¹⁵⁷

Original captions: The block on the left side is labeled "Schema for Block Ventilation;" on the right is "schema for protecting a block against wind." The right-hand proposal is acceptable only in certain climate conditions, otherwise the left-hand proposal is preferred specifically because it would more thoroughly 'air out' the residential territory.



Figure 6.20 Soviet motivational poster, showing the moral 'airing out' of Soviet city-dwellers and courtyards through greening and maintenance, 1958

Poster text reads: "“For Cleanliness and Order! Out of the Courtyard with Disorder and Indifference!”

¹⁵⁷ Vargazin & Velikovskii, 1959, *Osnovy Planirovki i Blagoustroistva Naseleennykh Mest i Promyshlennye Predpriatii* [Fundamentals of Layout and Beautification of Settlements and Industrial Enterprises] p84.

тени различен по временам года: зимой солнце встает поздно и в северных широтах поднимается сравнительно невысоко. Поэтому конверт тени зимой конечно будет значительно больше, чем летом. Так как солнце на юге поднимается выше над горизонтом, то и тени будут там короче, а конверт тени меньше, чем на севере.

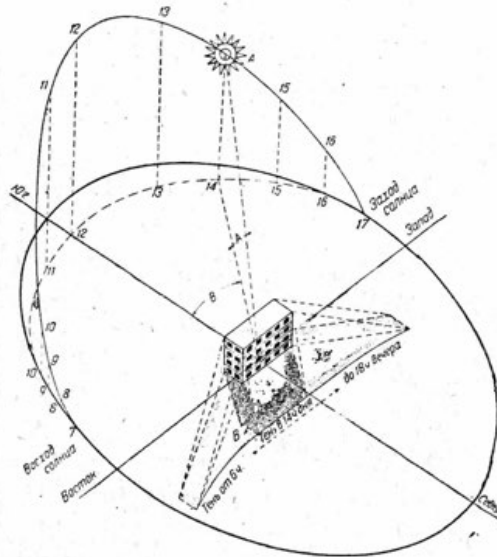


Рис. 13. Схема падения солнечных лучей и конверта теней от здания.

Географическая широта местности, где расположено здание, является таким образом первым фактором, который следует принять во внимание при применении этого метода.

На схеме падения солнечных лучей и конверта тени (рис. 13) наглядно показан «путь солнца», отвечающий выбранной широте. На рисунке представлены: угол высоты солнца в определенный час дня, обозначенный A (принято 14 час. дня), и угол, составляющий с меридианом азимут в этот час, обозначенный B .

Такой инсоляционный план, нанесенный на обычную планировку квартала, сделанный в масштабе 1—2 тысячной, следовало бы представлять в учреждения, ведающие утверждением проектов не только при планировке целых кварталов, но и при планировке отдельных домовых участков, для суждения об их связи с соседними участками и улицей. При таком порядке мы избежали бы неудачных сторон в жилищном строительстве, которые наблюдаются иногда исключительно из-за невнимания к этим вопросам в технических кругах или неосведомленности архитекторов о важности наличия инсоляции при планировке зданий на участке и в квартале.

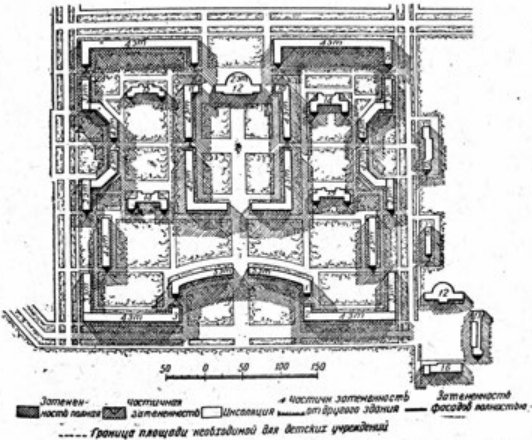


Рис. 37. Схема инсоляции жилого квартала в 10—12 ч. и 14 ч. дня в весенне-осенний сезон.

Наиболее простой будет схема построения теней только для весенне-осеннего периода и только для 12 час. дня (рис. 36). Более развитой схемой будет построение конвертов тени для трех периодов дня: 9, 12 и 15 час. (рис. 37). Еще лучше дать тени для трех сезонов года: зимы, лета и осени — весны для полудня или с охватом нескольких часов инсоляции, например от 9 до 15 час., а для зимы доводить этот период инсоляции до 1—2 час. (рис. 38). Еще более развитой схемой будет построение конвертов тени для определенного периода по часам дня для всех трех основных сезонов года (рис. 29). На рисунке представлен пример затенения улицы

Figure 6.21 Diagrams of insolation [direct solar exposure] as a factor in building orientation and layout, 1940¹⁵⁸

¹⁵⁸ A.U. Zelenko, *Insoliatsiia kak Faktor Planirovki Gorodov*. Moscow: Stroiizdat, 1940

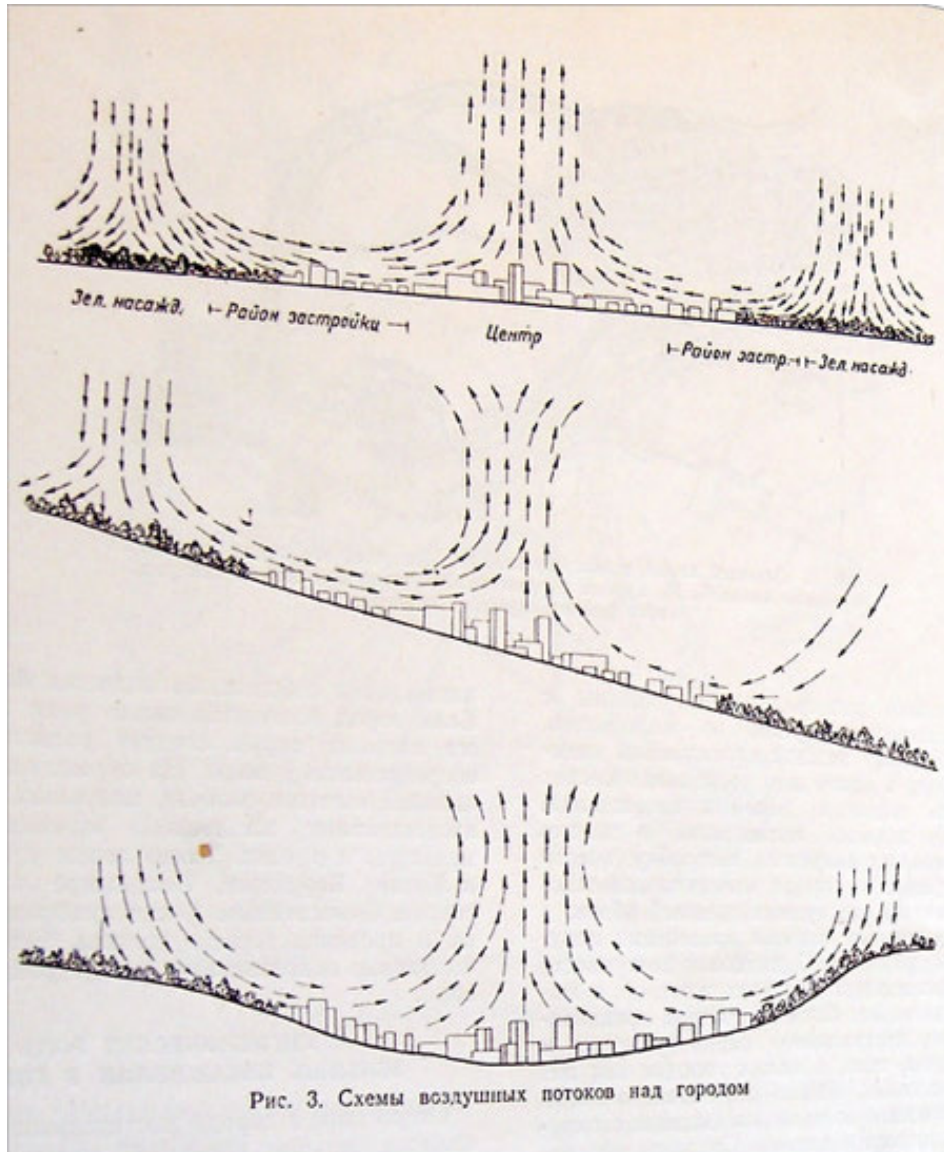


Figure 6.22 Diagram of atmospheric currents over a city, showing benefits of topography and green plantings for air flow. 1954¹⁵⁹

Explanation from text: In hot summer months, the microclimate of cities creates rising columns of hot air; clean cooler air “flows” into the city from adjacent large planted areas, where it is sucked in from higher levels of the atmosphere. Note the lack of smokestacks within the city—planning norms at this time called for factories to be located outside or on the edge of cities.

¹⁵⁹ M.P. Korzhev and L.S. Zalesskaia, *Greening Soviet Cities: Advice for Project Design (Ozelenenie Sovetskikh Gorodov: Posobie Po Proektirovaniu)*, Academy of Architecture of the USSR: Citybuilding Scientific-Research Institute: Moscow, 1954. p12



Figure 6.23 Aerial present-day photograph of Akademgorodok, near Novosibirsk (established 1957)¹⁶⁰



Figure 6.24 Photograph of present-day Krasnoyarsk high-rise district, with residents' root cellars in foreground. Photo by author, 2014

¹⁶⁰ <http://www.eldefinido.cl/actualidad/mundo/6374/Akademgorodok-el-desconocido-Silicon-Valley-de-la-Union-Soviética/>

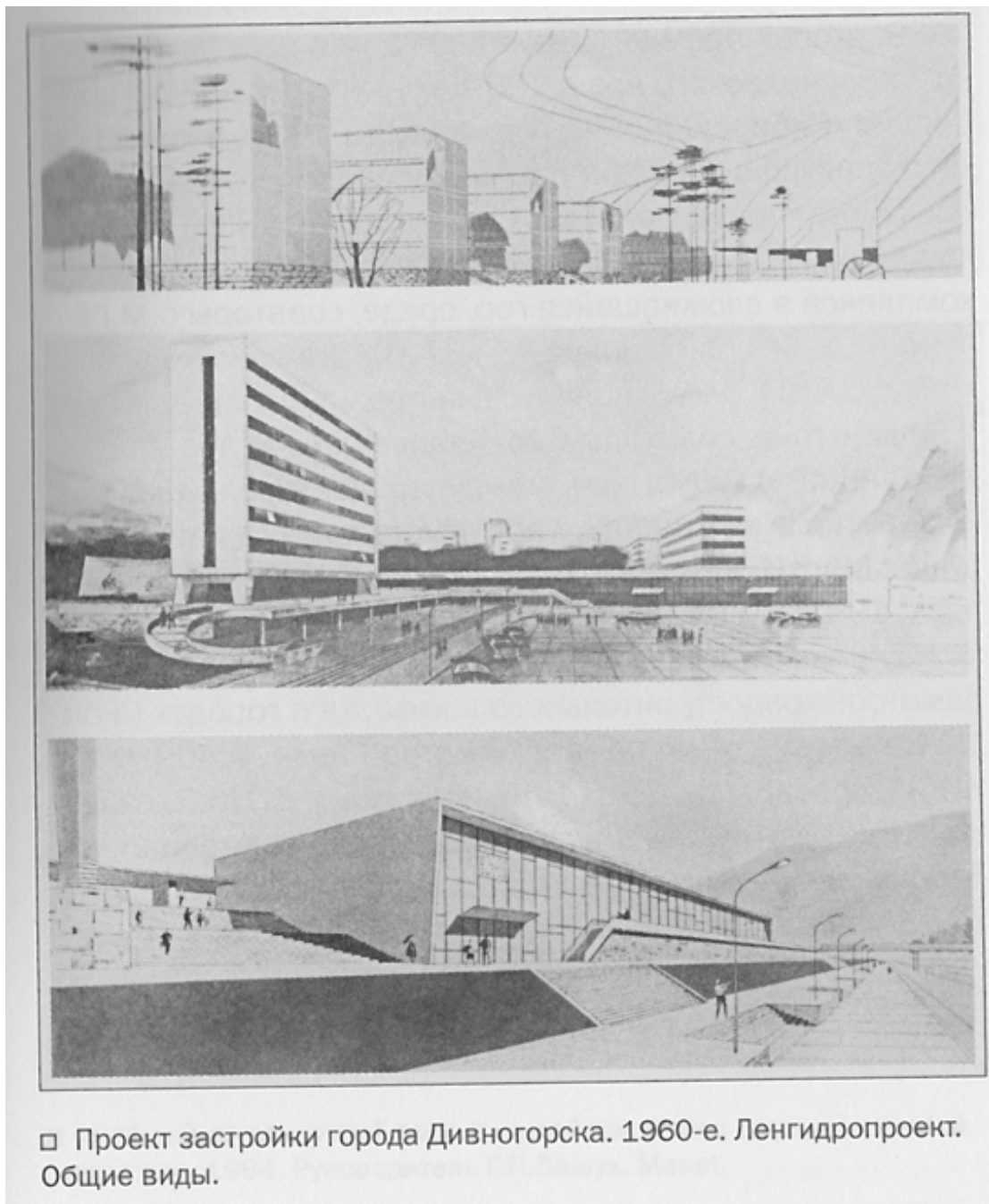


Figure 6.25 Design proposal perspectives from Lengidroproekt for the town of Divnogorsk, near the Krasnoyarsk Hydroelectric Dam, 1960s¹⁶¹

¹⁶¹ Slabukha, A. V. *Arkhitektury Prieniseiskoi Sibiri: Konets XIX-Nachalo XXI Veka : Illiustrirovannyi Biograficheskii Slovar, 540 Imen.* [in Russian] Moscow: Progress-Traditsiia, 2004.



Figure 6.26 Photograph of wall fresco [*panno*] of Krasnoyarsk sites and tree-planting, in cafeteria of Kirov District Administration Building, 1970s.¹⁶²

¹⁶² Photograph by M.Taylor, July 2012

Chapter 7.

Can Trees Talk Back? A Coda

The scholarly intervention intended by this dissertation was described, at the outset, as a reversal of the figure-ground relationships typically found in histories of Soviet urbanism. Focus shifted from the grey to the green. The structures that were, are there still, seen now from the perspective of the greenspace outside, and in the words of those specialists responsible for giving that greenery shape and meaning. The history of urban greening and greenspace presents another potential reversal, however, with respect to the defining structures of Soviet environmental history. Whereas in 1961 Khrushchev had proclaimed a twenty-year horizon for the transition to full communism and garden cities, by the late 1980s, some twenty-plus years later, the USSR and “Eastern Bloc” countries were rocked by oppositional environmental movement(s).¹

Despite widespread interest in the late 1980s and 90s in the social groups and issues that formed the prehistory of *perestroika* environmentalism, at that time there was “no definitive answers to the riddle of the regime’s failure to snuff out nature protection activism.”² In the years since, historians have identified and documented the roles of long-standing attitudes, international relations, and specific groups of specialists, including writers, scientists, and artists.³ To make sense of the process by which mass participation in urban greening turned into an oppositional yet tolerated protest movement, I propose that it helps understand the role played

¹ Key works of and about Soviet environmentalism include Marshall Goldman, *The Spoils of Progress: Environmental Pollution in the Soviet Union*. Cambridge, Mass.: M.I.T. Press, 1972; Philip R. Pryde, *Environmental Management in the Soviet Union*. Cambridge Soviet Paperbacks. Cambridge: Cambridge University Press, 1991.; Oleg N Yanitsky., *Russian Environmentalism: Leading Figures, Facts, Opinions*. Moscow: Mezhdunarodnyje Otnoshenija Pub. House, 1993. Laura A. Henry, and Vladimir Douhovnikoff. "Environmental Issues in Russia [Lit Review]." *Annual Review Of Environment and Resources* 33, no. 1 (2008): 437-60.; Yanitsky, *Russian Environmentalism: The Yanitsky Reader*. [in English; Translated from the Russian.] Moscow: TAUS, 2010. See also works by Douglas Weiner and Paul Josephson in bibliography.

² This provocation to further research, and a series of related questions, were posed by Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 444-45.. Since then, additional works have joined Weiner in identifying “sites of civic autonomy” and/or genuine concern for natural processes and outcomes within the Soviet Union; the contribution of this dissertation is to point out the role played by urbanists, and in this chapter, by trees.

³ Overviews of the field can be found in Gille, "From Nature as Proxy to Nature as Actor."; Brain, "The Environmental History of the Soviet Union."; Bruno, "Russian Environmental History - Directions and Potentials (Review: Brian Bonhomme, I.A. Poliakov, Arja Rosenholm, Sari Autio-Sarasma)."; Baron, "New Spatial Histories of 20th-Century Russia and the Soviet Union: Exploring the Terrain."

by the trees and other greenery, their agency, and the consequences of tree mortality in professional and popular realms from the 1960s on.

This concluding chapter, which acts as a coda to the overall arc and themes of this dissertation, focuses first on how trees might be said to speak or participate in the Soviet discourse of environmental protest. Second, I consider how Soviet urbanists listened. In particular, I offer a close reading of the reaction and recommendations offered by one of the participant authorities in Soviet greening and beautification, Lev Osipovich Mashinskii, from the early 1960s. This was the eve of the mass environmental movement as it is generally periodized, a time when the basic parameters of post-Stalinist Soviet urban environments were set—the mikroraiion, city-nature fusion, separate apartments and boundless urban public space—but environmental protection and “environmentalist” attitudes were still on the cusp of mass awareness. Specialists in the greening of cities and related fields attempted in this period to acknowledge and make sense of urban tree health and decline, in the period immediately before the consolidation of a mass environmental movement in the Soviet Union.

In the spirit of the program notes offered before a concert, a few brief notes are in order about the concepts, and scholarly lineage, of this variation on a theme. My approach to the historical mutual influence of trees, toxics, and theories of Soviet environmental awareness draws direct inspiration from the urging of Zsuzsa Gille to treat “nature as an agent” not (just) as a proxy for politics.⁴ The idea of non-human agency is one that percolates differently through various disciplines and realms of study; for here and now “agency” implies a capacity to do something other than what was required or expected, setting aside the question of ‘authentic’ intent. The basic assertion that environmental history should be more than the study of wilderness, or of natural resource use and non-use is by now widespread. I trace a specific genealogy of this chapter to urban environmental historians since William Cronan, particularly Ellen Stroud for linking forests and cities, and Paul Robbins for showing how much can be read from everyday spaces in interaction with humans, and human bodies.⁵

⁴ Gille, "From Nature as Proxy to Nature as Actor."; Bruno Latour, "When Things Strike Back: A Possible Contribution of 'Science Studies' to the Social Sciences," *British Journal of Sociology* 51, no. 1 (2000); "On Actor-Network Theory: A Few Clarifications," *Soziale Welt* 47 (1996). See also Bruce Braun, "Environmental Issues: Global Natures in the Space of Assemblage," *Progress in Human Geography* 30, no. 5 (2006); Jane Bennett, "The Agency of Assemblages and the North American Blackout," *PUBLIC CULTURE* 17, no. 3 (2005).

⁵ William Cronon, ed. *Uncommon Ground: Rethinking the Human Place in Nature*, 1st ed. (New York: W.W. Norton & Co., 1995); *Nature's Metropolis: Chicago and the Great West* (New York: W. W. Norton, 1991); Ellen Stroud, *Nature Next Door: Cities and Trees in the American Northeast*, Weyerhaeuser Environmental Books (Seattle: University of Washington Press,

The title is, humbly, meant to stir echoes of both Timothy Mitchell's question "Can the mosquito speak?" and the notion that the subjects of empires occasionally "write back" although not always in the expected or canonical mode.⁶ The idea of a more-than-human city comes from Bruce Braun, while Joanna Dean has raised the notion of "unruly" street trees in her work on Ontario.⁷ Finally, my interest in the qualities of trees, how what is registered by and through them might change over time, is indebted to the work of Nancy Ries on the potato, Jane Schneider on polyester, and of course Bruno Latour on objects and networks generally.⁸

Talking Trees and Toxics

The general lineaments of Soviet environmental problem are indisputable: extensive pollution and ecological degradation, the exploitation unto exhaustion of natural resources, with consequences for human, animal, and environmental health that were as gigantic as the technophilia and bureaucracy that fed them. The impact of this environmental reckoning on the so-called "Second World" is rarely understated. Assertions, similar to that made by Blair Ruble and John Czaplicka that "endeavors tied to place" provided the spark of regime change, are common, as they have been since the time of the Soviet collapse.⁹

When historians finally conduct an autopsy on the Soviet Union and Soviet Communism, they may reach the verdict of death by ecocide. [...] No other great industrial civilization so systematically and so long poisoned its land, air, water and people. None so loudly proclaiming its efforts to improve public health and protect nature so degraded both. And no advanced society faced such a bleak political and economic reckoning with so few resources to

2012); "Does Nature Always Matter? Following Dirt through History," *History and Theory* 42, no. 4 (2003); Paul Robbins and Julie T. Sharp, "Producing and Consuming Chemicals: The Moral Economy of the American Lawn," *Economic Geography* 79, no. 4 (2003); Paul Robbins, *Lawn People: How Grasses, Weeds, and Chemicals Make Us Who We Are* (Philadelphia: Temple University Press, 2007); P. Robbins, "Turfgrass Revolution: Measuring the Expansion of the American Lawn," *Land Use Policy* 20, no. 2 (2003).

⁶ Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity*. Bill Ashcroft, Griffiths, Gareth, and Tiffin, Helen. *The Empire Writes Back: Theory and Practice in Post-Colonial Literatures*. Florence: Taylor & Francis Group, 2002.

⁷ Braun, Bruce. "Environmental Issues: Global Natures in the Space of Assemblage." *Progress in Human Geography* 30, no. 5 (October 1, 2006 2006): 644-54; and "Environmental Issues: Writing a More-Than-Human Urban Geography." *Progress in Human Geography* 29, no. 5 (2005): 635-50; Joanna Dean, "'Said Tree Is a Veritable Nuisance': Ottawa's Street Trees 1869-1939," *Urban History Review* 34, no. 1 (2005).

⁸ Jane Schneider "In and Out of Polyester: Desire, Disdain and Global Fibre Competitions" *Anthropology Today*, Vol. 10, No. 4. (Aug., 1994), pp. 2-10.; Nancy Ries, "Potato Ontology: Surviving Postsocialism in Russia," *Cultural Anthropology* 24, no. 2 (2009); Latour, "When Things Strike Back: A Possible Contribution of 'Science Studies' to the Social Sciences."; "On Actor-Network Theory: A Few Clarifications."; *We Have Never Been Modern* (New York: Harvester Wheatsheaf, 1993). Ries on the potato: "I came to see potato as what Clark and Chalmers (1998) call a "cognitive resource"—an object in the world "coupled" to the social mind and thus an irreducible vehicle of thought about and action in the world." The difference between this and what I term the "cues" and "bundled values" associated with urban green plantings deserves further thought. See also Brad Weiss, *The Making and Unmaking of the Haya Lived World: Consumption, Commoditization, and Everyday Practice*, Body, Commodity, Text (Durham: Duke University Press, 1996).

⁹ Czaplicka, Ruble, and Crabtree, *Composing Urban History and the Constitution of Civic Identities*.

invest toward recovery.¹⁰

Blame for these issues is variously distributed between the system of state socialism, with its absence of market costs, the indifference or amorality of Soviet planners, and the absolute prioritization placed on industrial production.¹¹

Compounding the direct harms of various environmental problems was the habitual Soviet censorship of information regarding human health and mortality.¹² Similarly suppressed were statistics on the amount and kind of emissions from industrial enterprises, as were their true production profiles, even the locations and existence of entire military-industrial settlements.¹³ The publication and analysis of such statistics in the West by Murray Feshbach, Alfred Friendly Jr., and others at the end of perestroika was a major historiographical intervention, and their findings have served since as a primary exhibit of official Soviet disregard for human health and environmental degradation.¹⁴ The question of which system, capitalist or communist, was better able to safeguard the environment and/or provide quality living environments was, after all, a long-standing front of the Cold War.¹⁵

Before Gorbachev's policies of *glasnost* and *perestroika* began to open up a public arena to acknowledge and discuss such problems in the press, few opportunities existed for environmental discussions to occur at a national scale, outside professional channels. Within certain bounded realms of scientific expertise, or occasionally in literature, different opportunities obtained. Medical historian Christopher Burton has documented how specialists in communal hygiene, particularly those located in Siberia, articulated "searching critiques of

¹⁰ Feshbach and Friendly Jr., *Ecocide in the USSR: Health and Nature under Siege*, 1.

¹¹ Ibid., 98. "To Soviet planners, the imperatives that long mattered the most were the expansion of gross output, the prestige of the socialist state and its leaders and the Soviet Union's need to advance its security in isolation from Western rivals and markets. Such thinking dictated the crash course of industrial development. That model came from the 1930s, from Stalin... [...] Intensified by the wartime frenzy of production and postwar reconstruction needs, the commands of the center set the standard destructive pattern for investment and growth throughout the Soviet Union."

¹² Examples include the falsification of the 1937 All-Union census, wartime and post-war casualty figures from fighting, famine and other causes, and suppression of data regarding health threats posed by exposure to nuclear materials. Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters*; Feshbach and Friendly Jr., *Ecocide in the USSR: Health and Nature under Siege*, p31 on demographics.

¹³ e.g. the ZATOs, including Krasnoyarsk-26 and Krasnoyarsk-45. These were "secret" cities. In contrast, "closed" cities included those like Norilsk or Krasnoyarsk itself, whose existence was of course widely known but access by foreigners was strictly controlled.

¹⁴ Murray Feshbach and Alfred Friendly, Jr., *Ecocide in the USSR: Health and Nature Under Siege* (New York: BasicBooks, 1992).

¹⁵ See Simo Laakkonen, Viktor Pál & Richard Tucker "The Cold War and environmental history: complementary fields," *Cold War History*, 16:4 (2016), 377-394, and N.N. Vorontsov, "Nature Protection and Government in the USSR" *Journal of the History of Biology*, Vol. 25, No. 3 (Autumn, 1992), pp. 369-383

anthropogenic threats to human health” in the Khrushchev-era, decades before *glasnost*.¹⁶

In the 1950s the concerns of some Soviet experts, in communal hygiene, biology, agronomy, and other fields, seeped into the main press, provoking responses from members of the public on the subject of nature appreciation and protection. However there was no Soviet equivalent of a Rachel Carson who could popularize a debate, especially on threats to human health, very effectively. Indeed, there was no fully developed Soviet public sphere in which a Rachel Carson could operate. Public awareness and anxiety over rising birth defects due to toxins... were deferred.¹⁷

Burton finds, however, that “destalinization did not ‘detoxify’ the Soviet Union,” in part because such critiques remained limited to discussion within the scientific and policy communities, where they were constrained by political authorities. Relaxation of those constraints had to wait another generation.

In the late 1980s, during *perestroika*, ecological protest and activism took on a mass character, expanding its targets to a vast range of issues. Various expressions of political dissatisfaction “marched either partially or wholly under ecological slogans,” noted Oleg Ianitskii, “[o]ne way or another, ecological protest during the period 1987–1989 became the USSR’s first legal form of democratic protest and of solidarity among the citizenry as a whole.”¹⁸ Commentators seeking to explain the adoption of ecological or environmental causes as the “formal banner” for protest against the regime and its policies have repeatedly noted the pragmatic and political advantages, for protest participants, in this choice of “slogans.” Douglas Weiner, the pre-eminent historian of Soviet nature protection and advocacy, points to the immediate influence of the April 1986 Chernobyl disaster, but settles finally on a different interpretation. “Soviet people,” writes Weiner,

knew that historically, unlike political, religious, ethnonationalist, labor or even cultural dissidents, environmental protesters were not greeted by billy clubs, water cannons, imprisonment, deportation or exile. A host of compelling problems angered Soviet people in the early days of *glasnost*. Any one of those could have served as the focal point of their initial public protests. People almost universally chose *environmental* issues, however, because they were aware of the low risk historically associated with speaking out in that area.¹⁹

Weiner then asserts that his study of nature protection advocacy among Soviet natural scientists “reveals that environmental protest and activism served as a surrogate or even a vehicle for

¹⁶ Burton, “Destalinization as Detoxification?: The Expert Debate on Industrial Toxins under Khrushchev,” 253.

¹⁷ Ibid. On the topic of birth defects, Burton directs readers to Catriona Kelly’s chapter in the same volume, “White Coats and Tea with Raspberry Jam—Caring for Sick Children in Late Soviet Russia” pp258-280 in Bernstein, Burton, and Healey, *Soviet Medicine: Culture, Practice, and Science*.

¹⁸ quoted by Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, p21 see fn27..

¹⁹ Ibid.

political speech continuously throughout the Soviet period.”²⁰ (This notion of nature-as-proxy has since been critiqued by sociologist Zsuzsa Gille, as will be discussed below.)

Those who seek, like Weiner, to expand the recognized pre-histories of glasnost-era Soviet environmentalism have focused, for the most part, on scientific specialists (foresters, medical specialists, geologists), cultural workers and dissidents (artists, filmmakers, writers), extreme environments or distant places. This last feature reflects the long-standing association of environmentalism with wilderness protection—“pristine nature still, thankfully, does exist” sighs Massey Stewart²¹—but also reflects the distribution of the largest or most acute interventions in natural processes and ecosystems within the Soviet Union. While not everyone uses the term “ecocide,” it is also generally agreed that, within the RSFSR, the regions beyond the Urals—what is known in American English as “Siberia”—have borne the brunt of Soviet environmental degradation, rapacious resource extraction, and official indifference.²² Siberia was also an epicenter, within Soviet Russia, of dissent and opposition.²³ Scientists, writers, youth activists and local authorities may have felt more free to speak out in places like Akademgorodok or Kedrograd, distant from central sources of authority, or they may simply have had a better close-up view of the problems.

Scholars note that, due to the intense co-location of factories and population, “cities ... lay at the heart of the environmental dilemmas faced by the Soviet Union.”²⁴ Despite this acknowledgement, cities and urban built environments are rarely placed at the heart of Soviet environmental histories.²⁵ The role of urban specialists including architects and spatial planners

²⁰ Ibid.

²¹ Stewart, "Air and Water Problems Beyond the Urals," 234.

²² High profile environmental events and causes in the region include the planned-for diversion of Siberian rivers to Central Asia, the pollution of Lake Baikal, various nuclear leaks and explosions, massive instances of acid rain and atmospheric pollution caused by industrial facilities such as those in Noril'sk, north of Krasnoyarsk, unrestrained logging, and the depletion of river and ocean fisheries. Josephson, "‘Projects of the Century’ in Soviet History: Large-Scale Technologies from Lenin to Gorbachev."; Stewart, "Air and Water Problems Beyond the Urals."; *ibid.* Notorious examples from other regions of the USSR include Chernobyl (now in Ukraine), and the Aral Sea (bordered now by Uzbekistan and Kazakhstan, affected by developments in all the “-stans” of formerly Soviet Central Asia.

²³ Weiner, "Environmental Activism in the Soviet Context: A Social Analysis."; Burton, "Destalinization as Detoxification?: The Expert Debate on Industrial Toxins under Khrushchev."; Parthé, *Russian Village Prose: The Radiant Past*; F.R. Shtilmark, "The Evolution of Concepts About the Preservation of Nature in Soviet Literature," *Journal of the History of Biology* 25, no. 3 (1992); Diment and Slezkine, *Between Heaven and Hell: The Myth of Siberia in Russian Culture*.

²⁴ {Josephson, 2013 #6260 @p216. This book is one of the few to attempt equal coverage of urban, industrial, and agricultural environments, emphasizing political and economic factors over cultural and scientific aspects. See their section “What is Environmental History in this Book,” pp6-8.

²⁵ One of the few works that might be considered an urban environmental history is Josephson, *An Environmental History of Russia.*, which tries to include some of everything.

is usually lumped together with the, largely negative, role of “planners” and “planning” as a whole.²⁶ Urban planning and municipal service organizations, if mentioned in these histories, are often side-lined as ineffective in controlling emissions.²⁷ The professionals and community organizations involved in urban greening, meanwhile are dismissed as Douglas Weiner does, as “curious footnotes to the great sweep of Russian and Soviet conservation history” important only insofar as their “trivial” and “cosmetic” banality afforded camouflage for the true scientist-subversives.²⁸ The provision of greenspace within cities is subsumed to questions of city’s relationship to “the environment” of nature-out-there, as when the index redirects from “urban greenspace” to “city greenbelt.”²⁹ The absence or backgrounding in Soviet environmental history of the full range of ‘green construction’ expert’s engagement with society-nature relations does not extend, however, to the trees that were the objects of those experts’ efforts.

Setting aside histories of Soviet forestry, trees are frequent, if quiet, partners in expressions of Soviet environmental concern. To give five examples, moving from more recent to less as I do here, is to barely skim the surface of trees’ presence in Soviet environmental discourse. Still, it indicates the lay of the land. First, as quoted by John Massey Stewart, the “Taimyr Green Front” declared in a perestroika-era press release that

Northern industrial concerns using outmoded technology have been transformed into 'factories of death'. **Millions of hectares of northern forests have perished**; fish have disappeared from murky waterways; deer have been decimated by fatal maladies. The remaining representatives of some [small northern] nationalities are poised on the edge of extinction.³⁰ (emphasis added)

²⁶ From Feshbach and Friendly Jr., *Ecocide in the USSR: Health and Nature under Seige.*, an oft-quoted slogan of the Stalinist “war on nature”: “Stalinist planning justified itself with a forthright slogan: ‘We cannot expect charity from nature. We must tear it from her.’ Nature existed to be exploited, to be wrested into submission.” [p43]

²⁷ {Josephson, 2013 #6260 @p216-28: “More serious for public health, a tendency toward urban concentration of industries emerged with a vengeance at the end of the 1950s that had serious consequences for the public. Soviet planners managed to situate apartments and factories near one another because of both the lack of zoning laws and their hope of keeping commuting times and costs to a minimum. This led to high levels of exposure to industrial chemicals for workers at work and for workers and their families at home. [...] Finally, in response to the pernicious pattern of putting industry and housing side by side, the expansion of industry was forbidden in the Moscow region and thirty-four other large cities... Ministries and state and city authorities nonetheless continued to favor this practice. Urban leaders were well aware of environmental degradation but only had recourse to diagnostic measures, not therapeutic ones.”

²⁸ Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 79-80. Weiner’s dismissal is in itself sweeping. With regard to the 1948 formation of two Green Plantings societies, he states: “A local Moscow society, DOSOM (the Voluntary Society for the Greening of the City of Moscow), was formed as well. DOSOM and the All-Russian Society for the Promotion and Protection of Urban Green Plantings (VOSSOGZN) would be curious footnotes to the great sweep of Russian and Soviet conservation history were it not for just those qualities that made them seem platitudinous and banal. When the heavy hand of state repression once again was raised against VOOP [the All-Union Nature Protection Society], Makarov’s strategy of protective coloration called for a merger with those conformist societies: the subversive VOOP core would be shielded and disguised by the patriotic and trivial veneer of urban greening.”

²⁹ Pryde, *Environmental Management in the Soviet Union*, 314.

³⁰ Stewart, “Air and Water Problems Beyond the Urals,” p227 (fn16). The two sources Massey lists are both from 1990, it is not clear from which this quote came. The Taimyr peninsula is home to Noril’sk, infamous as one of the most polluted places on

Forests come first in this roll call of the dead, disappeared or dying, then food animals, then people. Presumably, the crafters of this declaration wished to draw attention to the effects of the “outmoded technology” onto other areas of the economy; it is left unclear whether the nationalities mentioned are threatened by direct health impacts or by hunger. (Of course, the answer would be both).

Not everyone was so utilitarian in their rhetoric. Another example of trees co-starring in a litany of Soviet ecological problems comes from a book typically identified as the first alarm regarding pollution levels and extent: Ze’ev Wolfson’s 1978 work, published abroad under the pseudonym Boris Komarov as *The Destruction of Nature in the Soviet Union*.³¹ “Major ecological problems in the Soviet Union began with [Lake] Baikal, but unfortunately they will not end with the lake. . . .” Instead, Wolfson identified the problem as being much broader, more conceptual, with trees again at the center:

‘The blue orb of Siberia’ has become a symbol of hundreds of Russian lakes and rivers being ruined by pollution, **a symbol of the smoke-filled sky suffocating forests and people**, a symbol of perishing nature.³²

While the symbolic and agitational power of Lake Baikal came from its ability to serve as the land-form equivalent of ‘charismatic megafauna,’ standing in for all other lakes and water pollution, here “forests and people” are presented as equal victims of air pollution.

At other moments, it was a unique forest, through connection to a unique notable person, that stood as a symbol of threatened or lost identity and could therefore garner attention. As described in *An Environmental History of Russia* (2013), “on several occasions between the 1960s and 1980s,” a “lethal brew” of smoke and chemicals blew from a Moscow-based combine toward the famously forested estate of the famous writer Leo or Lev Tolstoy, Yasnaia Poliana—

earth. The city remains closed to foreigners, with some restrictions on travel by Russian citizen non-residents. On Soviet Norilsk, see Andrew R. Bond, "Urban Planning and Design in the Soviet North: The Noril'sk Experience (Climate Impact)," *Soviet Geography: Review & Translation* 25, no. 3 (1984); "Air Pollution in Noril'sk: A Soviet Worst Case?," *Soviet Geography: Review and Translation, N.Y* 25, no. 9 (1984); "Noril'sk, Profile of a Soviet Arctic Development Project." Boris Revich notes that efforts in environmental epidemiology (i.e. investigations into human health) in Northern industrial cities such as Norilsk were hindered in part “by the migration of the population into other regions.” [...] In northern cities, as in other parts of Russia, no computer databases exist, and this seriously hampers analytical epidemiologic research. Furthermore, the secrecy of data in this sphere hindered the exchange of information, and even professionals have hitherto been unfamiliar with the results of many studies.” "Public Health and Ambient Air Pollution in Arctic and Subarctic Cities of Russia," *The Science of the Total Environment* 160/161 (1995). Trees, for obvious reasons, experienced lower levels of regional out-migration, and their urban demographics were a database readable by all.

³¹ Boris Komarov [Zeev Wolfson], *The Destruction of Nature in the Soviet Union* (White Plains, N.Y., 1980); Originally Boris Komarov, *Unichtozhenie Prirody: Obostrenie Ekologicheskogo Krizisa V SSSR* (Frankfurt/Main: Posev, 1978).

³² As quoted in Feshbach and Friendly Jr., *Ecocide in the USSR: Health and Nature under Siege*, 45, fn71. citing p16 in Boris Komarov, *The Destruction of Nature in the Soviet Union* (White Plains, N.Y.: M. E. Sharpe, 1980).

literally, “Bright Glade.” Large stands of trees were killed. Decrees against the pollution were issued but ignored until, in 1985, writer Yuri Bondarev raised the issue at the 1985 Soviet Writers’ Congress.³³ A 1972 account by another early chronicler of Soviet environmental pollution, Marshall Goldman, gives additional details of the same conflict between industry and the estate’s famous trees:

At Yasnaya Polyana, Tolstoy’s old country home, a similar penchant for construction has led to **the near destruction of a historic and treasured forest**. In 1955 a coal gasification plant called Shchekino was built about a mile from the estate. [...] As soon as the plans [to add a urea plant to the complex] were known, the people at Yasnaya Polyana began to protest that the fumes from **the factory would harm the vegetation** on the estate.³⁴ [emphasis added]

The people were initially reassured that no harm would be done, but “[s]hortly after the urea plant went into operation, however, the people at Yasnaya Polyana noticed that their famous pine forest was dying. After more protests, a special commission was established...” For Marshall and the authors of *An Environmental History*, this incident demonstrates the repeated, habitual prioritization of engineers, technocracy, and industrial production targets over environmental consequences, even at the most sacred sites of cultural heritage.

In both accounts, the effects of the toxins on the trees was the precipitating cause for human protest. We cannot know whether “the people at Yasnaya Polyana” were motivated purely by concern for the vegetation, or whether concerns for their own down-winder status played its part. What is clear from the historic record is that actual, symbolic, and anticipated harms to trees were considered sufficient grounds to protest official industrial processes, from the late 1950s through the early 1990s.

The last two examples of trees featuring in declarations of Soviet environmental concern also come from the early 1960s, not long after the RSFSR adopted the law “For the Protection of Nature” (October 27, 1960). The passing of relatively strict environmental laws that were extremely laxly enforced was, it should be recalled, a characteristic feature of Soviet environmental engagement.³⁵ One of the best known examples of Soviet environmental indifference, the pollution of Lake Baikal, was publicized in a famous essay by Vladimir Chivilikhin, “Svetloe Oko Sibir” (Siberia’s Luminous/Radiant/Bright Eye, the “blue orb” evoked

³³ Josephson, *An Environmental History of Russia*, pp218-19.

³⁴ Goldman, *The Spoils of Progress: Environmental Pollution in the Soviet Union*, pp62-63.

³⁵ According to Goldman, who reproduced in his appendices the full text of this and other similar laws, the 1960 law “spells out which resources are subject to control: land, mineral resources, water, forests, typical and rare landscapes, resort and green-belt areas, wild animal life, and the atmosphere.” *Ibid.*, 30-31.

above by Komarov [Wolfson]).³⁶ The overwhelming reader response to this “Siberia’s Bright Eye” essay boosted the issue of Lake Baikal’s future into public and high-level political spheres, much the way that the 1945 and 1947 essays by Leonid Leonov, Chivilikhin’s mentor, had done for urban greenery.³⁷

Already by this time, as previous chapters have shown, Soviet authorities put a great deal of effort into promoting a culture of popular responsibility for urban greenery, continuing efforts begun with the 1930s beautification campaigns.³⁸ These cues to care included, in professional literature, frequent exhortations that urban designers and greening specialists reach out “to the masses” and mobilize their labor to install, maintain, and protect urban green plantings.³⁹ The public experience of this campaign included interaction with posters urging viewers to maintain clean, green courtyards and other spaces, based in personal and political morality.

Children and youth were particular targets for enrollment, in particular those involved in the Pioneers or Komsomol, but also non-Party organizations such as the Moscow young naturalists society or local chapters of VOOP.⁴⁰ In school, such youth wrote essays on the theme of Russian landscape paintings and poetry, another durable linkage between landscape and patriotic norms.⁴¹ Outside of school, they might attend a Pioneers summer camp or House of Culture located “in nature,” or assist in the planting of a new park, such as one in Krasnoyarsk that doubled as a sanitary-protective zone separating the adjacent Television Factory from nearby residential blocks.⁴²

Amidst these campaigns to engage youth in participatory planting, Chivilikhin wrote his

³⁶ Originally published in *Oktiabr'* April 1963, republished in collections since then, including Chivilikhin, *Svetloe Oko Sibiri*, Moscow: Sovremennik, 1980. The history of this episode, particularly the involvement of the Siberian and Moscow-based scientific community is discussed in Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, ch16 “Storm over Baikal”, pp355-73. and by Paul Josephson, *New Atlantis Revisited*, ch5 “Siberian Scientists and the Engineers of Nature” pp163–203. Josephson notes that “... the Baikal and diversion disputes marked a turning point in Soviet history. For the first time since the 1930s a major political dispute was played out in public.”

³⁷ As discussed in Chapter Four on postwar Moscow.

³⁸ Qualls, *From Ruins to Reconstruction: Urban Identity in Soviet Sevastopol after World War II*; DeHaan, *Stalinist City Planning: Professionals, Performance, and Power*; Conterio, “Inventing the Subtropics: An Environmental History of Sochi, 1929-36.”

³⁹ Examples include G.V. Krylov, *Ozelenenie goroda Novosibirska i naseleennykh punktov oblasti*. Akademiia Nauk Souza SSR-Zapadno-Sibirskii Filial Botanicheskii Sad, 1948; G.G. Shkulov, *Ozelenenie goroda Omska*. Moscow: izd. MinKomKhoz RSFSR, 1958; L. Leonov, 1945, 1947. See quotes referenced in footnotes 115, 120.

⁴⁰ Weiner argues that VOOP initially enrolled “juridicial members” such as factories and schools in order to boost membership on paper and raise dues, at least initially. Regardless of the scientific quality of their activities, it seems that participation was actual and meaningful for many of the children involved—shaping a generation that grew up to be the *druzhiny* and environmental activists of the late Soviet period.

⁴¹ Sartorti, “Pictures at an Exhibition: Russian Land in a Global World.”

⁴² Image from KKKM

own archipelago statement, declaring that the planting of trees and flowers in Siberian cities represented “small islands of good relations with nature” albeit islands floating in a “sea of evil.”⁴³ For Weiner, this statement signals Chivilikhin’s “ambivalence” to urbanization, a point in his journey from “Soviet patriot” to Russian nationalist.⁴⁴ In the opening chapter of this dissertation, this passage was used to indicate the systematic, Siberia-wide, character of urban greening and forest-preservation work, linking Krasnoyarsk to other cities new and old like Novosibirsk, Angarsk, and Akademgorodok.

I now offer a third interpretation, taking into focus the temporal context of Chivilikhin’s statement. In 1962 he asked: “Does the introduction of such good things as electricity and residential blocks obligatorily have to be accompanied by the crushing of the flowers? Must industrial beauty replace natural beauty?” He then offered examples of desirable synthesis, instances of flowers and natural beauty being planted or preserved amidst urban and industrial settings. Around those islands of good, the “sea of evil” was a slaughterhouse of trees:

The taiga is currently felled at an unprecedented tempo, on a horrifically grand scale. And it cannot be avoided— after all, the country needs millions of cubic meters of lumber every day. But the felling... is conducted unsystematically, exhaustively, wastefully, without looking back and without looking ahead.⁴⁵

Chivilikhin’s turning away from optimism for city-nature fusion came after this statement, when “as a result of the bruising struggle over Kedrograd” he began in the 1970s to disentangle “the two not always compatible ideologies of soviet patriotism and Russian nationalism.”⁴⁶

Chivilikhin’s evolving writings show a personal trajectory from his 1960s advocacy of nature transformation to his assumption, in the late 1970s and 1980s, of a leading role in

⁴³ “Why then in the squares of Novosibirsk do they plant each spring the seeds of the amazing taiga flower—the *kandyk*? Why then were the people of Krasnoyarsk able to preserve a large tract of ‘wild’ taiga forest right in the middle of their city? Why haven’t they leveled the taiga, then, in Angarsk and Akademgorodok, but instead integrated their residential areas into it? All of that, however, amounts to a few small islands of good relations with nature in a sea of evil.” Chivilikhin, “Mesiats v Kedrograde,” p13-14 in *Svetloe Oko*, Moscow: Sovremennik, 1980

⁴⁴ Weiner, *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 334. Referencing a later 1970s work, Weiner comments that “In another work Chivilikhin’s antiurban feelings were more explicit, as he quoted Le Corbusier’s observation that “cities were dangerous and unworthy machines for life in our epoch.” Indeed, Chivilikhin himself added, “the specter of urbanization hangs like a black shadow on the horizon.” Chivilikhin, “Shvedskie ostanovki,” p579 in *Izbrannoe: V dvukh tomakh*, 2:451–589. Moscow: Molodaia gvardiia, 1978.

⁴⁵ From Chivilikhin, “Mesiats v Kedrograde,” p13-14 in *Svetloe Oko*, Moscow: Sovremennik, 1980 [note that this is a compilation. Original essay written in 1962] Quoted, minus the sentence on Novosibirsk, in *Ibid.*, 338. Note 109 as being on p39.

⁴⁶ *Ibid.*, 334. Kedrograd was an experimental forestry project, located in the Altai highlands south of Krasnoyarsk, organized out of the Leningrad Forest Technical Institute (LFTI). See Weiner chapter in *Shades of Green Weiner, “Environmental Activism in the Soviet Context: A Social Analysis.”* LFTI was one of the educational centers where specialists in green construction were trained, and a center of post-Soviet Russian Landscape Architecture. More recently they have acted as co-hosts of the “Global Landscape Architecture” or GALA conference in St. Petersburg.

Russian-nationalist environmentalism.⁴⁷ Like other writers associated with the Village Prose movement, Chivilikhin was an “otherwise average Soviet subject [pushed] into environmental activism [by] the sense that their environmental "homeland" was being destroyed and that the system on its own would not stop it.”⁴⁸ Where those writers idealized the village, Chivilikhin idealized forests, seeing them as the essential formative environment of the Russian ethnic character. As Weiner describes:

The forest, for Chivilikhin, was the key to the survival of the Russian people during the years of Mongol-Tatar rule. Only forested Rus' preserved the pure genotype of the Russian people and their cultural heritage. Vladimir Chivilikhin was the "writer-intercessor . . . sent by the Siberian forests to plead the case for living nature.”⁴⁹

Chivilikhin, in his own words, put it more plainly: “The Russian people have never lived without forests and can never do so.”⁵⁰ In this he joined a deep tradition of Russian identification with treed landscapes, traceable in politics, literature, and art.

A discourse of linkage between trees and humans, forests and society, landscape and nation can be found throughout human history, with well-documented variations in tsarist and early Soviet Russia.⁵¹ In the Soviet Union, particularly after Stalin’s death ended the protection of certain category forests, alarms about deforestation were tied to concern over the supposedly threatened national character and heritage. These concerns were voiced initially in the arena of *publistika*, or current events prose, then fed into the mid-1960s emergence of the Village Prose writers.⁵² What if we reconsider Chivilikhin’s “islands of good” characterization of Siberian urban developments, this time including urban trees as another kind of forest? If a tree falls in the

⁴⁷ Weiner: “Chivilikhin's ideological odyssey was repeated by Fatei Shipunov and resembled the attitudes of Soloukhin, Rasputin, Viktor Astaf'ev, Proskurin, Shukshin, and a host of others. These represented a new set of social actors—journalists, writers, foresters, engineers, and other ordinary people—distinct from the "lost tribe" of ecologists, botanists, zoologists, and geographers who were still fighting on behalf of "pristine" nature and the *zapovednik* ideal. This new group was composed of upwardly mobile beneficiaries of the system who had conformed but who felt disillusioned and betrayed. *A Little Corner of Freedom: Russian Nature Protection from Stalin to Gorbachev*, 338-39. In footnote 113, Weiner cites “I khram, i masterskaia!” (Iz besedy za 'Kruglym stolom' v redaktsii *Literaturnoi gazety*), in Chivilikhin, *Zhit glavnym*, 232-33.”

⁴⁸ Ibid.

⁴⁹ Weiner continues: “The natural environment creates what, poetically, we call the soul of the people and in reality determines the salient characteristics of national culture. In preserving our traditional natural environment the people can count on preserving their creative originality. A writer as far back as Nikolai Leskov said it—the Russian character is impossible to imagine without [Russia's] expanses of forest.”[95] From Ibid., 335. footnote 95: “Quoted, Kazarkin, "Pamiat'," 162.

⁵⁰ Quoted by Weiner from A.Kazarkin, “Pamiat’ —Ekologüia kul’tury k 60-letiiu V. Chivilikhina” *Sibirskie Ogni* 3 (1988): 156–62.)

⁵¹ Bonhomme, *Forests, Peasants, and Revolutionaries: Forest Conservation and Organization in Soviet Russia, 1917-1929*; Brain, *Song of the Forest: Russian Forestry and Stalinist Environmentalism, 1905-1953*; Costlow, *Heart-Pine Russia: Walking and Writing the Nineteenth-Century Forest*.

⁵² Gillespie, *Valentin Rasputin and Soviet Russian Village Prose*; Parthé, *Russian Village Prose: The Radiant Past*; Shtilmark, “The Evolution of Concepts About the Preservation of Nature in Soviet Literature.” See also Shneidman, “Soviet Prose in the 1970's: Evolution or Stagnation?.”

distant forest, it is a topic for philosophers and nature protectionists. When all the trees fell in all the Soviet cities, they fell into the arena of greening mobilization rhetoric: “an affair for all our hands, comrades.”

Urban greening was a joint enrollment of urban residents and urban plantings in the project of constructing—or cultivating—communism. In the course of mobilizing various human constituencies in support of trees, the social and cultural status of trees was reinforced, drawing on a long tradition in Russian elite and popular culture.⁵³ The personification and agency attributed to greenery trees in particular can be seen in the use of the phrase “our green friend” to refer to trees. Describing trees as “green friends” was not new to the 1960s. Prominent uses in the postwar period included Leonid Leonov’s 1947 article in *Izvestiia*, the main Soviet governmental mouthpiece, entitled “In Defense of a Friend,” (discussed in Chapter Four.)⁵⁴ In 1948, thanks in large part to Leonov’s public advocacy, the All-Russian Society for the Promotion and Protection of Urban Green Plantings (VOSSOGZN) had its charter approved by the RSFSR Council of Ministers and the Central Committee in Moscow. This society, sometimes referred to as the Green Friends Society, merged in 1953 with the natural scientists of the All-Union Society for the Protection of Nature (VOOP). The new hybrid organization had a suitably hybrid name: the All-Russian Society for the Promotion of the Protection of Nature and the Greening of Population Centers. Chapters were similarly approved for cities across Soviet Russia, including very industrial cities like Krasnoyarsk.⁵⁵

The rhetoric of tree friendship, like the membership of VOSSOGZN, was durable and geographically widespread. In Krasnoyarsk, author and city official E. S. Nifant’ev used the term to head a 1953 essay “About the Green Friend” in the journal *Yenisei*.⁵⁶ In this piece, Nifantiev argued that local species of trees including spruce and pines would improve the city’s sense of

⁵³ Sartorti, "Pictures at an Exhibition: Russian Land in a Global World." On the use of trees and greenery to mobilize settler colonialization of Central Asia in the tsarist period, see also Keating, "'There Are Few Plants, but They Are Growing, and Quickly': Foliage and the Aesthetics of Landscape in Russian Central Asia, 1854–1914."

⁵⁴ Leonov was a premiated Soviet writer who was deeply involved with environmental issues, including urban greening. In addition to his best known novel, *Russkii Les (The Russian Forest)* which focused on the plight of forests far from cities, Leonov also wrote the foreword to the 1954 book *Factory-Garden [Zavod-sad]*, discussed in chapter 3, about the greening of the Kalibr Instrumentation Factory in Moscow.

⁵⁵ See GAKK 1974: In honor of VOOP's 50th anniversary, Leninskii District / Rob4 fond R-2085 op.1 del.291 na 84L: 3.XII.1974. Compare to fond P-17 op.1 del1661 na36list <23>: Exhibit "Stolby" 1952

⁵⁶ Evgenii Sergeevich Nifantev, *Gorod Na Enisee* (Krasnoyarsk: Krasnoiarskoe knizhnoe izd-vo, 1954); *Gorod Na Enisee* (Krasnoyarsk: Krasnoiarsk Kn. izd-vo, 1973).

place, confer streets “rigor and splendor,” and complement architectural elements in creating the desired visual and spatial effects.⁵⁷ The contested political character of city greening was underscored that same year in newspaper articles calling for greater investment in the city and its public spaces. Residents of Krasnoyarsk, proclaimed one headline, request that the City Council [Gorispolkom] give “more care for the Center of the Krai,” i.e. Krasnoyarsk. The city

is dressed in green finery. On the streets of the Krai center are hewn out squares, lawns, flowers are planted. But the ‘green friend’ has some non-friends [foes, *nedrugii*] in the city...⁵⁸

Such references to green friends and dressed-up cities socialized and personified urban green plantings.⁵⁹ They marked trees in socialist cities in particular as eligible for the same moral, political, and material support as socialist citizens. Chivilikhin’s praise for Krasnoyarsk and other examples he gives of Siberian city-nature imbrication suggest a pattern of recognition at the time that trees in cities and trees in nature were equally environmentalist concerns. Moreover, his use of specifically Siberian examples, followed by his and other Russian nationalists’ celebration of Siberia and its forests as the essence of Russian national authenticity, suggests the special significance of urban greening in Siberia.

Chivilikhin’s concern over the “unsystematic, exhaustive and wasteful” felling of the taiga coincided with the early edge of concern across the globe about deforestation due to acid rain and atmospheric pollution. Within the Soviet Union, concern over urban air pollution had been made a object of professional attention as early as the 1930s, when Kharkhiv, Ukraine hosted the

⁵⁷ Nifant’ev, E.S. “O zelenom druze” *Yenisei*, kn.11 (1953): p179. In this essay, Nifant’ev expresses in short succession the importance of correct species selection for creating proper sense of place and specifically Stalinist urban atmospherics: “Needled species help to link urban green plantings with the surrounding forest masses, which include spruce and pines. The use in street greening of needled trees interspersed with leafy trees gives streets rigor and splendor [*strogost’ i paradnost’*]. The character of the tree crowns and slimmess [*stroinost’* - shapeliness?] of needled species complement the architecture of the built environment, especially low-rise development, which demands verticals for the silhouette of the street.” Note that “verticals... silhouette” oriented urbanism is a hallmark of Stalinist citybuilding, whereas the horizontal and holistic “system” of a city were emphasized under Khrushchev and after. Papernyi, *Architecture in the Age of Stalin: Culture Two*.

⁵⁸ The letters to the paper published below this heading accused by name the directors of the green trest and of the “Locomotive” Stadium of damaging saplings and neglect in watering. One letter closes with a veiled threat: “Why doesn’t the city executive committee (Gorispolkom) apply stricter punishments to them and their ilk?” *Gazeta Krasnoyarskii Rabochii*, 13 June 1953, no138.

⁵⁹ see also, from Krasnoyarsk, G. Terskikh, “Krasnoyarsku – zelenyi nariad” *Gazeta Krasnoyarskii Rabochii* 30 March, 1967; and, via CDSP, “Cities’ Green Shield.-Why Are Parks of Culture and Recreation Being Created at Such a Slow Rate?” (By Candidate of Architecture L. Lunts. Pravda, Nov. 4, 1980: p. 6. 1,200 words. Condensed text:) Other works include N. Dergachev, “The City’s Green Finery” in Problems and Opinions, *Izvestiia* September 7, 1975 (also from CDSP); A. Grodzinsky, “City’s Green Shield” *Pravda* Oct. 21, 1975 (via CDSP). Note the alternation between greenery as “decoration” and greenery as “defender.” Dergachev begins by noting that “It is no longer necessary to convince people that we need to preserve natural green landscapes as much as possible when building cities. Local Soviet executive committees are also devoting a great deal of attention to the creation of man-made wooded belts, parks, tree-lined drives, etc. ¶ Conifers are one of the main types of trees being planted in Gomel Province. At the same time, special attention is given to preserving natural coniferous tracts...” Conifers are preferred over deciduous species, he states, due in large part to their year-round benefits. “Besides,” he continues “the problem of ridding the air of harmful substances was not as urgent then as it is now.”

first All-Union Conference on Air Pollution Control in April 1935.⁶⁰ Of the Stalin period, Josephson et al state that “there are no data available to assess the level of environmental pollution in Soviet cities,” but “we can indirectly gauge the extent of the problem through a series of Soviet publications.”⁶¹ An alternative source of data did exist and was identified at the time, however, bringing us to the fifth example of trees’ “speaking up” and otherwise participating in Soviet environmental protest.

In 1945, there was only one air-measuring station in Moscow, in Gorky Park. Another was added in 1947.⁶² In 1948 the Council of Ministers of the USSR issued a decree regulating air pollution in Moscow, and in 1949 they created the Chief Sanitary Epidemiological Administration these were followed in 1951 by standards “for maximum permissible concentration” of various heavy metals and other pollutants in the air of cities.⁶³ Goldman, drawing from a mid-1960s Soviet source, describes a process by which Soviet municipal authorities measured air pollution, not in the end-of-tailpipe monitoring preferred by Western actors,⁶⁴ but in terms of how environmental conditions affected the health and growth of some Moscow residents.

By resourceful use of data recorded for other purposes, air pollution officials have been able to ascertain that Moscow’s air quality began to deteriorate significantly, with the advent of the Five-Year Plans in 1930. By going back to the records compiled since 1870, naturalists were able to compare the average growth of pine trees during the years before 1930 with the growth since that time.⁶⁵ **Pine trees are particularly susceptible to sulfur oxides in the air, and so pine tree growth can serve as an index of air quality.** Records of such trees in Izmailovskii Park in the eastern part of Moscow were grouped by age and their average growth over a ten-year period of time were charted.

[...] Although not as severe, the same tendency has been noted in other less intensely industrialized areas of the city.⁶⁶

⁶⁰ Josephson, *An Environmental History of Russia*, 90-91.. The subsequent establishment of “Stalin’s epidemiology service” i.e. a special corps of urban sanitary inspectors led to investigations and standards, issued in 1947, regarding the exclusion zones recommended for five threat classes of industrial enterprises. The prohibitions “were not followed.” No mention is made here of urbanist’s specific reactions and recommendations with respect to industrial pollution during the 1930s, although the authors do note the basic principle: “Socialist cities, so the utopian version went, would be greener than capitalist cities, with more open space and parks. Indeed, Soviet cities have extensive green spaces. Second, public transportation would be more extensive...” (p87). On 1930s and 1940s developments the authors cite N.F. Izmerov, *Control of Air Pollution in the USSR* (Geneva: World Health Organization, 1973)

⁶¹ *Ibid.*, 89.

⁶² Goldman, *The Spoils of Progress: Environmental Pollution in the Soviet Union*, 122. citing Sokolovskii et al. 1965, p7

⁶³ *Ibid.*, 122-5.

⁶⁴ Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*.

⁶⁵ Here Goldman cites Sokolovskii et al. 1965, p74

⁶⁶ Goldman, *The Spoils of Progress: Environmental Pollution in the Soviet Union*, 123-4., citing Sokolovskii p77. In this section Goldman also cites Nuttonson 1970a, p20 and p13-14 – in descriptions of air pollution in Moscow and other large cities, specifically an “article published in 1964 by two specialists from the Forestry Laboratory of Gosplan.” cf M.Y. Nuttonson, ed., (1970a) *The Susceptibility or Resistance to Gas and Smoke of Various Arboreal Species Grown Under Diverse Environmental Conditions in a Number of Industrial Regions of the Soviet Union*. AICE Survey of USSR Air Pollution Literature. Silver Spring, Md.: American Institute of Crop Ecology, vol.3 Also included in Goldman’s bibliography are volume 1, (1969a) *Atmospheric*

The residents whose health problems and growth delays were pine trees. According to Goldman, trees in this region were “particularly affected” because of the spatial distribution of urban industrial enterprises: “industry in Moscow tends to be most heavily concentrated in the northeast and southeast parts of the city and the prevailing wind comes from the west and southwest.”⁶⁷

Goldman does not go into why the pine trees existed in such an industrial section of the city, nor why their growth would have been measured since the 1870s. His account makes it seem a lucky accident that “resourceful use of data recorded for other purposes” was able to document and quantify historical air pollution levels, rendering them legible to officials in the 1960s. What Goldman overlooks is the intentional, rather than incidental, co-location of urban forests and factories. As the preceding chapters of this dissertation have sought to show, those pine trees were there on purpose. We therefore turn now to consider how greening specialists interpreted the state of their field in the early 1960s. At the same time as Chivilikhin wrote alarums in *Komsomolskaia Pravda* and similar publications regarding the state of Soviet forestry, specialists in greening wrote in professional and popular journals regarding the state of Soviet urban green plantings, i.e., the urban forests. We therefore turn now to consider how greening specialists interpreted the state of their field, and their trees, in the early 1960s.

A Most Important Task for Science

In the late 1950s, experts involved in urban greening campaign began to publish statements of alarm and caution. The trees and other green plantings that comprised the sanitary-protective buffers around factories and infused the everyday residential environment of the *mikroraion* seemed to be in need of protection themselves. Research on the “growth and development of individual [separate] tree species in various soils in street plantings, and in the squares, boulevards, gardens and parks of Moscow,” had been conducted beginning in 1954—the year after the merger of VOOP with the urban green plantings protection society—to 1957. The findings, along with a census of tree health in other cities at the same time, documented “mass

and Meteorological Aspects of Air Pollution; volume 2 (1969b) *Effects and Symptoms of Air Pollutes on Vegetation: Resistance and Susceptibility of Different Plant Species in Various Habitats in Relation to Plant Utilization for Shelter Belts and as Biological Indicators*, and volume 4, (1970b) *Meteorological and Chemical Aspects of Air Pollution: Propagation and Dispersal of Air Pollutants in a Number of Areas in the Soviet Union*.

⁶⁷ Ibid., 124.

processes of premature weakness and death [*otmiraniia*] of plantings.” Concerned experts drawn from the biological sciences cautioned: “the reasons [for this mass die-off] need to be identified and prevented, is a most important task for science, without which it will be impossible to solve the problems of greening overall.”⁶⁸

The need for continued research on tree health and mortality was voiced by, among others, Lev Osipovich Mashinskii. Mashinskii was a *kandidat* in biological sciences and leader of the Greening Section of the Institute of Citybuilding of the Academy of Construction and Architecture [ASiA] of the USSR.⁶⁹ He was also a faculty member of the Moscow State University of Forestry.⁷⁰ In articles and conference presentations published in the early 1960s, Mashinskii laid out arguments that asserted the importance of urban greening even as he noted the vulnerabilities (and mortality) of the constituent trees.

Contemporary city building theory and practice is grounded in the fact that the development of a system of green plantings with diverse functional designations is an inalienable element of the city.⁷¹

Urban greening, to Mashinskii, was necessarily systemic, multi-valent, and indivisible from urban design-planning as a field.

After quoting Khrushchev's comments in the 22nd Party Congress speech regarding “green cities, garden cities” urbanism in full, Mashinskii cautioned that “the problem of distributing cities amidst healthy natural surroundings cannot be fulfilled solely by means of including green plantings amidst urban buildings [*v gorodskuiu zastroiku*].” First, there was a problem with the “demographics” of the green friends. Whereas trees in cities and parks (for instance those around Leningrad) historically lived to hundreds of years, contemporary trees were perishing prematurely.

This phenomenon, which in earlier periods might have been attributed to wrecker-pests, official apathy or popular hooliganism, was blamed in 1963 on the character of the urban environment.

⁶⁸ L.O. Mashinskii, L. O. "Gorod i Priroda (Gorodskie zelenye nasazhdeniia)" [City and Nature: Urban Green Plantings] in *Problemy Sovetskogo Gradostroitel'stvo* [Problems in Soviet Citybuilding], no14 (March, on *Ozelenenie*), pp3–44: quote on p3. (Published by ACiA SSSR and the Institute of Citybuilding and Regional Planning; collected in December 1962 and published in March of 1963, Print run 1700.). For other (similar) publications by Mashinskii see the bibliography.

⁶⁹ I have looked but not found a reliable biographical or career history of Mashinskii. He may also have worked at the Moscow Institute of Communal Economy [*Kommunalnoe Khoziastvo*]. His other publications include Mashinskii, A. [sic] “Osnovnye voprosy zelenogo stroitel'stva naselennykh mest” in Gosplan SSSR, *Rekonstruktsiia Gorodov SSSR 1933–1937*, Volume I. pp 176–200 Edited by N. Ushakov. Moscow: Izdat. Standartizatsiia i Ratsionalizatsiia, 1933 (This chapter is cited in a 1951 book, *Ozelenenie Gorodov*, by L.O. Mashinskii as being by “L.O.” not “A.” Mashinskii.); See bibliography for additional works.

⁷⁰ According to MGUL website, “engineer of green construction” specialty was established by SovNarKom/CPSU decree in 1931. The specialty of “greening” specialties established in 1945(LGLT) and 1948 (MGUL).

⁷¹ Mashinskii “Gorod i Priroda” 1963: 3

Urban “ecological” conditions, noted Mashinskii, are significantly different from “true” ones in which wood plants developed and formed. “Airborn smoke and dust, less light, soil that lacks nutrients and is spoiled with construction refuse—these affect negatively the growth and development of trees.”⁷² The premature mortality of existing urban trees in urban conditions interferes with their hygienic-sanitary functionality. If they perish at 40-50 years old, it is “in the very period, when they just begin to give increased [*naivysshii*] decorative and “greening” effect [*ozelenitel’nyi effekt*].” The resulting average age of trees—less than 25 years—lowers both their decorative value and their active role in the improvement of microclimate of cities, and increases the costs for state municipal management [*khoziastvo*].⁷³

The problem was not limited to established plantings, or historical cities. Siberian cities and new towns such as Novosibirsk, Cheliabinsk, and Angarsk followed a similar pattern. According to Mashinskii, “here too at a significant scale the premature mortality of plantings [is observed].” Notably, Siberian cities such as these were sites of the largest urban and demographic growth the USSR had experienced. The growth of these boomtowns was fueled in large part by relatively youthful populations, e.g. demobilized soldiers, and Komsomol volunteers—those whose childhood coincided with a period of official outreach and nature propaganda efforts in schools.

In Novosibirsk, where a majority of forest masses were in “a stage of intense die-off”, Mashinskii noted that “6 million trees and shrubs were planted” in the last five years, “enough to establish up to 2000 hectares of green masses—however, only 50 hectares were established, as for the most part the planting material was used to replace deceased trees.”⁷⁴ In another example of urban industrial pollution from the Urals region, Mashinskii gives 1959 figures on the factor by which air-borne concentrations of sulfuric gas, carbon monoxide, and “dust” measured by the Cheliabinsk Urban Sanitary-Epidemiological Station exceeded the allowable sanitary norms. Returning to the trees, he describes their death as another kind of filter failure:

Harmful emissions so heavily pollute the air that, not infrequently, there are difficulties in establishing green sanitary-protective zones in close proximity to the sources of atmospheric pollution. For example, in the district of the paint and varnish and zinc factories in Cheliabinsk, more than one attempt to install [*vysadit’*] green plantings did not give positive results, as the planted trees and shrubs quickly died from burns. Such a situation is also

⁷² Ibid.

⁷³ Ibid.

⁷⁴ Mashinskii “Gorod i Priroda” 1963: 3-4

characteristic of other major industrial cities.⁷⁵

These large-scale instances are accompanied by statistical tables of the observed levels of chlorine compounds, sulfuric gas, and other industrial outputs in an unnamed urban setting, based on research by the Central "Erisman" Scientific-Research Institute.⁷⁶ "The pollution of the urban air basin has a most direct impact on the acceleration of the dying off [*otmiraniia*] of urban plantings," he concluded.⁷⁷

Who is to blame?

Mashinskii identified two basic categories that cause the observed weakness and mortality of urban trees: "below-ground factors" affecting the root system,⁷⁸ and "above-ground factors" such as smoke, dust, diseases, pests, and lack of care.⁷⁹ Protecting trees required eliminating these factors by means of mitigating their effects, rather than stopping the emissions. Improvements would come about "by means of rational *agrotekhnika*, cleansing the urban air basin from smokiness and dust, intentional spatial-planning, improved care for plantings, creation of soil-protective plantings, and so forth."⁸⁰ Here again plants were characterized as agents capable of protecting soils, even as they themselves require increased care and protection from harmful urban soil and air conditions. Air pollution, in particular, was identified unequivocally as "the most immediate influence accelerating the die-off of urban plantings."⁸¹

Mashinskii's various writings on the subject followed a consistent structure. After

⁷⁵ Ibid.: p5 Additional research is cited from the Academy of Communal Economy [AkKomKhoz], and examples given from Leningrad and Moscow.

⁷⁶ Mashinskii cites R.A. Babaiaants, *Zagriznenie gorodskogo vozdukha*, Moscow: Izd. AMN SSSR (The Soviet Academy of Medical Science), 1948. Babaiaants' research on the relative amount of sulfuric gas in milligrams per cubic meter of air: up to .011 "in clean places" and more than .8 in "strongly polluted" places. Concentrations vary by location within the categories as well. In one unnamed but heavily polluted industrial city, Babaiaants—who was also the editor responsibly for G.V. Sheleikovskii, *Zadymlenie gorodov*, 1949. / 234 pages. (Moskva : Izd-vo Ministerstva kommunal'nogo khoziaistva RSFSR)—measured airborne concentrations increasing in proximity to the source of pollution, from .025–.03 in "gardens and parks" to 1.07–1.52 mg/m³ in "industrial blocks in the district of the chemical factories." The full transect is given as follows: Prigorod: 0.006 – 0.014; Gardens and parks: .025 – .03; Residential blocks far from industrial enterprises: .011 – 0.37; Res. blocks close to industries: .022 – .062; Industrial blocks: 0.035 – 0.085; Industrial blocks in the district of the chemical factories: to 1.07–1.52 mg/m³. Mashinskii, "Gorod i Priroda" 1963 p4.

⁷⁷ Mashinskii: "Gorod i Priroda" 1963, p4

⁷⁸ Ibid., discussed in more detail pages 6–14 in the section "Particularities [*osobennosti*] of urban soils" (acidity, mineral composition, depth and profile, construction wastes, moisture and retention, frost levels) and 15–20 "Particularities of the spatial planning of territories of urban green plantings" (which focuses on the linkage between user density and soil compaction in parks and other urban green spaces).

⁷⁹ Ibid., Discussed pp4–6 in the section "Pollution of the Air Basin of Cities" [*Zagriznenie vozdushnogo basseina gorodov*]

⁸⁰ Ibid., p4

⁸¹ Ibid.

identifying and quantifying an urban environmental hazard—almost always originating in industrial production, less often as a side-effect of housing construction—he locates the effect of that hazard in plants. The effect of urban industrial pollution on humans, the other visibly prominent long-lived resident of cities, was implied but not detailed. At times, Mashinskii connected the industrial pollution that threatened plant health to the question of human living conditions, the preferred Soviet metric for quality of life.⁸²

In a given year, each hectare of soil in territories proximate to major factories is regularly infiltrated by hundreds of kilograms of sulfuric acid, presenting one of the greatest threats for plantings. As a result, the air basin of contemporary cities, in particular industrial ones, is strongly polluted with harmful impurities including sulfuric gases, which strongly worsens the living conditions of the population.⁸³

It is worth taking time to consider the structural logic of this passage. Soil pollution from sulfuric acid poses a threat to plantings located near factories. As a result of those plantings' die-off, air quality worsens for the air basin of the city as a whole. The polluted air worsens the living conditions, not the living bodies, of the population. A causal connection between human health and industrial air pollution is implied, but not stated directly. Instead, the chain of evidence connecting industrial emissions to human mortality is camouflaged and mediated by non-human biota. Green plantings comprised or were found in the sanitary-protective zone around a factory because the “norms and standards” of Soviet urbanism required them to be.

What is to be Done?

Even as Mashinskii described issues that would affect growing conditions for urban plantings in general, and trees in particular, he crafted an argument that all greenery is not the same. Not all sites are equally affected by the “urban” conditions, a point that preserves a role for spatial planners seeking to protect and strengthen their green friends. Mashinskii highlighted research that shows that “mature trees are usually more gas-tolerant than young ones.” Trees growing in groups or *massifs*, similarly, “are harmed [by atmospheric pollution] significantly less than those growing in open parcels.”

These statements align with two preferences of Soviet design in the post-Stalin era. First, there was a general preference for mature trees, whether transplanted from wild-grown locations

⁸² Distinction should be observed between “living conditions” and “standard of living” See Filtzer, “Standard of Living Vs Quality of Life.”

⁸³ Mashinskii “Gorod i Priroda” 1963 p4.

or from nurseries. Second, Khrushchev's renunciation of the ensemble approach to architecture had, somewhat contradictorily, been accompanied by an embrace of planted ensembles. Massed clumps of trees and shrubs were now preferred to the more formal and linear treatment of city greening that had dominated Soviet praxis prior to 1954/55.

Other factors affecting the health and mortality of trees were also presented in relationship to the changing design and spatial norms of de-Stalinization. Specifically, the new focus on residential rather than street greening was presented as better for the trees. The higher temperatures found on city streets, in comparison to parks, were found to have "a negative effect on the growth of trees."⁸⁴ This was a rebuttal of the Stalin-era prioritization of linear boulevard plantings. Slightly better off were trees planted in the "singular conditions" found in the interior of residential blocks. There, "protected from cold and drying winds," obtained "special, more pleasant microclimatic conditions for the growth of plantings."

At the close of this section, Mashinskii—acknowledging that the negative influence of these factors "to some degree or another will continue"—urges architects and planners to wrest what gains they can from "new, progressive approaches to city building." Without naming the *mikroraion* per se, he asserts that "the clear division of city territory and municipal transportation arterials," with "free plan" development and the presence of "large areas of green plantings," will "undoubtedly contribute to the improvement of the ecological conditions of the growth of plantings."⁸⁵ The causal arrow has switched direction. Rather than urban trees improving city environmental conditions, better urban conditions and microclimate will make for better, healthier trees, ones that are better able to survive urban industrial conditions.

The special relationship of contemporary, progressive urban design to urban greening, and of both to quality of life and environmental health, was reiterated throughout Mashinskii's statements. Design professionals, it was emphasized, were responsible for crafting urban environments and spaces that would protect trees. The trees, in turn, were expected to "raise the level of urban comfort and beautification and contribute to the extension of human life."⁸⁶

Furthermore, Mashinskii emphasized the specificity of expertise that was needed to protect plantings in urban settings, in contrast to the forms of *agrotekhnika* [agro-techniques,

⁸⁴ Mashinskii, "Gorod i Priroda" 1963

⁸⁵ Mashinskii "Gorod i Priroda" 1963 p6

⁸⁶ Ibid., p3

agro-technology] used in food production and forestry. In the former case, the demands of crop cultivation excluded concern with sustained and long-term growth, a quality required of urban trees and, to a lesser extent, shrubs. In the case of forestry and lumber production, the environmental conditions faced by urban and forest trees precluded the transfer of practices developed for large-scale ex-urban tree cultivation and harvesting.⁸⁷ In making this point, Mashinskii may have been asserting the disciplinary specificity of urban greening, given that “green construction” [*zelenoe stroitel'stvo*] was taught as an engineering sub-field within schools of forestry such as the Moscow State University of Forests (MGUL) and the Leningrad State Forestry Institute (LGLI).⁸⁸

Tying Trees to Place

By the end of the Stalin era, specialists from a variety of fields had latched on to greening as a process and field of activity in which they could gain traction on multiple fronts, e.g., demonstrating their utility and expertise to the regime, reinforcing their connection to populist needs and values, and mitigating the hazards of urban industrial modernity through spatial and vegetal means— to the extent possible given how regulatory and technological measures were consistently delayed or unenforced. Cheap, popular, and self-sustaining, the production of communist environments through urban greening was expected to avoid the shortage of labor and materials that disrupted other projects of “building communism.” In their “patronage” [*sheftsvo*] of this ambitious agenda, experts in the central research and design institutes had the task of providing sufficient guidance for local professionals and employees of municipal or regional greening trust, who oversaw the planting of greenery within the centrally-designated norms and parameters. This process mirrored the architectural practice *priviazka*, or adapting a standardized plan to local conditions.⁸⁹ The difference was that green plants were expected, thanks to Lysenko, to adapt themselves, while being planted by non-expert enthusiasts and youth.

Specialist literature on design and planning in the USSR was dominated by practical

⁸⁷ Ibid., p43-44. This discussion follows a section in which Mashinskii discusses theories of “Extending the lives of woody plants” [pp20–23] including reference to the history of biological/genetical science, citing works by Michurin and Lysenko.

⁸⁸ According to MGUL website, “engineer of green construction” specialty was established by SovNarKom/CPSU decree in 1931. The specialty of “greening” specialties established in 1945(LGLT) and 1948 (MGUL).

⁸⁹ Crawford, “From Tractors to Territory: Socialist Urbanization through Standardization.”

handbooks produced by central authorities for use by local actors. Examination of these sources as a genre reveals some of the difficulties associated with the central planning model with respect to urban greening. Soviet greening and public health experts needed to establish guidelines "for the correct selection of sustainable [hardy] species of plants for various conditions of city greening and the development of optimal *agrotekhnika* [agricultural or horticultural techniques and technology] for their cultivation."⁹⁰ The recommended species lists would also be used by local greenhouses and nurseries to determine the kinds of plant material they needed to have available. While the logistical issues of such a system were challenge enough, failures in supply and implementation were compounded by a more basic problem. The expectations laid on trees in cities—to achieve diverse aesthetic, environmental, and political agenda—did not align.

In the textbooks and professional handbooks that linked these visions to actual construction projects and planting plans, greening experts faced a task familiar to any who worked with prototypical plans. The prototypes, abstracted and idealized as they generally were, had to be adapted to fit the sites.⁹¹ The onus on professional experts writing from the central design and planning research institutions was to make recommendations for which species should be planted where. These recommendations, if followed, would ensure proper fit between tree or shrub species, the hazards to be mitigated or effect to be achieved, and the landscape and climatic character of the place.

Along these lines Liubov Zaleskaia, a leading figure in Soviet landscape architecture from its early years, issued a challenge to the architectural community at the 1961 conference on Landscape Architecture.⁹² The USSR, she declared, "has the most diverse landscapes." Nevertheless, she maintained,

architects rarely study landscape specificity and produce designs by template [*po shablonu*]. We often spoil the landscape by incompetently distributing industrial enterprises, facilities, and buildings, without studying the specificity of each city's natural landscape. Architects apply an identical system of layout-plan to cities in the Siberian taiga, in the southern steppe area, and in the middle belt with its copses and meadows."⁹³

⁹⁰ Mashinskii "Gorod i Priroda" 1963 p43

⁹¹ "Adaptation for site" was recognized as a discharge of architectural duties/expertise worthy of recognition. See Slabukha, *Arkhitektory Prieniseiskoi Sibiri*; Crawford, "From Tractors to Territory: Socialist Urbanization through Standardization."

⁹² Discussed in the previous chapter. Zaleskaia was a professor at the Moscow Architectural Institute and editor of the 1963 volume in which the conference proceeds were published. See also Vronskaya, "Urbanist Landscape: Milita Prokhorova, Liubov' Zaleskaia, and the Emergence of Soviet Landscape Architecture".

⁹³ "Soveshchanie po landshaftnoi arkhitekture [Conference on Landscape Architecture]" *Arkhitektura SSSR* 1962:01 pp59–60 (no

Instead of treating the natural landscapes of all regions as interchangeable, Zalesskaia advocated giving attention to regional and environmental specificity. “Even as housing and urban expansion takes place via mass models,” she wrote, “the individual landscape specificity of cities must be considered, reflecting the diversity of landscapes in the USSR.”⁹⁴ Just as plantings were means of mitigating architectural monotony at the building or site scale, the urban uniformity of standardized spatial plans could be remedied through the use of locally-appropriate tree species.

A similar attention to environmental specificity was recommended at the scale of species selection. In part, these recommendations were based on cost considerations and predicted behavior; local trees theoretically required little or no special care, being already adapted for local conditions. For example, V. S. Grokhol’skaia, writing on “The Selection of Woody Plant Stocks for the Greening of Settlements,” made frequent reference to testing a species for hardiness “in urban conditions.”⁹⁵ For the most part, however, she focused on environmental and climatic factors: frost, moisture, light, soil depth and composition, and latitude.

These factors were relevant constraints for planting in the Far North and other regions of the USSR, including Siberia. “[I]n selecting an assortment of plans for the greening of cities,” advised Grokhol’skaia, “the first order focus should be on the use of local plant species, which are the best or most adapted to the conditions of the environs.” This position diverged from the Michurinist-Lysenkoist sentiment prominent in the previous period, which asserted that Soviet scientific intervention and discovery would assuredly lead to the frequent, successful, introduction of species into zones previously considered outside their range.⁹⁶

The textbooks and other professional reference works produced in the Central Scientific-Research Institutes of Moscow and Leningrad consistently identified the sanitary-hygienic basis as being fundamental to the Soviet pursuit of greening. This was the “indisputable” sanitary and microclimate ameliorative capacity of green plantings. Trees and shrubs, if planted in the appropriate locations, masses and types, were theorized to improve urban air quality, temperature

author given). Designing by template should not be confused with designing “according to model” [*po obratsu*], the latter being considered a desirable means of controlling quality and costs.

⁹⁴ Ibid. Quotes from Vlasov appear on p59, from Zalesskaia on p60.

⁹⁵ V. S. Grokhol’skaia, “The Selection of Woody Plant Stocks for the Greening of Settlements,” in *Problemy Sovetskogo Gradostroitel'stva* (1963)

⁹⁶ Regarding this notion of acclimatization and its “Michurnist” underpinnings, see S. Ia. Sokolov “Michurinskaia Biologiia i Zelenoe Stroitel'stvo” [Stenogram of report, read at the Session [Soveshchani] on Green Construction at the Botanical Institute im. V.L. Komarova at the Academy of Science of the USSR in December 1949]. *Trudy Botanicheskogo Instituta im. V.L. Komarova; Akademii Nauk Soiuza SSR*, v.1, 1950 [Series VI]: pp7–19.

regimes, humidity levels, and reduce urban noise. The performance of these expected functions took on greater urgency in a context of continued and increasing industrial production, especially given the consistent failure of regulatory and technological measures to control pollution.⁹⁷

Yet in order to meaningfully ameliorate urban environmental conditions using trees and other biota, certain pre-conditions had to be met. First, the trees had to actually exist in cities and industrial territories, in sufficient quantities. Urban specialists sought to ensure this presence by formulating norms and standards for urban greening: how many square meters of greening was needed per capita or per hectare, how to distribute it, etc. Necessary and sufficient quantities were, over time, increasingly measured relative to a spatial metric. Also influential was the concept of continuous greenery, comparable to an irrigation system, along which fresh air might “flow” from a greenbelt or adjacent undeveloped area into the very center of the city. As we have seen, changing theories of the optimal scale and distribution of urban greenery drove the evaluation and selection of the “free planning” or mixed system layout of the *mikroraion*.

Second, cities needed the right kind of green plantings, regardless of amount and placement. The specific kinds of trees, shrubs and other forms of urban greenery had to be physically able to provide the intended filtration and prophylactic services. Some of these services were more form- and leaf-dependent, such as catching dust or slowing winds; others were contingent on a tree’s physiological processes such as transpiration.⁹⁸ At a more basic level, however, specific trees and species had to survive in the environment that they were expected to improve.

Mashinskii used detailed comparative data to demonstrate how urban tree species suffered due to urban conditions, which differed in soil, air, and water quality from the conditions experienced by trees growing nearby in non-urban areas.⁹⁹ Guidance available for urban greening practitioners, however, often remained framed in regional terms.¹⁰⁰ The selection of plants according to region would have been an area of expertise seemingly easily

⁹⁷ See GAKK f R-1386 op.1 d.2090 on 263L: Protokol Zasedaniia VI sessii 7.VII.1962; f R-1386 op.1 d.3973 on 66L: Spravki po stroitel'stvu ochistnykh sooruzhenii... 1966-68gg.

⁹⁸ Mass urban greening was to be accomplished through the planting of trees, shrubs, lawns and flowers, but trees are emphasized both here and in the original sources, reflecting their consistent prominence as a Russian cultural and environmental touchstone.

⁹⁹ Mashinskii “Gorod i Priroda” 1963, p24–43 features multiple tables and comparative photographs of leaf size, branch and root structure based on the 1954–1957 research conducted in Moscow.

¹⁰⁰ E.g. V. S. Grokhol'skaia, writing on “The Selection of Woody Plant Stocks for the Greening of Settlements,” (1963 in *Problemy Sovetskogo Gradostroitel'stva*); E. Pomazkova, “Ozelenenie naselennykh mest Krainego Severa” chapter in *Landshaftnaia Arkhitektura: Sbornik Nauchnykh Trudov* [Landscape Architecture: Collection of Scholarly Works], edited by L.S. Zalesskaia, 1963. pp215-226. This pattern can be contrasted to the situation in the United States, where plants found in cities across the country are more similar to each other than to the native plant communities found in each region. Urban heat island effect, irrigation, and maintenance regimes create, in effect, their own urban climate.

controlled by architect-planners. Thanks to new, more detailed maps dividing the USSR into climate zones and sub-zones, architect-planners could claim a seemingly solid scientific base for region-specific planting choices. In contrast, the appropriate selection of gas-, smoke- and dust-hardy plant species required accurate knowledge of factory emission profiles and quantities.¹⁰¹ Even if appropriate species existed, the information necessary to make such selections would have been tightly controlled. Examples abound of the blurring of industrial details and locations. For instance, when specific quantities and consequences are discussed within Mashinskii's recounting of research by the medical institute, the location is typically unnamed, generalized, or foreign: e.g., "a major industrial city," "in the Urals region," London. Correspondingly, the regional guidance that was offered in species recommendation lists relied on broad categories, such as "Central Asia" or "the far North and Siberia."

A regional mis-match between research sites and implementation sites compounded the challenges of planning for urban industrial plantings. Documentation of the harmful effect of industrial emissions on plant health had centered on cities in the more temperate European section of the USSR, even as the bulk of urbanization and new town development occurred in Siberia and the Far East. Mashinskii cites research findings from Moscow, Leningrad, Kiev, Tashkent, Tallin, and Riga, all long-established capital cities in the West and South of the USSR.

Easier to reach than Novosibirsk or other cities in Siberia or the Urals, these cities had been the subject of significant research and applied experimentation in urban planning and greening. They were national centers of publishing, with considerable institutional presence. Many had been sites of interwar and postwar projects in the greening of factories and industrial territories. They would have been well-known case studies for the Soviet urban planners tasked with developing model and typical block layout plans. These cities and regions also featured relatively long growing seasons and milder temperatures. They were not, however, necessarily representative of the compound climatic and industrial challenges that greening specialists faced

¹⁰¹ V.S. Grokholskaia "O podbore assortimenta dresny'kh rastenii dlia ozeleneniia naseleennykh mest" in *Problemy Sovetskogo Gradostroitel'stvo* [Problems in Soviet Citybuilding], no14 (March 1963), 45–56 reviews three recent "regional" guides to plant species selection: the 1953 *Spravochnik [Handbook] on Decorative Trees and Shrubs of the European Section of the USSR* (MikKomKhoz RSFSR 1953); I.I. Kolesnikov, *Decorative Dendrology* (Gosstroizdat, 1960), and A.V. Gurskii, *Findings of the Introduction of Woody Plants in the USSR*, (Academy of Sciences, SSSR 1957), preferring the last of the three, which identified 9 regions, one of which (mixed forest and forest-steppe) being further divided into seven sub-districts. [p54] Soon thereafter, agricultural sciences *kandidat* I.I. Galaktionov put forth a much more detailed classification, comprising 76 districts [*raiony*] for green construction within the RSFSR. See "Raionirovanie territorii RSFSR dlia ozeleneniia gorodov i promyshlennykh tsentrov" pp8–31 in *Ozelenenie Gorodov: Nauchnye Trudy XXXIII* (November), Akademiia KomKhoz im. K.D. Pamfilova, Moscow, Leningrad 1964, print run 1200. (Galaktionov and A.V. Vu had published in 1964 and 1960 on the same topic, according to the Literature Cited section, p25.

in the rapidly growing new towns and city districts of Siberia.

Soviet greening specialists called optimistically for future fusion of city and locale. This synthetic ideal was to be made possible by means of urban forests that matched the species composition and "typical landscape" of the region. Such city-nature fusion would ultimately prove a stiff challenge. When 1960s Soviet urbanism is considered from an environmental perspective, it is clear that the balance of built and planted space tilted toward the vegetated at the very time when external factors combined to raise the stakes of urban greening. The challenges, and aspirations, of Khrushchëv's "green urbanism" were especially acute in Siberia, where post-Stalinist industrialization and New Town construction was concentrated.¹⁰² The dense knotting-together of climatic, industrial, and social pressures in Siberian cities created the perfect environment for the emergence of an oppositional environmental movement. By the mid- to late-1960s, one had emerged—centered, at least within Soviet Russia, in Siberia.¹⁰³

A lacework birch or a severe pine?

The contradictions between the various expectations and agency of a given species are readily apparent when the specific lists of trees recommended for use to achieve a given goal are examined. Consider, for instance, the following parameters placed on the selection of deciduous or evergreen tree species. One of the functions consistently attributed to urban green plantings by Soviet sources was their capacity to improve the urban "microclimate" by softening daily and seasonal fluctuations in temperature. In order to provide cooling shade in summer and admit pleasantly healthful sunlight in winter, said trees needed to be deciduous. Trees' intended role as structural filters of particulate matter similarly dictated a preference for deciduous species, the

¹⁰² Hausladen, *Siberian Urbanization since Stalin*.. The 1961 volume (#13) of *Problemy Sovetskogo Gradostroitel'stva* was dedicated to New Town construction, as was a 1964 United Nation Symposium, held in Moscow. See also A. Vysokovskii, "Stillborn Environments: the New Soviet Town of the 1960s and Urban Life in Russia Today" Kennan Institute Occasional Paper #261, Woodrow Wilson International Center for Scholars, Washington, D.C., 1995, translated by Peggy McNerny and Natasha Zanegina.

¹⁰³ Factors included regional industrialization (e.g. of Siberia), secretive military-industrial collaborations, a shift to chemical industries, as well as the pressures of the Cold War emphasis on daily life as ideologically-fraught metric of political-economic superiority. Zsuzsa Gille addresses the changing ideological confluence of production and pollution across the transition from metal to chemical industries in socialist Hungary Gille, *From the Cult of Waste to the Trash Heap of History: The Politics of Waste in Socialist and Postsocialist Hungary*.. For general treatment of Siberian development during the Soviet period, see Benson Bobrick, *East of the Sun: The Epic Conquest and Tragic History of Siberia* (New York: Poseidon Press, 1992), Diachronic_Popular. More focused on economic development and bounded in temporal perspective is Conolly, V. (1975) *Siberia Today and Tomorrow: A Study of Economic Resources, Problems and Achievements*. A more recent, and tendentious, account of the consequences of Siberian urban and industrial development is found in Hill and Gaddy, *The Siberian Curse: How Communist Planners Left Russia out in the Cold*.

leaves of which provided greater surface area than did needles.

Evergreen trees might be preferred, however, if judged on aesthetic and symbolic grounds. Their deep color and growth habit communicated “splendor and rigor,” qualities that were especially prized during the Stalinist period. Evergreen species were more visually appealing during long winters when their foliage was a welcome contrast to grey skies and snow; that same foliage would screen the grey buildings behind it, regardless of season. In Siberia, spruce, pine and fir trees were promoted as being more “of the place.”¹⁰⁴ Green plantings are expected to connect the city with its surrounding [natural] landscape terrain, thereby insuring that individual cities had a distinctive appearance or *oblik*, even as building types and site plans were increasingly standardized. Evergreen trees, however, are even less tolerant in general of atmospheric pollution and the rigors of urban life than are deciduous species, making them less desirable on environmental grounds. These incompatible parameters collided most acutely in post-war Siberia.

Given that Siberia was a primary area of urban growth and expansion of the Soviet Union’s industrial production capacity during the 1960s, and made up of climatic regions dominated by firs, birches and other species sensitive to airborne particulates, the collision in that region of the agendas and agencies of Soviet trees was almost inevitable. There were, as well, plenty of witnesses. The concentration of science and technology enterprises in the region meant that Siberia had a relatively high concentration of natural scientists, as at Akademgorodok outside of Novosibirsk. The regime’s interest in providing these valued specialists with the best living conditions meant, moreover, that the scientists lived and worked in built environments characterized by above average amounts of greenspace, planted with species intended to mimic and extend the local landscape plant communities. The state of those trees would have provided a directly observable natural experiment on phyto-remediation and plant mortality, one that was legible to the resident scientists if not to the average city-dweller.

Professionals involved in the centralized planning of urban greening sought to direct planting selection, like the spatial planning and use interventions previously discussed, from a

¹⁰⁴ Kazakovtsev, G.M. “K Voprosu Ozeleneniia Gorodov Sibiri” *Arkhitektura Sibiri*, Ezhegodnik Novosibirskogo Otdeleniia Soiza Sovetskikh Arkhitektorov, July 1951, pp65-80; Nifant’ev, E. *Gorod Na Enisee*. Krasnoyarsk: Krasnoiarskoe Knizhnoe izdatel'stvo, 1954; Nifant’ev, E.S. “O zelenom druze” *Yenisei*, kn.11 (1953): 176–179;

See also E. Pomazkova, “Ozelenenie naseleennykh mest Krainego Severa” 1963; Krylov, 1948 on Novosibirsk; Shkulov 1957, 1958 on Omsk.

distance.¹⁰⁵ Planners argued that the selection of specific species of trees and their origins/growth habits were significant issues, best decided by properly trained experts than left to the full discretion of local parties. The activity of planting, however, continued to be viewed as best accomplished by affectively- and politically motivated “volunteer” participants. In the era of the *mikroraion*, the organization of such voluntary activity centered on the home or school unit, rather than in the factory as had previously been the case during Stalinism.

As seen in this section, in the late 1950s and early 1960s planner-botanists increasingly recognized a) the vulnerability or reactivity of trees of many species to typical urban (industrial) conditions and b) the reactivity of trees to climatic and regional environmental conditions. Native tree advocacy thus had at least two driving motivations. First, the pragmatic concern that local species were more likely to survive and easier to acquire or propagate than exogenous species. Second, the ideologically-inflected concern that urban equality did not justify urban uniformity or monotony, meaning that cities should be distinguished by the planting of representative tree species.

Individual trees and species were infused with the symbolic function of representing local identity, while “urban” and “surrounding” forests were expected to merge. At the same time, the valence of trees shifted. From being protectors of environmental and public health, trees were publicly discussed as vulnerable beings in need of protection. Responsibility for that protection was theoretically shared by all human and institutional members of Soviet society, but fell particularly to local residents, especially youth. Their official moral and patriotic obligations were reinforced by another kind of self interest; shared public spaces such as *mikroraion* gardens were, after all, an extension of home and sites of community socializing.

The trees recommended for use in the mid-1960s— the period of emergence for Soviet mass environmentalism—were local species that were historically able to thrive in the regions of their nativity. When such trees failed to thrive, the experts identified industry and urbanization, not wreckers or hooligans, as the primary threat endangering the health and well-being of the urban trees. At fault would have been the central initiatives that failed to properly plan for their installation and protect their environment and the central prioritization of industrial development targets.

¹⁰⁵ The concept of architectural standardization and *priviazka* are developed by Crawford, "From Tractors to Territory: Socialist Urbanization through Standardization."

Green Victim, Green Voice

The Soviet pattern of referring to trees as “green friends” in need of attention, care, defense, and love from the populace may seem banal at first, a simple reiteration of the Soviet bargain in which the masses exchanged loyalty and participation for amenities and living conditions. More careful consideration to the content and context of these statements reveals a different, darker side, that became more apparent with time. Once city greening became the state’s business, tree death became the state’s problem.

In 1980, for instance, the editors of the Soviet periodical *Housing and Municipal Services* (*Zhilishchnoe i kommunalnoe khoziaistvo*) published an open letter in *Pravda* entitled “Grow a Tree! A plea for more attention.”¹⁰⁶ The piece began by rehearsing with the hygienic-environmental credentials of urban greenery. It reiterated the by-now familiar position that “the planting of greenery is the least expensive and most effective method of improving air quality.” The socio-political credentials of Soviet city plantings were asserted next, as highly visible signals of political and economic difference between capitalist and communist daily life and environments:

Soviet urban development without landscaping is inconceivable. It is considered normal for landscaped areas to account for up to one-half of a city's territory. The creation of gardens, parks and sanitary-protective zones around industrial enterprises, the re-cultivation of worked-out open cut mines and the improvement of land covered by dumps and spoil banks have become the state's business in our country.

The scale of this work is huge...¹⁰⁷

Enumeration of the finances allocated, hectares occupied, and trees and shrubs “set out” each year followed.

This quantitative and recognizably Soviet discourse soon shifts, however, as the authors turned their attention to problems to be addressed. “Planting a tree is only half of the job,” they caution. “The main thing is to grow it.” In such discourse, it was specifically in their misfortune that trees become humanized:

“But planting a tree still is only half of the job. The main thing is to grow it. Unfortunately, the number of plants set out and the number that have "matured" are not even approximately equal. Large numbers of trees and shrubs die "in infancy," while in many cases areas sown to

¹⁰⁶ A translation of the condensed text appears in the Current Digest of the Soviet Press (CDSP) as “Grow a Tree! Urban Landscaping: A Plea for More Attention” *Pravda*, Aug. 31, p. 3. By the editors of the magazine *Zhilishchnoye i kommunalnoye khoziaistvo* [Housing and Municipal Services], writing as a *Pravda* collective correspondent <http://dlib.eastview.com.proxy.lib.umich.edu/browse/doc/13626824> *The Current Digest of the Russian Press*, No. 35, Vol.32, October 01, 1980, page(s): 10-16. I have not compared the condensed English-language translation of this text to its original.

¹⁰⁷ *Ibid.*

grass never become lush lawns. The statistics can't be denied..."¹⁰⁸

This language of personified trees—seen here dying “in infancy” before reaching “maturity”—continued a long tradition of greening advocacy couched in metaphors of trees as vulnerable youth, wounded veterans, helpful adults and elders to be respected.¹⁰⁹ The green friends, trees, were indeed functioning as a form of proxy, but not for politics. Or not only for politics. Instead, urban green trees stand in for urban people, and the promised concern of the state for their welfare.

The offered responses to tree mortality and risk usually included interventions in political and regulatory structures. Mashinskii, after documenting the challenges faced by urban trees, recommended sticking the course with regard to tree placement in large masses and adherence to the *mikroraion* free-planned model. Drastic changes in urban morphology were rare, much changes in less industrial production outputs which were controlled by powerful Ministries and set by economic not city or regional planners. The official rhetoric of tree vulnerability could thus be read as making a standard bid for institutional power more emotionally and politically compelling, but little else.¹¹⁰ When such statements are evaluated from the perspective of environmental health and hygiene, recognizing that trees were seen as reliable indices of urban pollution levels by scientists, and as necessary elements of national character by patriots, the concern on both sides for the cause of urban greenery makes more sense.

The agency of plants and planners

There may not have been, as Burton notes, a “fully developed public sphere” in which to debate the question of human health versus industrial production and substances in the USSR, as Rachel Carson and her contemporaries did in the USA. What there was, however, was an abundant public realm of linked urban green spaces. Urban greenspace, and the practice of greening functioned as a contact zone in which professional, political, scientific and cultural agendas interacted with mass experience and attitudes. This dissertation has shown how the

¹⁰⁸ Ibid. “...The increase in green area is less than one-fourth of the area on which plantings have been made.”

¹⁰⁹ Examples of this discussed in chapter Three with respect to the *Vecherniaia Moskva* 1945 and 1947 newspaper articles by Leonid Leonov and others.

¹¹⁰ The 1980 article by *Housing and Municipal Services* editors (see footnotes 106-113) advises greater consolidation of official responsibility: “Why is this happening? Not because of a shortage of organizations and departments handling the planting of greenery, in any case. [...] Unfortunately, our “green friend” in fact has no one reliable, solicitous master. In many cities, saplings and seedlings are grown by one organization, set out by another, and cared for by a third. ...”

discourse and practice of urban greening evolved over time, bundling together Russian patriotism with trees, trees to health, and urban greenspace to national landscapes. These bundled linkages created structures of association which allowed the public discussion over tree mortality to function as also a proxy debate over human mortality, health, and morality.

Given the variety of pressing demands placed on urban greenery in the mass-housing era, and particularly in Siberia, what was a tree to do? The trees did not cleanse urban “air basins” of industrial smoke, dust, and gases as intended. Nor did their presence produce “green cities, garden cities,” suffused with the combined best qualities of nature, urbanism, and affluent communist modernity. Instead, the trees demonstrated a classic form of agency: dissent. In cities across the USSR, but particularly in the Siberian postwar boomtowns, they weakened and perished en masse. For all the potent ideological capacity of greening and the pragmatic/professional struggles to implement the vision of a “Green/Garden City” amidst the economic pressures and contradictions of post-Stalinist urbanism, the forests intended to beautify and mitigate the effects of urban industry functioned instead to publicly broadcast the failures of the system.

Unlike sick people, who could be moved or hidden, urban trees were immobile. Their health was legible to all even if the mechanisms and statistics of impact were censored.¹¹¹ At the same time, thanks to decades of official cues, the general public was able, even expected, to defend their green friends against perceived threats. Ordinary citizens and experts alike might express opposition to industrial impacts “for the sake of the trees,” despite the context of information control in which the human health costs of industrialization and Soviet daily life could not be discussed as publicly or antagonistically.

It would take additional research on institutional and popular linkages between nature protection, public health concerns, and urban greening and beautification efforts to demonstrate conclusively how Khrushchev-era mass greening evolved into the late Soviet mass environmental protest movement. In particular, what impact was made by the institutional unification of forestry and greening at places such as the Leningrad Forest Technical Institute? What interactions occurred between urbanists and naturalists in the All-Union Society for the

¹¹¹ The trade-offs between public information control and scholarly knowledge production are discussed by Brown, *Plutopia: Nuclear Families, Atomic Cities, and the Great Soviet and American Plutonium Disasters*. with regard to Soviet epidemiological research into the multi-generational human health impacts of chronic nuclear exposure. See also Burton, "Destalinization as Detoxification?: The Expert Debate on Industrial Toxins under Khrushchev."

Protection of Nature and the Greening of Settlements, between 1953 and 1961, when it reverted to the Society for the Protection of Nature?

Conclusions

Retrospective and contemporary critiques of Soviet urban landscapes have complained about the monotony and paucity of planted species. The trees meant to mitigate architectural monotony ended up adding to the “placelessness” of Soviet and post-Soviet environments, a situation identifiable for instance in the city-wide use of *topol’* [poplar] trees in Krasnoyarsk and many other Soviet cities regardless of region. - There were simply too few trees that fit all the parameters of what was expected, therefore the same species were planted on all the streets (and all the cities).¹¹² The hierarchy of needs that eventually pertained to city trees valued what might today be termed ecosystem services—oxygenation, shade and coolth, filtration capacity—over aesthetics. The use of fast-growing “weed” trees such as poplars achieved the desirable hygienic and environmental effect, although at the cost of visual and regional character.

These are trees that, being planted all at once by mass ‘volunteer’ labor, have all reached an age of infirmity at the same time, creating as a result a post-Soviet urban tree-scape of stumps. The presence of even these less desirable trees, however, read with attention to the “cues to care” instilled over the decades of Soviet and post-Soviet greening, can be read as a means of saving space for a brighter future. As soon as the ever-promised scrubbers were actually installed on factory smokestacks, the poplars could be replaced with more appropriate and charismatic species. In the meantime, poplars had been shown “to give off ...almost 600% more oxygen than fir trees.”¹¹³ The continued popular enthusiasm for the Soviet urban model of expansive openspace, with its nationalist underpinnings, speaks to the durability and long-term influence of Soviet urbanists’ pursuit of cities, awash in greenery.

¹¹² See, for instance, complaints made by L.B. Lunts in “City Planning: City’s Green Finery” *Pravda*, Jan. 30 1976, p. 3. 1,100 words. Abstract published in *The Current Digest of the Russian Press*, No. 4, Vol.28, February 25, 1976, page 20.) “Careful selection of trees is essential to effective landscape architecture. It has been demonstrated, for example, that lindens give off 150% more oxygen than fir trees, oaks 350% more, and poplars almost 600% more. ¶ The shade factor should also be taken into account. The shade of lindens and chestnuts is twice as dense as that of ash trees and white acacia. Health is another important aspect of the problem. Trees should be selected on the basis of how efficiently they absorb impurities in the air. ¶ Depending on its size, a city should have eight to 24 sq. m. of landscaping per person in its public parks, squares and boulevards, and 11 to 19 sq.m. in residential areas.” This newspaper article appears to be one of Lunt’s last published comments, I have not been able to find a date of death for him. At this time he is identified as “docent at the V. V. Kuibyshev Moscow Construction Engineering Institute.”

¹¹³ *Ibid.*

In the preceding chapter, I asserted that the physical and spatial instantiation of Khrushchev's "green city, garden city" vision in the form of the *mikroraion* was shaped by the bundled aspirations associated with urban greening. Urban specialists and other authorities asserted consistently that trees and other city greenery afforded hygienic, social, and political benefits and were, as such, "inalienable" elements of the socialist city environment.¹¹⁴ Similarly, the perceived necessity of enrolling broad swaths of the population, and especially children, remained part of the package of greening policy from the Stalinist era to the post-Soviet.¹¹⁵

This basic principle of applied greening was expressed, for instance, with respect to the Siberian city of Novosibirsk, using quotes from Academician Komarov:

Having brought themselves unfading glory in feats at the front and in the rear, our heroic people-victor [*geroicheskii narod-pobeditel'*] wants to live in the best, most beautiful, most healthy conditions." [...] The reduction in costs of greening work and the mass attraction to the work of greening by the whole population holds great meaning for the wide implementation of greening. A large role must be played by schools, pioneer *otriady* and Komsomol organizations, taking on patronage over greening of settlement sites and the protection of green plantings. **The task of all of society is to inculcate among the population caring, loving relations to green plantings, fruit gardens, flowerbeds. The more greenery, the healthier and happier will be our lives.**"

Ten years later, a profile of greening in neighboring Omsk ended with the same basic call to mass popular engagement: "In conclusion it is necessary to say, that it is only with the active help [*pomoshchi*] of party and Soviet communities that the workers of green management can count on success in greening in any city of our Union."¹¹⁶

Trees mattered to the how and what of building "mass" communism that Khrushchev instigated in the late 1950s and early 1960s—an ideology continued by Leonid Brezhnev and subsequent leaders with few changes to fundamental principles of the *mikroraion* / urban greening). The trees and other plants that were collectively enrolled in the new "distributed domestic" daily environments of the Khrushchevian city had two areas of agency. First, they acted as an over-determined material index registering the progress and distinctive character of Socialist urbanism. Second, they acted as a means to the end vision of modern communist urbanism. The success of the "garden city, green city" model became a proxy for the agenda of building communism, a ideological ambition then being physically constructed in the booming

¹¹⁴ E.g. in G.V. Krylov, *Ozelenenie goroda Novosibirska*, (1948) p11, citing the 1st August 1938 Party and State directive "*Ob ustroistve nas. mest RSFSR*" which declares greening to be a "*neot'emlemaia chast'*" of the socialistic construction of settlements.

¹¹⁵ *Ibid.*, p56. The phrasing used is "*vospitat' sredi nas berezhnoe liubovnoe otnoshenie k zelenym nasazhdeniiam*"

¹¹⁶ Shkulov, *Ozelenenie goroda Omska*, 1958: p40

new towns and industrial centers of Siberia. As such, the articulation by Soviet greening experts of when, where, and which trees to plant effected a host of unexpected consequences.

Trees exercised a different agency than expected, however, in the context of Siberian industrial urbanism—succumbing to rather than surmounting the challenges of the task. The death or stunted growth of the urban trees necessary to materialize the Soviet agenda of city greening would have been one more technical, professional problem of implementation—if it weren't for the decades of effort by Soviet authorities to make the general population feel and act responsible for those trees. Furthermore, because of the emphasis placed on trees as symbols of local identity and socialist superiority, and the casting of local residents as their protectors, the tensions that arose when centrally-directed industrial production damaged local tree health contributed to the growth in the 1960s of a Siberia-based environmental movement. It is Soviet environmentalism's prior bundling together with urban greening that helps explain the degree to which the Soviet government and Communist Party supported or tolerated the movement.

In hindsight it is clear that the Soviet commitment to urban greening—massive in scale, by the masses, for the masses—formed an unsustainable assemblage of agendas and pressures. After the 22nd Party Congress of 1961, the volume, visibility, ideological resonance, and pragmatic difficulties of urban greening increased simultaneously, with no clear mechanism in place for resolving the increasingly obvious contradictions between the multiple agendas associated with greening. The urban green plantings proved unable to function as proscribed by architect-planners and communal hygiene experts. When the trees died, failed to thrive, or otherwise acted outside their planned-for functions, there were far-reaching environmental and political consequences. The urbanist ideal of city-nature fusion and the pragmatics of “our green friend” mobilization, when combined with the trigger of urban and non-urban tree death, helped transformed the previously elite phenomena of scientific and cultural nature appreciation into a mass environmental movement. Put another way, the "noble cause" of urban greenery could not long exist as both a political symbol and an object of participatory responsibility without there being consequences for the third leg of the triangle: the relationship between the populace and the political system. Urban greening was a knotted bundle linking these poles.

Images

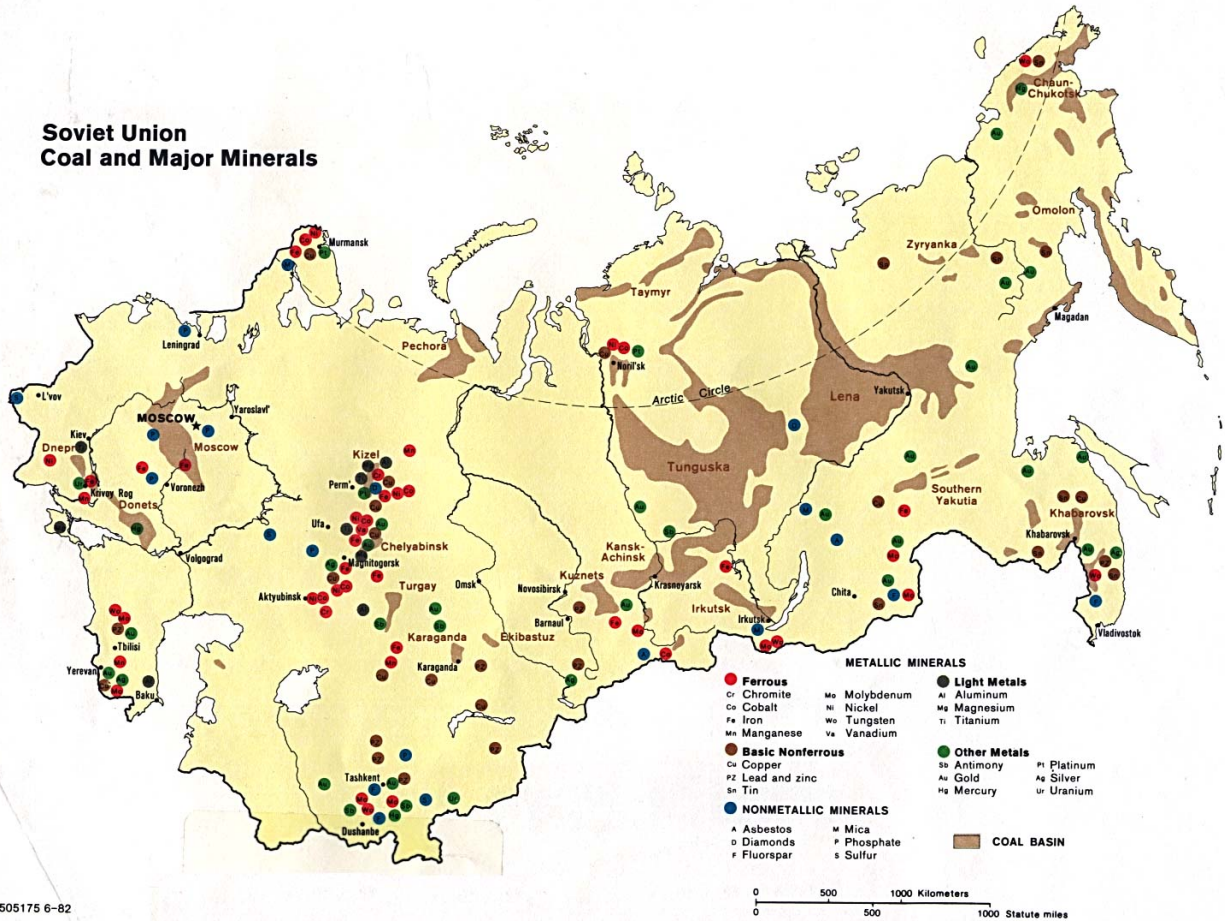
Figure 32. Russia: Key Environmental Problem Areas



Map 7.1 Russia: Key Environmental Problem Areas, from 1996 Handbook of International Economic Statistics¹¹⁷

¹¹⁷ Courtesy of the University of Texas Libraries, The University of Texas at Austin. Perry-Castañeda Library Map Collection. Accessed 1/2019 at https://legacy.lib.utexas.edu/maps/commonwealth/russian_env96.jpg

**Soviet Union
Coal and Major Minerals**



505175 6-82

Map 7.2 Soviet Union: Coal and Major Minerals, 1982¹¹⁸

¹¹⁸ Courtesy of the University of Texas Libraries, The University of Texas at Austin. Perry-Castañeda Library Map Collection. Accessed 1/2019 at https://legacy.lib.utexas.edu/maps/commonwealth/soviet_coal_82.jpg



Figure 7.2 Soviet motivational poster: "Let's improve our home town!" 1959¹²⁰

Full text of poster, 53.5 x 73cm:

"Let's beautify [improve the amenities of] our home town! / Kalinintsy! Work on city beautification no less than three days per person" (Kalinintsy = residents of Kalinin)

¹²⁰ Included in "Soviet ecological posters" collection by Skyfall, self-described "patriot of the city Almaty" (<https://yvision.kz/post/384588>). Date from a Russian auction house website <http://www.gelos.ru/2010/august/13.08/karti.shtml>



Figure 7.3 Soviet poster "Clean Air for the Cities"¹²¹



Figure 7.4 Latvian forest-protection poster "Do not let the nature go"⁵

¹²¹ from "Soviet ecological posters" collected by Skyfall (@SKYFALL) <https://yvision.kz/post/384588>



Figure 7.5 Soviet or Russian Tree-protection Poster "Caution!" Unknown date.



Figure 7.6 Soviet Belarussian poster: "Greenery for the New Buildings" 1973¹²²

¹²² Included in collection of "ecological posters" at <http://greenbelarus.info/articles/02-04-2018/belaruski-ekalagichny-plakat-ad-1950-h-da-2018-ga>. 1973, author U.Ia. Krukouski.



Figure 7.7 Soviet motivational poster "Glory to Country, with your labor!" 1976¹²³

¹²³ Artist M.V.Luk'ianov. Produced for exhibit. Included in Mikhailova, T.V. *Moskovskie Plakatisty*. Moscow: Sov. khudozhnik, 1982.

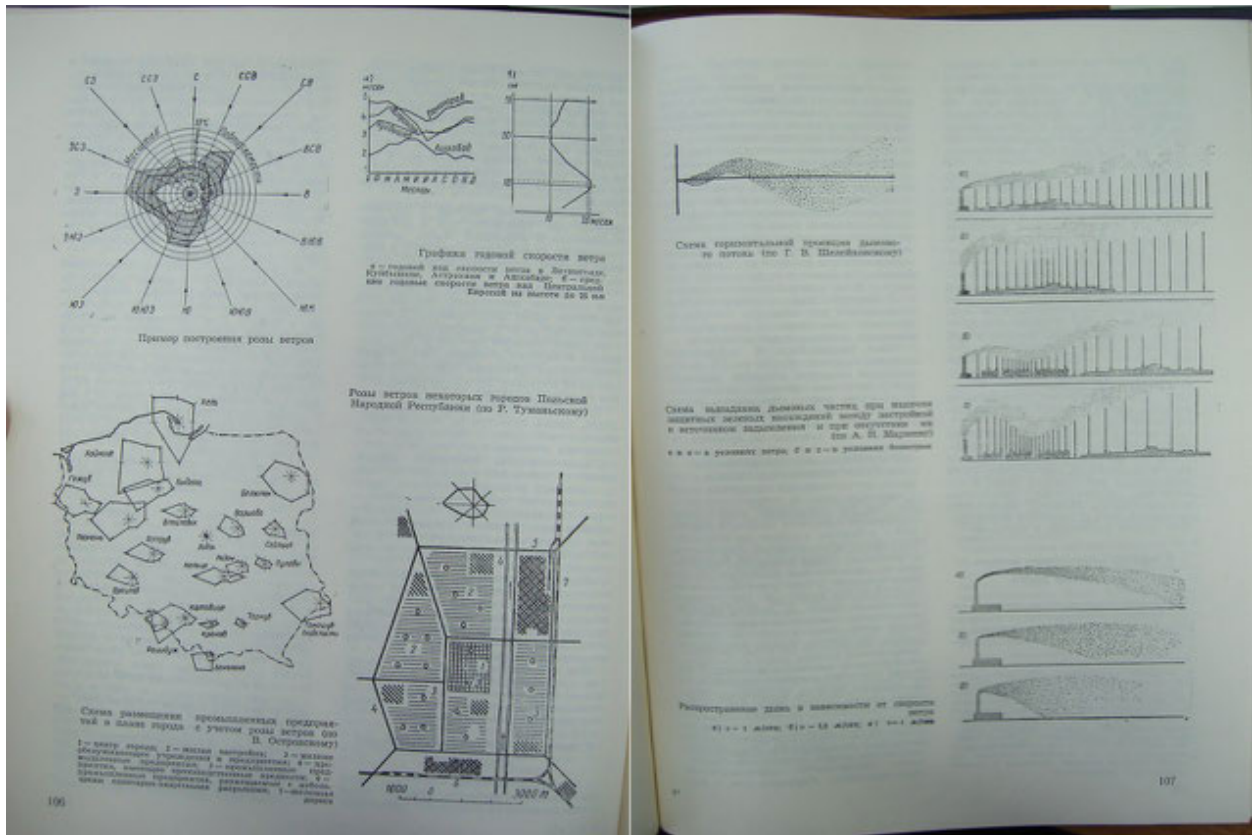


Figure 7.8 Pages from *Industrial Enterprises in Cities*, 1965 by Ivan S. Nikolaev showing spatial and functional relationships of cities, factories, and greenery.¹²⁴

Diagrams on left page, clockwise from top left: example of building a wind-rose, graphic of annual wind speeds, a wind rose for some cities in the Polish People's Republic, *skhema* showing distribution of industrial facilities within a city including the wind rose for each.



Diagrams on right page, top left: Diagram of the horizontal projection of a smoke sourceflow; Top right: diagrams of the fall-out of smoke particulates with and without a protective green planting belt between development and the source of smoke, in windy and windless conditions. Bottom right: distribution of smoke depending on windspeed in meters/second.

At left: cover with iconographic images of industry, trees and residential architecture.

¹²⁴ Nikolaev, Ivan S. *Promyshlennyye Predpriiatiia V Gorodakh; Razmeshchenie, Planirovka, Blagoustroistvo*. Dopushcheno V Kachestve Uchebnogo Posobiia Dlia Studentov Arkhitekturnykh Vuzov I Fakul'tetov, Moscow: Izd-vo lit-ry po stroitel'stvu, 1965

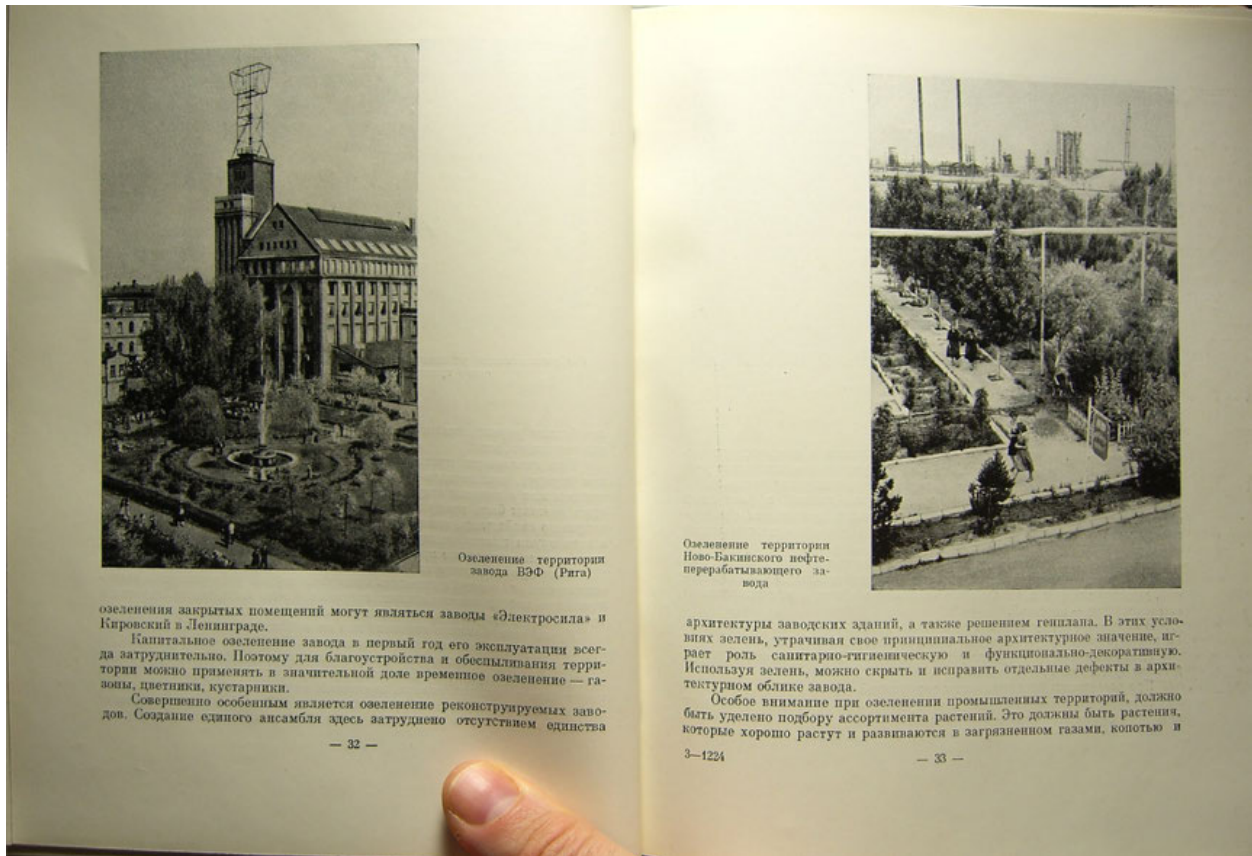


Figure 7.9 Pages showing the greening of factory territories, from 1963 *Landshaftnaia Arkhitektura* volume¹²⁵

Photograph on Left: “Greening of the territory of the VEF factory, Riga”

Photograph on Right: “Greening of the territory of the Novo-Bakinskii Gas Works Factory”

¹²⁵ M. Bolotova, and T. Kashintseva, “Ozelenenie promyshlennykh territorii goroda (The Greening of Urban Industrial Territories)” pp25-36 in *Landshaftnaia Arkhitektura: Sbornik Statei*, edited by L.S. Zalesskaia, 1963



Figure 7.10 Pages from 1962 article "The Praxis of Greening Industrial Enterprises" by A. Kovalev, showing Kalibr Factory grounds¹²⁶

- Photographs Top Left: Milling Machine Factory, Gorki
- Bottom Left: "Kalibr" Factory in Moscow, Entry
- Top Right: "Kalibr" Factory, Heroes' Allée
- Bottom Right: "Kalibr" Factory, Factory Garden [Zavodskii Sad]

¹²⁶ A. Kovalev, "Praktika ozelenenie promyshlennykh predpriatii [Praxis of Greening Industrial Enterprises]" *Arkhitektura SSSR*, no3 (1962): 36-40.

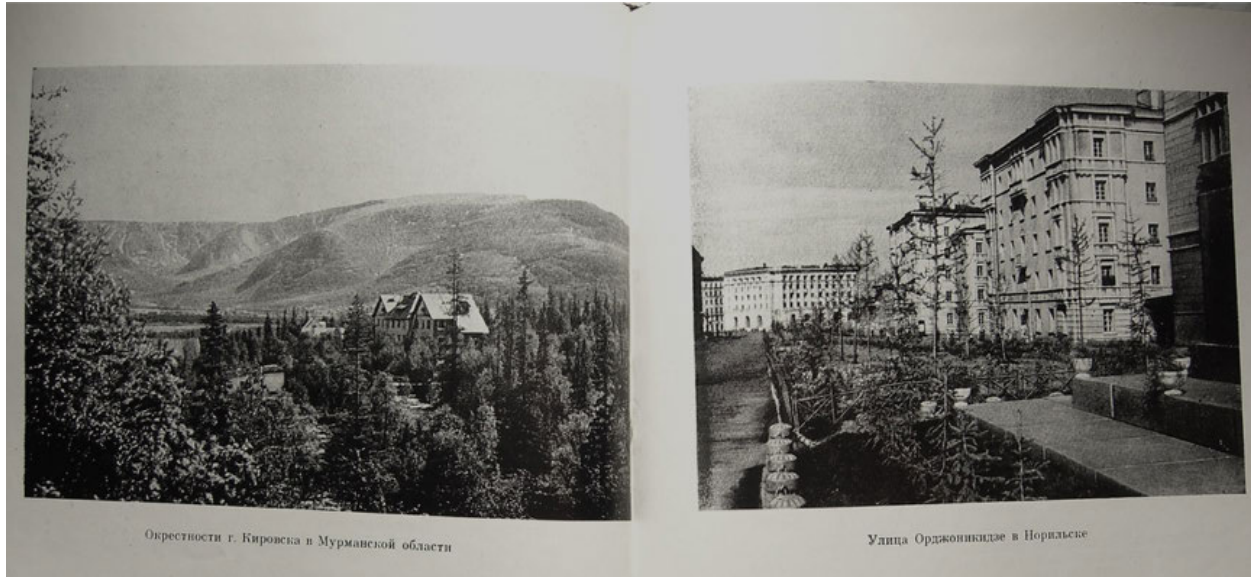


Figure 7.11 Photographs showing attempted greening of Northern industrial cities Kirovsk and Norilsk, 1963¹²⁷

Left photograph: “The outskirts of Kirovsk in the Murmansk oblast”

Right photograph: “Ordzhonikidze Street in Norilsk” [note sickly conifers in foreground]

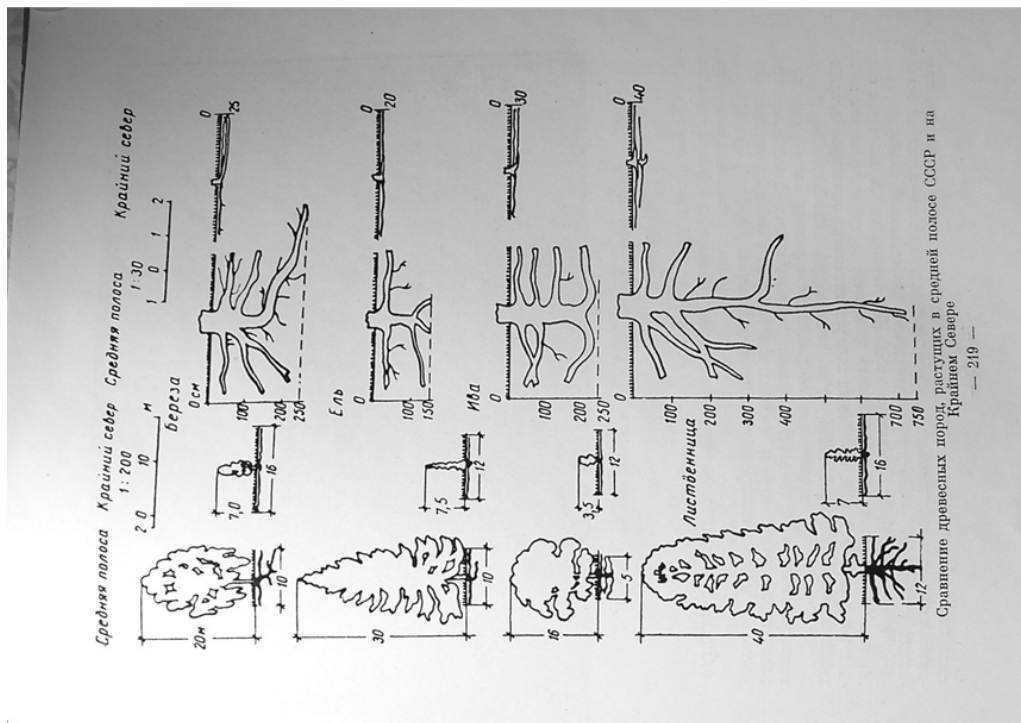


Figure 7.12 Drawings of regional differentiation in tree root and height from 1963 article on greening in the Far North¹¹

¹²⁷ from E. Pomazkova, “Ozelenenie naselennykh mest Krainego Severa [Greening of settlements of the Far North]” chapter in *Landshaftnaia Arkhitektura: Sbornik Nauchnykh Trudov* [Landscape Architecture: Collection of Scholarly Works], edited by L.S. Zaleskaia, 1963. pp215-226



Figure 7.13 Photograph of street scene in Krasnoyarsk with poplar stumps, 2012¹²⁸

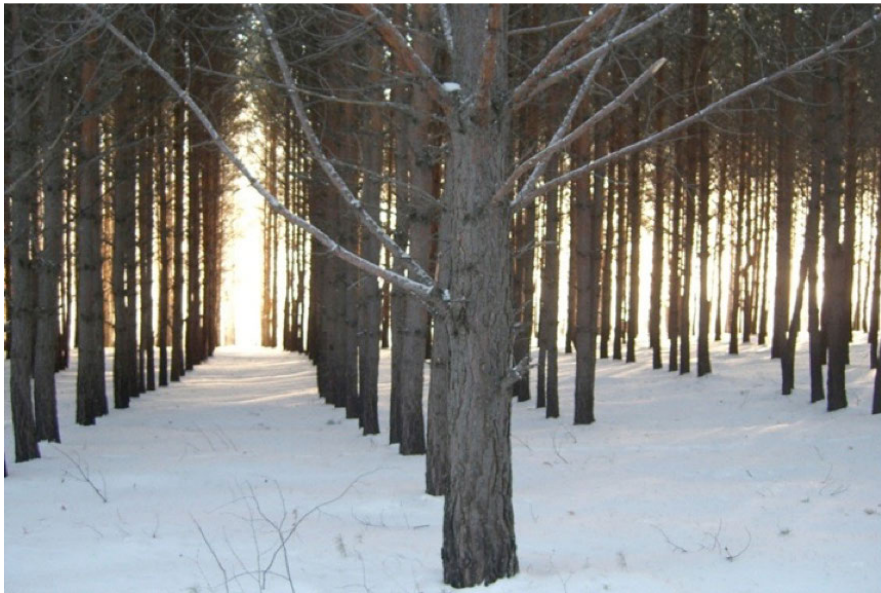


Figure 7.14 'Forest' scene near Akademgorodok and Siberian Federal University in Krasnoyarsk, 2007⁸

¹²⁸ Photographs by M.Taylor

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¹ Particularly material and *opisy* formerly held as part of the *Tsentr khraneniia i izucheniiia dokumentov noveiwei istorii Krasnogo Kraiia (TsKhIDNIKK)* on ul. Robespiera, 4 and to a lesser degree, the archives on ul. Karla Marksa, 6.

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