Urbanotopia and the Frontier: Reaching Heights before the Crash in Moscow and New York at the End of the 1920s

by

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ABSTRACT

My dissertation investigates, at its broadest level, the visualization of the future city in Moscow and New York at the end of the 1920s. In particular I examine two imaginative designs executed in the form of “paper architecture.” One proposition was delivered by Georgii Tikhonovich Krutikov, a Soviet student of architecture, who in 1928 presented a diploma project called Gorod budushchego (City of the Future), and the other model was suggested by Hugh Ferriss, an architectural renderer, in his book entitled The Metropolis of Tomorrow, published in 1929. I want to discover the circumstances that prompted these two architects to suggest intriguing concepts of the ideal city, in which both authors employed similar metaphors, associated with height and a skyward trend applied to urban space. Evidently their projects announced novel ways to rethink the form of a modern city, but why is the improbable concept of “flying” such an important part of Krutikov’s gorod, and why does Ferriss’s metropolis evoke mountainous formations? What were the conditions at play at the end of the 1920s that prompted both architects to propose such eccentric visions?

Since Krutikov’s professional debut coincided with the Communist Party’s adoption of Stalin’s First Five-Year-Plan (October 1928 – December 1932), and Ferriss’s publication concurred with the Wall Street Crash in 1929, my interest leads me to reevaluate these two projects according to issues and ideas residing outside of aesthetics.
and to disclose the politics of representation involved in their production. Hence, my work considers how artistic practice is interconnected with socio-political issues in albeit politically and culturally distinguishable centres.

As this thesis demonstrates, Krutikov and Ferriss responded to these growing tensions by imbuing their utopian urban spaces with concepts related to boundaries and limits, and by applying rhetoric and visual vocabulary that resound with issues occupying the Soviet and American “frontier” paradigm, respectively. However, as this study concludes, while appreciating Krutikov’s and Ferriss’s great imagination and the dilemmas each of them faced, we should recognize the vicissitudes of their concepts, and how the following events, especially of the 1930s, revealed that utopian thinking is vulnerable, or perhaps induced to become a dystopian reality.
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INTRODUCTION

A city in the air. A city of glass, of asbestos. A city on springs. What is this – an eccentricity, a desire to be original, a trick? No, simply maximal expediency. In the air - in order to free the earth. Made of glass - in order to fill it with light. Asbestos - in order to relieve the structures' weight. On springs – in order to achieve balance.

Boris Ignat'evich Arvatov, "Oveshchestvlennaia utopia" (The Materialized Utopia), 1923

Skyscrapers! ... All the crazy lust for growth which sprawls American towns flatly over the Western plains ... here finds expression in a vertical drive. From these great folios New York derives her grandeur, her strength, her aspect of Tomorrow. Roofless, crowned with terraces, they seem to be awaiting the rigid balloons, the helicopters, the winged men of the future.

Paul Morand, New York, 1931 (written 1929)

These comments by Arvatov and Morand demonstrate a fusion of the logical and the fantastic in perceiving an urban space during the 1920s in both Moscow and New York. Arvatov, in his promotion of Anton Mikhailovich Lavinskii’s clearly utopian design of 1921 for housing on springs explains the materials and structure of the highly imaginary project in the rather utilitarian terms distinctive of Left Front rhetoric, using a pragmatic, scientifically based argumentation.¹ On the other hand, the Frenchman

¹ B. A. (Boris Ignat'evich Arvatov), "Oveshchestvlennaia utopia" (The Materialized Utopia), Lef 1, no.1 (1923), 61-64. Arvatov, in his article, praised the project for a city of the future by Anton Mikhailovich Lavinskii. The text was illustrated with four schematic drawings: one of a city plan, one of a house, and two of a radio tower. Lavinskii’s plan -- suggesting a circular city of rotating houses of glass and asbestos mounted on springs -- was regarded by Arvatov as utopian. However, Arvatov refused to "laugh at" Lavinskii’s ideas because they represented elements of actual future content. The importance given to the radio is indicative of the importance given to it by the Soviets. In 1920, Lenin pronounced radio as the “universal ear,” the “newspaper without paper and ‘without borders,’” in Vladimir Il’ich Lenin, Polnoe sobranie sochinenii (Collected Works) (Moskva: Izdatel’stvo politicheskoi literatury, 5th ed., 1965), v. 51: 130. Not surprisingly, then, for many members of the avant-garde (Naum Gabo, Gustav Gustavovich Klutsis, Aleksandr Mikhailovich Rodchenko, Aleksei Kapitanovich Gan, Velimir Khlebnikov) radio was a powerful visual and poetic image. Lef, as the avant-garde magazine, from its start, promoted designs that combined different means of transportation and communication as ideal vehicles of agitation (in the same
Morand, in his account of his voyages to the United States, attests to the growing fascination with aviation and aerial communication, by imbuing the already existing high-rises in New York with a futuristic aura, using poetic, metaphorical language rather than the more practical, technology-based terminology that was then permeating the American scene. Particularly striking is the contrasting tone used by these two authors. The Soviet theorist seeks to convince the reader of the utopian concept of the new socialist city by applying an unemotional voice with technical, matter-of-fact explications. Although Arvatov admits that this constructivist urban blueprint by Lavinskii was likely unrealizable “under current technological conditions or any conditions,” he nevertheless maintains that it constitutes a “materialized utopia,” since its author “was interested primarily in the social side of the venture – that is with the forms of novyi byt [new everyday life].” Morand when describing New York, the place often...
identified as the centre of capitalism and crass materialism, cites the material
environment shaped by existing tall buildings that “do not scrape the sky” but “batter it.”

However, while foreseeing the future of New York, Morand invokes a quasi-mystical
language and avoids using any scientific, “know-how” terminology pertaining to the
technology that would have allowed these colossal structures to be built, preferring
instead to apply visionary and figurative articulations.

Arvatov’s and Morand’s intriguing remarks about imagined and perceived urban
spaces in the Soviet Union and the United States invite us to explore ways in which cities
were represented in both countries during the 1920s. Indeed, the 1920s was a dynamic
and fascinating time during which both milieus were engaged in the process of
reinventing themselves, and their two major metropolises, Moscow and New York,
played important roles in this course of events. Indeed, for both locales in the 1920s, the

Soviet conception of the novyi byt (new everyday material life). For Trotskii, there was a necessity to
totally reconstruct byt, that for him indicate the personal, the primitive, the immobile and stubborn (byt
niepodvizhen i upriam), and the conservative. Accordingly, byt would lose these negative qualities if it was
collectivized, rationalized and made dynamic following the social, technical and economic developments
introduced under the Bolsheviks. The editors and authors of the avant-garde journal Lef (Levyi Front
Iskusstv – Left Front of the Arts), in which Arvatov published his text, adhered primarily to the traditional
Russian paradigm of understanding material byt as the enemy of higher goals. Arvatov on the other hand
began to articulate a different, more material version of how byt might be transformed, not through the
denial or evacuation of the material object world, but instead via its modification and intensification. See,
Lev Trotskii, Problems of Everyday Life and Other Writings on Culture and Science (New York: Monad
Press, 1973); Svetlana Boym, Common Places: Mythologies of Everyday Life in Russia (Cambridge, MA,
and London: Harvard University Press, 1994); Christina Hilleboe Kjaer, “The Russian Constructivist
“Object” and the Revolutionizing of Everyday Life, 1921-1929,” (MS, Ph. D. dissertation, University of
California, Berkeley, 1995); Irina Gutkin, The Cultural Origins of the Socialist Realist Aesthetic 1890-1934
(Evanston, IL: Northwestern University Press, 1999), especially “The Struggle with Byt as a Problem of the
city became a site for a discourse about modernity. Moreover, to compare and contrast aspects of this process of reinvention in Moscow and in New York, as I have done in my thesis, is to present a rich and complex case study, allowing an insight into the ideological and cultural contest that was playing out between them and that was being acted out in the national as well international arena during the 1920s. Opposing each other across the ideological spectrum, the Soviet Union and the United States commenced an intense competition, not only to legitimize their specific ideological systems, but also to authorize their respective drives to supremacy. Cultural production was very much involved in this rivalry. In projecting themselves as leading strategic loci, they both generated the idea of a “New World” and constructed themselves as a model ground for modern life. At the same time, each centre was charged symbolically as a site of power -- in Moscow, political power, in New York, financial power -- and of the fabrication of desire, in which urban reorganization was a crucial component. The diverse rhetoric adapted to these ends, ranging from pragmatic to utopian, offered a mode of operation that was to address issues of community and city by diversely accentuating the complex relations of human interaction, production and consumption. In the Soviet Union, the goal was collective, while in the USA, the emphasis was on the individual. Thus, urban space was perceived, respectively, more as a public domain controlled by

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centrally administered prerogatives in the former,\(^5\) while in the latter, discussions were negotiated between private and civic values, and in planning between *laissez-faire* importance and efforts to give shape and unity to the city’s heterogeneous and often conflicting functions. While the revolutionary regime in Soviet Russia was committed to industrialization and modern science as the protagonists of a new order, in the US, technology and technocratic management, alongside industrialization, were perceived as the source of qualitative change in social organization and of moral transformation. The horizon, both in the Soviet Union and in America, seemed to be open, promising and ready to be shaped and arranged anew. And the plans for reformulating the urban skyline in both milieus proliferated.

In this study, at its broadest level, I concentrate on the visualization of the city\(^6\) in its ideal form in Moscow and New York at the end of the 1920s. My research examines

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\(^5\) In 1922, it was established that city planning was to be just one aspect of the overall plan for the country as a whole. The task of central planning was given to the GOSPLAN (State Planning Commission), the agency entrusted with general planning on a national scale. See Kirill Nikolaevich Afanas’ev and Vigdariia Efaimovna Khazanova, eds., *Iz istorii sovetskoi arkhitektury 1917-1925* (From the History of Soviet Architecture, 1917-1925), (Moskva: Akademiia Nauk CCCP, 1963), 18-19.

\(^6\) The subject of the visualization of architecture/city and architectural/city representation is complex and large. Topics range from the early stages of conception of specific buildings, structures and whole cities, through images created for publication, competition, exhibition, up to those that are done because they were commissioned or executed for the artist/architect’s private enjoyment. For observations on the American milieu see, Hélène Lipstadt, ed., *The Experimental Tradition: Essays on the Competition in Architecture* (Princeton: Princeton Architectural Press, 1989); for the Soviet competitions, see Catherine Cooke and Igor’ Aleksandrovich Kazus’, *Soviet Architectural Competitions 1920s – 1930s* (London: Phaidon Press, 1992); Catherine Cooke, “Mediating Creativity and Politics: Sixty Years of Architectural Competitions in Russia,” in *The Great Utopia: The Russian and Soviet Avant-Garde, 1915-1932* (New York: Solomon R. Guggenheim Museum, 1992), 681-715; on the history of architectural rendering, see
two particular visions of future urban form. The first is by Georgii Tikhonovich Krutikov, a Soviet student of architecture, who in 1928 presented a diploma project called Gorod budushchego (City of the Future), and the other is by Hugh Ferriss, an American architectural renderer, who one year later, in 1929, published a book entitled The Metropolis of Tomorrow. What is at stake in my reexamination of these two utopian visions is the forwarding of another interpretation that adds to existing material that deals with Soviet and American artistic production during the 1920s. My interest leads me to

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Werner Oechslin, "'Rendering' – The Representative and Expressive Function of Architectural Drawings," Daidalos 25 (September 15, 1987), 68-78; also Ada Louise Huxtable, "Architectural Drawings,” in idem., Architecture Anyone? (New York: Random House, 1986), 272-283; on the complex relationships between drawings, photographs, prints, and depiction of architecture in different media on paper, in the context of the buildings, landscapes and cities they represent, see Eve Blau, Edward Kaufman, eds., Architecture and Its Image: Four Centuries of Architectural Representation, Works from the Collection of the Canadian Centre for Architecture (Montreal: Canadian Centre for Architecture, and Cambridge, MA: MIT Press, 1989); Beatriz Colomina, ed., Architectureproduction (New York: Princeton Architectural Press, 1988). Then, there are various theoretical perspectives on “representation” and the “real,” i.e. between the cultural and the material realm. Hollis Clayson in her article “Materialist Art History and Its Points of Difficulty” (Art Bulletin LXXVII, no. 3 [September 1995], 367-371), while fleshing out the problematics of such concepts as “real,” “representation,” and “context” (among others), defines the differences between Marxist and social art history. In both approaches, the concern is with the image and how it operates within a larger social world. Traditional Marxist methodology implies a critique of ideology and a grounding of art within the material conditions (social, political and economic) in which art is produced and received. Materialist art historians have been informed by the Marxist tradition and tend to operate on the assumption that the real is prior to culture. On the other hand, social art history considers a more ambiguous sphere of social relations and practice in which images can not be so easily situated; in effect art is interpreted as a less deterministic practice, often functioning in multiple and contradictory ways.


For translation of Krutikov’s text to his diploma project, see Appendix below.
reevaluate these two projects according to issues and ideas residing outside of aesthetics and to disclose a politics of representation involved in their production. Hence, my work considers how artistic practice is interconnected with socio-political issues in albeit politically and culturally distinguishable centres. On this point, my own contribution to the established reading of the visual representation of the city in the Soviet Union and the United States is set to expand a comprehension and to bring into sharper focus the motivations underlying the seemingly idealised views of these two milieus during the 1920s. My goal is to interrogate Krutikov's and Ferriss's projects of the future city in a comparative manner within their specific historical contexts, by merging artistic production with the social and political realm. Appreciating the power of the imaginary and fascinated by the visions put forward by Krutikov and Ferriss, I set my attention on the debates and problematics that circulated in a larger public sphere and that were related to the notion of the "frontier." Only then can the sterile notions of cultural autonomy fade away, and only then can these two works be revealed as working beyond aesthetic categories as complicated sites engaged in tense intellectual discourses.

There are a few reasons for my choice of these works, aside from the fact that both share the same subject matter, that of the imagined city of the future. One of them is

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the fact that these works both represent so-called “paper architecture.”

“Paper architecture” constitutes, in my opinion, a more compatible ground for analysis of these two distinct centres than a comparison of any constructed works would allow. It offers the opportunity to circumnavigate the considerable disparity in economic situations and technology that affected the construction activities in both countries during the 1920s.

Soviet Russia experienced economic conditions that limited its building processes. After the October Revolution of 1917, the Bolsheviks inherited under-developed industry, and the country’s economy was further weakened by the Civil War of 1918-1921. Even though hopes and plans for a new life under communism were proclaimed with enthusiasm, large-scale projects were realized only rarely, and architecture continued to

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9 The notion “paper architecture” in its broadest sense indicates any architectural representation on paper. This term is often used as equivalent to other categories, such as ideal, visionary, utopian, unbuilt, or fantastic architecture, although each of them carries a different set of meanings. In general, however, all of them denote works that are characterized by one or all traits such as: perfect, speculative, imaginary, and/or theoretical. Throughout my dissertation, I apply all these terms interchangeably. See Irina Vladimirovna Kokkinaki, “Architecture on Paper. The Evolution of Dreams,” Apollo 131 (January 1990), 14-17; Gennady Revzin, “Paper Architecture in the Age of the French Revolution,” in Alla Efimova and Lev Manovich, trans. and eds., foreword Stephen Bann, Tekstura. Russian Essays on Visual Culture (Chicago and London: Chicago University Press, 1993), 219-231 (Revzin suggests that the Soviet avant-garde architects are heirs to the utopian projects of Claude-Nicolas Ledoux and Etienne-Louis Boullée); Christian W. Thomsen, Visionary Architecture: From Babylon to Virtual Reality (Munich, New York: Prestel, 1994); Alison Sky and Michelle Stone, Unbuilt America: Forgotten Architecture in the United States from Thomas Jefferson to the Space Age (New York: McGraw-Hill, 1976); George R. Collins, Visionary Drawings of Architecture and Planning: 20th Century through the 1960s (New York: The Drawing Center, and Cambridge, MA: MIT Press, 1979); Ruth Eaton, Ideal Cities. Utopianism and the (Un)Built Environments (London: Thames and Hudson, 2001).

10 Before World War I, in the last years of the Tsarist regime in Russia, there existed some "pockets" of modernity in main cities within a vast, and actually still largely medieval, traditional building technology dominated by timber. The years of Civil War had caused havoc in industrial plants and factories across the Soviet Russia. In 1922-1923, the worst decimated of all industries were those of building materials. In
be plagued by aesthetic controversy, political pressures and material deficiencies throughout the revolutionary period. Due to these severe and various problems that riveted the Soviet milieu, propositions submitted by students – as, for example, in the case of Krutikov -- and by a growing number of young professionals were treated with the same attention and in earnestness as those offered by established architects and urban planners. The shortage of specialists in these fields sped up the process of maturation among those who trained to take on a career in the newly established socialist state and heightened their expectations for taking on responsible, active roles in the anticipated developments.

At the same time, the USA, between the end of the First World War and the Wall Street Crash in 1929, experienced an economic boom based on industrial development and financial accumulation, and the cityscape in New York was changed by the construction of skyscrapers, nascent highways and suburbs. These economic and technological differences led to extremely uneven results with regard to what was actually built in Moscow and New York. Due to these discrepancies, projects executed on paper which are restricted only by the architects’ own licentia poetica, rather than by material or technological confines or the expectations of a commissioner, offer a more effect brick, cement, glass and steel were in very limited supply and nearly unobtainable. In addition, even skilled labour for felling and dressing timber was depressed in numbers.
compatible site for examination. Furthermore, “paper architecture” allows more
imaginary, indeed, utopian potential to be revealed.

It is precisely this extreme inventiveness which enabled Krutikov and Ferriss to
promote, on the one hand, residences hovering in the air and, on the other, skyscrapers
that batter the firmament with densely massed and huge complexes reaching toward the
sky, that prompted my fascination with their projects. The intrinsic features of “paper
architecture,” its visionary scope, lack of creative constraints and unlimited possibilities
for imagination to soar -- all of which Krutikov and Ferriss fully utilized -- present a
promising ground for an extended field of inquiry. More than built architecture, they
invite an investigation of both architects' visualizations of urban form within their
respective ideological frameworks, rather than strictly within the parameters of the
stylistic, material and technological status quo of the architectural enterprise. My interest
leads me to reevaluate Krutikov's and Ferriss's projects and the ways in which the
architects interacted with their publics, to disclose a politics of representation that
operates as much via the material art object as through the discourses in which it is
positioned. 11 Hence, I want to discover the circumstances that prompted these two
designers to suggest such intriguing imaginary concepts of the ideal city. Evidently their

11 According to Thomas Crow, to create a contextual framework is to build linkages “between art objects
and contiguous, intermediate zones of social practice that are not integral to the artist’s professional
culture.” Idem, “Codes of Silence: Historical Interpretation and the Art of Watteau,” Representations no.12
(Fall 1985), 4. Quoted in Clayson, op. cit., 367.
visions announced novel ways to rethink the form of a modern city, but why is the improbable concept of “flying” such an important part of Krutikov’s gorod, and why does Ferriss’s metropolis evoke mountainous formations? What were the conditions at play at the end of the 1920s that prompted both architects to propose such eccentric visions?

Some explanations are to be found in the time period in which these visions were produced and when they entered the public domain. Krutikov worked on Gorod budushchego and Ferriss devised The Metropolis of Tomorrow during the 1920s, by immersing themselves in discourses related to the city and its form and to architecture and its function that permeated the professional circles in Moscow and New York, respectively, at that time. Moreover, Krutikov’s professional debut in 1928 coincided with the Communist Party’s adoption of Stalin’s First Five-Year-Plan (October 1928 – December 1932), while Ferriss’s publication concurred with the Wall Street Crash in 1929. Hence both projects are not only representative of the culmination of the architectural reformulation discussed in Moscow and New York during the 1920s, but also their creation and submission to the public happened at a time of profound and far-reaching changes in broader social, economic, political and cultural realms. The year 1928 /1929 is an important caesura in the history of the Soviet Union and the USA. In the

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12 Records of the exact date when this book was published have been lost; however, the first press reviews of Ferriss’s work began to appear in December 1929.
So the Soviet Union, a growing tension was brought about by a political detour enforced by the Party under Stalin, the curtailing of diverse, post-Revolutionary opinions by an increasingly totalitarian voice.\textsuperscript{13} In the United States, the anxiety caused by the disappearance of the Victorian/Puritan/Frontier past ran deeply next to the excitement brought by the more moderate values of the “Jazz Age.”\textsuperscript{14} It was also a time when the American economic boom of the “roaring ‘20s” had suddenly run its course with the stock market crash of Black Thursday, October 24\textsuperscript{th}, 1929. Consequently, during their work on the propositions of the future city, Krutikov and Ferriss were in the thick of professional debates, while at the same time they

\textsuperscript{13} Since Stalin gained power, after Lenin’s death in 1924, he championed “socialism in one country” (the concept directly opposed to Lev Trotsky’s “permanent revolution”). Between 1925 and 1928, there were measures adopted that led in politics to centralization and bureaucratization, with growing attacks on the Left Opposition and Trotsky. In the economy, the call was industrialization and collectivization. In the realm of architecture and urban planning, the dominance of modernism was steadily replaced, via the direct demand of bureaucratic clients that led to a more historicist monumentality that eventually emerged during the 1930s as Socialist Realism. However, it should be recognized that even at the height of Stalin’s power, there was never a single monolithic art or architectural style, as S. Frederick Starr stated: “At no point between 1917 and 1937 did there exist in Soviet Russia a single ‘typical’ architect or architecture.” Idem, Melnikov: Solo Architect in a Mass Society (Princeton: Princeton University Press, 1978), 9. For the great variety of artistic practice see Brandon Taylor, Art and Literature Under the Bolsheviks, vol.1: The Crisis of Renewal 1917-1924, vol. 2: Authority and Revolution 1924-1932 (London: Pluto Press, 1991). See also Edward Hallett Carr, Socialism in One Country, 1924-1926, 3 vols. (London: Macmillan, 1958); Vladimir Brovkin, Russia After Lenin: Politics, Culture and Society, 1921-1929 (London and New York: Routledge, 1998); Hugh D. Hudson, Jr., The Stalinization of Soviet Architecture, 1917-1937 (Princeton: Princeton University Press, 1994).

\textsuperscript{14} This label, coined by F. Scott Fitzgerald in 1922, was supposed to indicate a decade long “party” during which Americans indulged in an orgy of irresponsible self-indulgence. However, in 1929, under the reality check of the stock market crash, the author admitted that the “Jazz Age” concept applied only to the “upper tenth of a nation.” See, Scott Fitzgerald, “Echoes of the Jazz Age,” in Malcolm Cowley and Robert Cowley, Fitzgerald and the Jazz Age (New York: Scribner, 1966), 183. See also Manfredo Tafuri, “The New Babylon: The ‘Yellow Giants’ and the Myth of Americanism (Expressionism, Jazz Style, Skyscrapers, 1913-30,” in idem, The Sphere and the Labyrinth. Avant-Gardes and Architecture from
witnessed shifts and nascent cracks in the socio-political sphere that caused palpable tensions in both cities. It is at this juncture that my own work intervenes. I am interested in resituating Krutikov and Ferriss vis-à-vis debates concerning the "frontier," a contentious notion of the 1920s in Moscow and in New York. This concept operated on ideas related to "time" and "space," two major elements of the political imaginary in both the Soviet Union and the United States. As Susan Buck-Morss has pointed out, these

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15 This term, “frontier,” has several different meanings. In English usage it means the border between two countries. More broadly, it can also be used to designate the zone where two qualitatively varied spaces meet and overlap. Finally, the frontier can denote the outer limit, the edge of our experience, beyond which lies the wild and unknown. Walter Prescott Webb points out a different usage of the term “frontier” in the United States distinct from that prevalent in Europe, where the “frontier” designates the boundary between two nations and is represented on the map as a thin line. Instead, in the United States, the word does not indicate the nation’s limit at the physical edge of the country, but rather an area that is located within, and that invites an entrance, an organic entity that “lives, moves geographically, and eventually dies.” Walter Prescott Webb, The Great Frontier (Austin: University of Texas Press, 1964 [1951]), 2-8. The term “frontier” is not, however, an indigenous one to Russia, hence, there is no exact equivalent in the modern Russian language to the term “frontier.” The traditional Russian term for frontier was ukraina (an outer edge, a periphery), but this went increasingly out of use in the late 19th century as it took on national meaning. It might also indicate prostor (a wide, borderless land or space, which also could mean liberty), pogranichie (a bordered land), periferia (literally translated to English as periphery), granitsa (with variations pogranichnaia zona or pogranichnyi raion), or rubezh. The latter is used in the arts, culture, and science. In recent years, however, a few Russian scholars have started to use the term frontier borrowed from English. For the terminology and meaning of a “frontier” see, John Robert Victor Prescott, Boundaries and Frontiers (London: Croom Helm, 1978); Malcolm Anderson, Frontiers. Territory and State Formation in the Modern World (Malden, MA: Polity Press, 1996); Richard White and Patricia Nelson Limerick, The Frontier in American Culture (Berkeley: University of California Press, 1994); Louis Marin, “Frontiers of Utopia: Past and Present,” Critical Inquiry (Spring 1993), 397-420. For information on the many meanings of the term “frontier” in the Russian language, I am grateful to respondents to my query posted via the internet to H-Russia in 2002, especially Eva-Maria Stolberg, Nick Baron, Brian J. Boeck, Roger Chapman, and Dmitrii Sidorov.

16 Space and time are indeed basic ontological categories crossing over national and political divides. There is an extensive literature exploring the meaning and function of these concepts in social life, with links to cultural, economic and political processes. See, for example, Daniel Bell, The Cultural Contradictions of Capitalism (New York: Basic Books, 1976); Marshall Berman, All That Is Solid Melts into Air: The Experience of Modernity (New York: Penguin Books, 1988 [1982]); Stephen Kern, The Culture of Time
two ideas were the most constitutive parts of the political vision in both countries. For communism, the major feature of the political imaginary was “time,” largely understood via the process of class warfare. Conversely, progress for capitalist/democratic states was (is) understood spatially through the expansion of the “free world.” While the capitalist/democratic state has preferred national identity, the communist state favoured class, since nations were conceived to be in transition and just a temporary phase to be overcome in the future. The frontier problematics that reverberated in the Soviet and American milieus at the time when Krutikov and Ferriss worked actively on their projects, indeed encapsulated the notions of “time” and “space,” the two crucial components of the political imaginary.

On that account, the concept of the “frontier” is my point of reference, a tool or an interpretative key that I use to unpack Krutikov’s and Ferriss’s representation of imaginary cities. The crucial fact remains, however, that Krutikov and Ferriss emanated their visions from very divergent political and cultural positions, which caused their projects to offer distinct and different results. Nonetheless, despite these variances, gorod budushchego and the metropolis of tomorrow reveal a comparable adoption of “frontier” rhetoric. Krutikov and Ferriss, in their visions of the future city, joined not only the ranks

of architects and urban planners who laboured on urban solutions, but moreover, they both took part in the ideological discourses that were concerned with a spatial quest that related to the historical processes of their respective “new worlds.”

I want to emphasize in my work that in a very real sense Moscow and New York, each in its unique way, constituted a stage for playing out the highly charged tensions that link a complex past to a perplexing present, and to a promising and unknown future. Post-Revolutionary Russia was struggling with the past as it shaped a new political and social system, and the United States was gaining momentum in domination over the “old continent” after 1918. An understanding of this utopian moment of possibilities and ambivalence demonstrated by Krutikov and Ferriss is established through Louis Marin’s interpretation of utopia. Marin names the limit, the gap between two frontiers or two continents, the Old and the New Worlds, and elaborates on two contrasting notions of utopia -- ou-topia (no-place) and eu-topia (good place) -- in a neutral realm of difference, ambivalence and tension. This was exactly the place in which Krutikov’s and Ferriss’s visions of the city of the future were situated. In my analysis of their works, I argue that while both architects were located in a “New World,” albeit differently defined, both were working at a critical juncture of drastic changes and pressures that prompted them to

actually look backward when prophesying the future city, and to utilize the "frontier" rhetoric in their projects.

The application of the ideas associated with "frontier" phenomena to the analysis of the development of cities and to the interpretation of urban space is a well-established method, particularly when dealing with the American scene. Especially in late 20th century Western literature, scholars use the "frontier" concept when writing about American architecture. Giorgio Ciucci, for example, in evaluating Broadacres City by Frank Lloyd Wright, has examined the myth of the frontier, together with various agrarian movements, as factors in the architect's effort to recover the "humanistic" aspirations of architecture. Thomas A. P. van Leeuwen, addressing the mythical dimensions connected with high-rises in the United States, has pondered the connection between the American "frontier" idea and the skyscraper. Rem Koolhaas has pointed out that "only the Skyscraper offers business the wide-open spaces of a man-made Wild


West, a *frontier in the sky.*"\(^{22}\) Hubert Damisch, as well, widely engaged the frontier concept while analyzing the American cultural scene.\(^{23}\) Likewise Aaron Betsky, when interpreting skyscrapers in the United States, has brought up the notions of lost horizons and vertical limits.\(^{24}\) However, while all these authors do apply the idea of "frontier" to the problematics of architecture and architectural representation, they use it in a figurative manner, and they limit this framework to the American milieu exclusively.

What is missing in the existing literature devoted to this subject is a broader scope, a comparative study of the "frontier" concept, especially its application to both the American and the Soviet urban constructs.\(^{25}\) Why, for example, did Krutikov and Ferriss both attempt to reach skyward for new geographical/spatial domains, even proposing structures "floating in orbit"? The modified skyscraper was, to paraphrase Diana Agrest, racing upward in pursuit of its limits, while having been incorporated into a newly

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expanding territory, to dare and to define the old and new "frontiers." In my thesis, I analyze this phenomenon, this new frontier, which played such a central role in Krutikov's and Ferriss's works.

What is also at stake here is a reconsideration of these two highly utopian propositions now, when, as has been proclaimed, utopia has run its course as much in the socio-political realm as in art, for which an epitaph assures us that "utopia is truly dead." To turn our attention back to the moment of historical circumstances addressed in my work, when dreams were regarded in the Soviet Union and in the United States to still be of high currency, does not mean to exhort a resuscitation of this "corpse." Instead, by reviewing the early stages of the competition between the Soviet Union and the US -- when both countries declared themselves as sites for modern and advanced life by envisioning a mass society beyond material scarcity, and during which Krutikov and Ferriss programmed their visions of the future city -- we may better understand the


27 There exists a vast literature discussing the demise of socio-political utopia often linked to the passing of many socialist states in Central and Eastern Europe, and to the waning popularity of Marxism. However, Terry Eagleton, in his reviews of publications that claim that Marxism is over suggests that "nothing testifies more to the life left in Marxism than the flurry of works dissecting its demise." Idem, "In the same boat?" Radical Philosophy 82 (March/April 1997), 37-40. On the crisis of utopia in the arts, see Yves Michaud, "The End of the Utopia of Art," in Jean-Marie Schaeffer, Witte de With, eds., Think Art. Theory and Practice in the Art of Today (Rotterdam: Center for Contemporary Art, 1998), 131-156; Fredric Jameson, et al., Utopia Post Utopia: Configurations of Nature and Culture in Recent Sculpture and Photography (Boston: The Institute of Contemporary Art, Cambridge, MA: MIT Press, 1988). I emphasize here the assumption brought up by scholars on their observations that utopia lost its attraction and power of urgency. There certainly exists a concurrent yet opposing thought tradition of anti-utopian and dystopian discourses; however, it falls outside the scope of my inquiry.
shortcomings that led to the aforementioned demise of utopia. It is through recreating the past that we can gain a better comprehension of alternative modes of struggle, albeit through dreaming that failed.

My own investigation of Krutiov’s and Ferriss’s projects is informed by Susan Buck-Morss’s analysis of utopian thinking. In her study, she has traced the hopes and fantasies that prevailed and were shared during the first half of the twentieth century across national and political divides, only to be jettisoned, at the eclipse of the century (and millennium), in favour of mass consumerism and political cynicism. In Buck-Morss’s opinion, the socialist imagination particularly caused its own collapse by too literally mimicking capitalist dreams. Were there any shared and common traits between Krutikov’s gorod budushchego and Ferriss’s metropolis of tomorrow?

By examining these two examples of the envisioned future metropolis of the 1920s, I want to demonstrate how relationships between the architect, the city, and its representation in an ideal form were generated by socio-political circumstances and specific ideologies in Moscow and in New York. The post-Revolutionary Soviet environment is generally understood as a synonym for highly politicized conditions in all activities, including artistic production. Therefore, to view Krutikov’s project through this prism seems to be expected and unsurprising. Yet, what at times has been overlooked is the complex, intricate and volatile political Soviet scene riveted by strong factions and
constant fights during the 1920s. On the other hand, to treat Ferriss's work as being wrapped up in politics and resonating with ideological overtones goes beyond the prevailing approach when dealing with artistic production during the 1920s in the United States in general, and with Ferriss and his oeuvre in particular. For example, Carol Willis, "the expert" on Ferriss, when writing about three "utopian" American architects of the 1920s, Harvey Wiley Corbett, Hugh Ferriss and Raymond Hood, has asserted that:

These American visionaries were not radicals or ideologues; their writings contained no explicit polemics, like those of the Bauhaus or the Russian Constructivists. Their philosophy can be thought of as a sort of "passive modernism," as opposed to the "active modernism" of such avant-garde Europeans as Le Corbusier, who offered the ultimatum "architecture or revolution."  

To regard Le Corbusier as a subversive offering radical revolutionary demands is at best a passive if not a naïve reading of the Swiss architect's political stance. At the same time to label the German and Soviet avant-garde artists as "ideologues" is to infuse derogatory meaning into revolutionary ideas. Apparently Willis herself falls victim to the satirical paradigm: "I have a social philosophy; you have political opinions; he has an

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28 Buck-Morss, *Dreamworld and Catastrophe*, op. cit.
29 Symptomatic of this "sterile" consideration is, for example, Deborah Frances Pokinski, who in her text on modern American architecture, has named one of the chapters "Differing Concepts of Modern Architecture: American 'Style' and European 'Ideology,'" in idem, *The Development of the American Modern Style* (Ann Arbor: UMI Research Press, 1984 [1982]), 9-17.
What is, however, most striking in Willis' approach is her implicit assumption that politics only involve radicals and revolutionaries.

This lack of interest in evaluating Ferriss's œuvre within a broader socio-political context indeed prevails in existing criticism. A major exception to this neglect has been the scholarship of Lewis Mumford and Manfredo Tafuri. Mumford, an American critic of architecture and urban planning, was a liberal democrat with a voice stemming from his bent towards decentralization and communalism. Mumford, an extremely influential writer on cities, in his commentaries persistently alluded to the socio-political ramifications of urbanism. Hence, throughout his career, while advocating limited urban growth combined with development of new communities in the hinterland and passionately opposing the skyscraper, he challenged Ferriss's works for being socially regressive and politically conservative. A still harsher response to Ferriss's artistic

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32 Mumford’s promotion of communalism was to such an extent that in his Sticks and Stones. A Study of American Architecture and Civilization of 1924, he idealized medieval towns and suggested them as the modus operandi for contemporary America. Admiring the New England practice of establishing satellite communities, he urged architects and city planners to utilize medieval tradition for more than stylistic models: "we must recover the interests, the standards, the institutions that gave to the villages and buildings of early times their appropriate shapes" (30-31). For a severe critique of Mumford’s naive conception of the Middle Ages, see Meyer Schapiro, "Looking Forward to Looking Backward," Partisan Review 8 (July 1983), 12-24. Schapiro, in his review of Mumford’s The Culture of Cities (New York: Harcourt and Brace, 1938), harshly criticized Mumford for his political views, particularly those regarding class structure. As a Marxist, Schapiro disliked Mumford’s social liberalism, which fell somewhat left of the New Deal but too short of Shapiro’s political and cultural radicalism.

33 To analyze the ideological positions of Ferriss, as well as his adversaries and supporters, is a great but rather difficult task. Any information can be deduced from mostly implied inclinations and sympathies, instead of from clear explications and pronouncements. Mumford, for example, known for his social
production is demonstrated by Tafuri, a Marxist Italian critic of architecture and
urbanism. Tafuri, while scrutinizing the capitalist development of the American urban
structure, repudiated Ferriss’s concept of the future city as being “an updated version of
the classic precapitalist utopia, in this case with a theosophical flavor.”

Typically, however, Ferriss’s oeuvre is interpreted in American scholarship solely
within the limits of two disciplines, architecture and urbanism, that are represented as
sealed domains, closed off from social and political concerns. Thus Ferriss’s name

liberalism and left of centre leanings, defended the RPAA’s (Regional Planning Association of America, see Chapter One below) political connections by underlining the fact that the organization had never identified itself with any political party. The fact was, however, that the members of the group were involved politically through their contacts with various public institutions and specific government agencies. Thus, Stuart Chase, the RPAA’s economist, clearly characterized the group’s political orientation: “We were mildly socialist, though not all communist; liberal but willing to abandon large areas of free market in favor of a planned economy.” Quoted in Carl Sussman, ed., Planning the Fourth Migration: The Neglected Vision of the Regional Planning Association of America (Cambridge, MA: MIT Press, 1976), 23. Meyer Schapiro captured Mumford’s ambiguous political stance: “Nothing is more characteristic of Mumford as a social thinker than his general aversion from politics and his unclarity about the nature of the state. The mythical aggregate to which he constantly appeals, the undifferentiated we’s and our’s of his tume scent proclamations, are his alternative to class groupings.” Meyer Schapiro, “Looking Forward to Looking Backward,” op. cit., 19. The same difficulties in identifying specific political and ideological stances can be said of Ferriss and many other individuals who expressed opinions on his work. In the following chapters, I review the professional exchange between Ferriss and Mumford.

appears and his works are addressed in publications when authors are surveying American architecture and urbanism, or when they are concerned with issues related to a fantastic urban vision or the artistic rendering of architecture.\textsuperscript{35} There are, nonetheless, some scholars who deal with his works, especially with \textit{The Metropolis of Tomorrow}, with much greater attention, though missing the inclusion of other intellectual factors that go beyond artistic practice.\textsuperscript{36}

The general literature on Krutikov, to no surprise, is more extensive in Russian than in English. Yet there is only one text, by Selim Omarovich Khan-Magomedov, that is exclusively devoted to Krutikov’s diploma project.\textsuperscript{37} The remaining scholarship that is published both in Russian and in English mentions Krutikov and his \textit{gorod budushchego}, usually in the larger context of Soviet architecture and/or urban planning.\textsuperscript{38} In Western

\begin{itemize}
\item \textsuperscript{37} Selim Omarovich Khan-Magomedov, “Proekt ‘letaiushchego goroda’,” (Project of a “Flying City”) in \textit{Decorativnoe iskustvo} (Decorative Arts) no.1 (1973), 30-35.
\item \textsuperscript{38} Viktor Kalmykov, “ Goroda v vozdukhе,” (Cities in the Air) \textit{Arkhitектуra v CCCP} (Architecture in USSR) no. 6 (1973), 58-60 (in this text Krutikov’s images are illustrated as rendered in drawings by V. Simbirtszeit); Mikhail Grigor`evich Barkhin, \textit{Arkhiktectura i gorod. Problemy razvitiia sovetskogo zodchestva} (Architecture and the City. Evolution of the Soviet Architecture) (Moskva: Izdatel’stvo Nauka,
publications, notably in the catalogues to various exhibitions, selected images of Krutikov’s projects are represented as the “staple” of utopian trends in Soviet architecture. Unfortunately, because Krutikov’s project is relatively little known in the Western milieu, some publications made mistakes when representing the visual parts of Krutikov’s diploma project, particularly when presenting his illustrations of the future city.

There are, finally, numerous and extensive studies of Soviet and American architecture, histories of their cities and urban planning. More specifically, scholars have written synthetic overviews or detailed studies of specific movements, trends and individuals who were active in both milieus. Among them are publications that diligently bring together collected information and rich primary source material, making accessible a vast range of data that would otherwise be difficult to obtain. Such works have

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40 Hence, for example, one of Krutikov’s dom-komuna is shown up-side-down: in Elizabeth Klosty Beaujour, “Architectural Discourse and Early Soviet Literature,” Journal of the History of Ideas 44, no. 3 (July 1983), 477-495 (ill. p. 481); or the identification of particular panels is not correctly carried on: in The Great Utopia: The Russian and Soviet Avant-Garde, 1915-1932 (New York: Solomon R. Guggenheim
immense merit because they have contributed a great deal to our knowledge of Soviet and American architecture and urbanism. Indeed, these works have served as a point of departure for my own work. Yet some important questions have not been considered and remain to be explored. I perceive that my own contribution can be made by constructing a much more comprehensive context within which to analyze the work of these two visionary architects. Therefore, my method in approaching Krutikov’s and Ferriss’s envisioned cities offers a perspective other than those traditionally adopted. As I approached the primary documents and secondary materials that relate to their work, I opened up my investigation to include a much wider range of relevant sources than have heretofore been used. Furthermore, I have compared the Soviet and American urban visions which have often been studied separately and in isolation from historical circumstances.\(^41\) I am convinced that this investigation can provide a new insight into the

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complex modes of operation utilized by Krutikov and Ferriss, who, wishing to programme a new social equilibrium, I argue, imposed "frontier" rhetoric onto envisioned urban structures.

In my work, I address the questions of how and why Ferriss and Krutikov employ the rhetoric of the "new frontier" in their critical narrative of the future city. I interpret the social and political factors associated with this phenomenon that both architects found so useful in elaborating their urban visions. Of special interest here is how the imagined future city's critical contribution to the dominant discourse on urban planning, fused with the planning of the new limits, reaches beyond strict city boundaries. By looking at how each of these two architects operated within a certain set of social and philosophical circumstances, I hope to provide a better understanding of the larger issues of artistic practice and ideological choices that each of them made as they pursued their individual interests. Their professional activities revolved in very diverse environments that manifested at the same time comparable linkage to moments of tension and fracture that

revealed shifts of power relations and unearthed vested interests in socio-political domains.

Throughout my thesis, I have presented my research and my findings in a chronological order. Thus Krutikov, who defended his diploma project in 1928, is introduced first, followed by Ferriss, with his book published in 1929. Similarly, when dealing with the architects’ milieu, I have followed the same organization; thus Moscow precedes New York. Each chapter focuses on specific issues. In the first chapter, I begin by presenting an overview of Moscow and New York as sites of Krutikov and Ferriss’s professional activities, viewing them as two major centres beset by urban problems and bustling with strategies and solutions -- at times only on paper -- to ameliorate those ills. Elaboration of these issues creates a context for the energized interventions conducted by Krutikov and Ferriss in their projects. In the second and third chapters, I examine Krutikov’s Gorod budushchego, and Ferriss’s The Metropolis of Tomorrow, respectively. When analyzing their propositions, in each case, I identify and interpret the content, the layout and the medium, as a point of departure for presenting my argument in chapters four and five, which focus on the close relationship that existed between cities of tomorrow, as imagined by these two architects, and the socio-political issues that relate to the “frontier” phenomenon.

Overall, at the heart of my project is an exploration of the social and political factors that impinge on the production of art, not always in an overtly pervasive way; but
rather we may appreciate through an explication of these two projects that art making is conditioned in a complex manner, by external ideological forces that are expressed aesthetically. It is precisely because of this that projects that are seemingly as dissimilar as Krutikov's *gorod budushchego* and Ferriss's metropolis of tomorrow may not only be usefully compared, one with the other, but indeed that this comparison presents an extremely compelling case study. At this particular moment, when the conditions of utopia are regarded as doomed, or perhaps because of that, the promotion of fantastic, indeed utopian, concepts maintains a powerful hold on the imagination.

Finally, a short note on transliteration. There is no easy solution to the problem of transliterating Russian names and words into English. For the sake of consistency, I have used the system of transliteration employed by the Library of Congress. Hence, I have retained the Russian soft and hard signs, represented in English by a single apostrophe, and a double apostrophe respectively, and have allowed the Library of Congress system to prevail over customary English usage (thus Mayakovsky becomes Maiakovskii, Trotsky is spelled Trotskii, etc.). However, in cases where other forms have become well established -- as in Lissitzky, and the Library of Congress system would render it unrecognizable: Lisitskii – the system has not been adopted. All translations from Russian texts cited in this study are my own, unless otherwise noted.
CHAPTER ONE

Moscow and New York in the 1920s: Challenges and Solutions

Cities are not simply material or lived spaces – they are also spaces of the imagination and spaces of representation.

Gary Bridge and Sophie Watson, “City Imaginaries,” in A Companion to the City

Corresponding to the form of the new means of production, which in the beginning is still ruled by the form of the old (Marx), are, in the social superstructure, wish images in which the new and the old interpenetrate in fantastic fashion. This interpretation derives its fantastic character, above all, from the fact that what is old in the current of social development never clearly stands out from what is new, while the latter, in an effort to disengage from the antiquated, regenerates archaic, primordial elements. The utopian images which accompany the emergence of the new always, at the same time, reach back to the primal past.

Walter Benjamin, “Exposé,” in The Arcades Project

Georgii Tikhonovich Krutikov, living in Moscow,¹ and Hugh Ferriss, residing in New York,² created images of the ideal future city during the 1920s, from their vantage points within the dynamic exchanges of urban ideas that circulated in their respective milieus. The exposure to everything that was new and inspiring stimulated the architects’ engagement with current discourses on the city and architecture, and framed their concepts of the envisioned urban form. It was the ever-changing cities of Moscow and New York, as they had experienced them, combined with the constant flow of various

¹ Krutikov, born in 1899 in Voronezh, moved to Moscow in 1922 to enroll at VKhUTEMAS (Vysshie gosudarstvennye khudozhestvenno-tekhnicheskie masterskie - the Higher State Artistic and Technical Workshops, see note 101 below) to study architecture. He stayed and practiced architecture in the capital until his death in 1958.

² Ferriss, born in 1889, came to New York in 1912 from his native St. Louis at the age of twenty-three with a B. S. in Architecture from Washington University (1911). Working as an architectural renderer he lived in New York City until his death in 1962.
opinions on the shape, organization and function of urban space that created a

springboard to Ferriss's and Krutikov's own projects. In effect, each author used, to

various degrees, the city's built environment, its socio-economic conditions and powerful

symbolic connotations, mixed with contemporary professional discourses, as a matrix for

the imaginary urban settlement of tomorrow. In this process, both architects embarked

on a task to correct the historical urban imperfections accumulated over the centuries. In

doing that, the Soviet and the American architects turned on the one hand toward the

future, while, on the other, they were dealing with the past and current issues. This

approach characterized modernist architects at large, who demonstrated, as Anthony

Moscow (first mentioned in chronicles for 1147), and New York City (established by the first Europeans
in 1625 under the name Nieuw Amsterdam, renamed in 1664 as New York) played crucial metaphorical
roles in the cultural and political landscapes of their respective countries. The Soviet Union and the United
States had, on one the hand, very diverse backgrounds with regard to politics, economy and culture; on the
other hand, these two nations shared similar figurative trademarks. The first similarity is that both centers
were historically laden with symbols of the "New World." From 1507, a short time after its discovery in
1492, the term "America" had been used to denote the "New World", and the newly discovered territory
was perceived as the Promised Land for those for whom Europe, the "Old World," seemed to be too
restrictive economically or spiritually. The United States reinforced this symbolic image of the "New
World" after the First World War, when it resurfaced as a powerful and economically dominant nation on a
global scale. See, Howard Mumford Jones, O Strange New World. American Culture: The Formative Years
(New York: The Viking Press, 1964 [1952]). Russia, after the October Revolution of 1917, was the
embodiment and proponent of the first socialist state, and strove to present herself as the site of a nascent,
ideological system for the "New World." For example, Polish Marxists residing in Moscow proclaimed on
April 2, 1918 that "Europe and the entire world will be refashioned on new principles by Revolution.”
Remarks of two poets, Aleksandr Aleksandrovich Blok and Vladimir Vladimirovich Maiakovskii, captured
the overwhelming convictions and hopes for the new beginning. Blok wrote that the meaning of the
Revolution is "[t]o remake everything: to organize things so that everything should be new, so that our
false, filthy, boring, hideous life should become a just, pure and beautiful life,” while Maiakovskii
announced, “today the millennium of ‘before-times’ is broken” and “we will remake life anew – right down
to the last button of your vest.” Blok quoted in Avril Pyman, The Life of Alexander Blok (Oxford:
proletarskaia moral’ (Great October and Proletarian Ethics) (Moskva: Mysl’, 1976), 20-21; cited in
Vidler points out, the desire to erase the past, forgetting the old city and what it stood for – its chaos and corruption – while at the same time still striving to reference earlier urban forms. The history of a place and what has happened there yesterday is important, because this site is the locus of collective memory, of political identity, and of powerful symbolic meanings, while at the same time it constitutes resources of possibilities as well as obstacles for change. Although fantastic, Krutikov’s and Ferriss’s concepts of a new city originated not from a clean slate – albeit the architects projected their fantastic visions onto empty sheets of paper, thus facing a literal tabula rasa -- but rather from a position both appreciative of and challenging the complex urban traditions and charged symbolism that Moscow and New York had established over time.

Moscow and New York during the second decade of the 20th century were two cities divided not only by vast geographical distance, but also by the historical moments of their establishment, and by diverse political and economic frameworks, factors that determined their shape and function. In spite of these differences, however, both centres demonstrated parallel concerns during the 1920s. According to Thomas Bender, the new metropolises, when they emerged as a consequence of rapid urbanization, often bore


more relation to each other than to their national environment. In the case of Moscow and New York, this similarity manifested itself particularly in problems such as congestion, shortages of affordable housing, transportation difficulties and planning policies that sometimes ran counter to legislative building regulations. To eliminate or at least to abate the urban ills associated with big cities, Moscow and New York had to reconsider organizational principles that governed their development. The overriding need to cope with the new scale of metropolitan life in Moscow and New York during the 1920s gave rise to complex alliances between political bosses, civic leaders, engineers, planners and architects. Although the situation in both the Soviet and the American metropolises demanded well-informed and experienced professionals and experts, urban planning as a discipline was relatively new in both countries.

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6 In 1925, New York was the most populated city in the world (7,774,000 inhabitants). Moscow in 1925 had much smaller population (1,764,000 people) taking thirteenth position on a list of the world’s largest cities. Both centres however were leading as the exemplary cities of capitalism and socialism, respectively (next largest cities were London with 7,742,000 inhabitants, and Leningrad, whose population was 1,430,000). For the statistical data see, Anthony Sutcliffe, “Introduction: Urbanization, Planning, and the Giant City,” in Anthony Sutcliffe, ed., *Metropolis 1890-1940* (Chicago: The University of Chicago Press, 1984), 7, Table 1.1.

7 In Russia the profession of city planning, as Europe or North America already understood it in the beginning of the 20th century, was so underdeveloped when Tsarism collapsed that the young Soviet Union inherited only a few specialists capable of looking at urban form in its entirety. Moscow represented a typical Russian city with its medieval pattern of the streets fanning out from the Kremlin (the ancient citadel), creating the radial-circular lay-out, and imposed on it the regularity of Neo-Classicism and its strictly geometrical design. In Tsarist Russia, only just before World War I had courses in “town building” been launched in the Academy School of Architecture, in 1910 in Petersburg and a year later in Kiev. There was even a lack of a consistent name for the activity which incorporated social and technical concerns of “public utilities engineering” (literally “arrangements for well-being” – *blagoustroistvo*) with the formal and aesthetic issues on which historical cities had developed as “compositional ensembles.”
Although professional city planning was in its nascent stages in Moscow and New York, the 1920s was a time in both centres when the necessity to improve the metropolis was widely recognized, and the amelioration of their respective dilemmas became an

Slowly the term gradostroitel'stvo (literally “town/city-building”) became a standard vocabulary in the Soviet professional milieu. In September 1918, the Soviet government created one of its earliest legislative documents and established the Office for Town Planning, Regulation and Building. It was a committee under the Department of Urban and Rural Construction of the Council of National Economy, whose role was to eliminate the deficiencies of cities. While the Soviet city planning was state-run and centralized, the early city planning in the US was private, entrepreneurial and de-centralized. It was predominantly the work of land surveyors, real estate developers, industrial managers and transport companies. There are a few suggested benchmarks in the history of modern urban planning in the United States. First are the original icons of American planning tradition that incorporated grids: William Penn's plan for Philadelphia (1682), in which the grid is interrupted by a central square and a park in each of the four quadrants; Pierre Charles L'Enfant's combination of the grid and the diagonal for Washington, D. C. (1791); and finally the Commissioners' 1811 Plan for New York City, which laid a massive grid on Manhattan. The second milestone were the activities of Frederick Law Olmsted, and his concept of opening up urbanization to nature as via the Central Park in New York (1858). The third turning point in city planning is associated with the Chicago World’s Columbian Exposition and the construction in 1893 of the white model city on the shores of Lake Michigan to house it. Next landmark is 1909, the year of publication of Daniel Burnham and Edward Bennett’s Plan of Chicago, and the time of the First National Conference on City Planning and the Problem of Congestion in Washington, D.C. As well, in this year, Harvard College established a city planning course within its landscape architecture programme. Following the academic curriculum was the establishment in 1917 of the American Institute of City Planners, the first professional organization. Finally, the year 1929 marked an introduction at Harvard University of the first school of city planning in an American academic institution (coinciding with the completion of the Regional Plan of New York and Its Environs). For a role Chicago played in establishing the ideas related to urban planning, see Chapter Four below, note 2. For a discussion of the pre-Revolutionary foundations of urbanism in Russia, see Catherine Cooke, Russian Avant-Garde. Theories of Art, Architecture and the City (London: Academy Editions, 1995), especially 190; for early Soviet planning documents, see Kirill Nikolaevich Afanas'ev, Vigdaria Efraimovna Khazanova, eds., Iz istorii sovetskoi arkhitektury 1917-1925. Dokumenty i materialy, k problemam goroda (From the History of the Soviet Architecture, 1917-1925. Documents and Materials Related to the Problems of the City) (Moskva: Akademiia Nauk CCCP, 1963), 13-25. For a critical account of American city planning, see John Reps, The Making of Urban America: A History of City Planning in the United States (Princeton: Princeton University Press, 1965); Mel Scott, American City Planning Since 1890 (Berkeley: University of California Press, 1969); Anthony Sutcliffe, ed., The Rise of Modern Urban Planning, 1800-1914 (New York: St. Martin's Press, 1980); Christine M. Boyer, Dreaming the Rational City: The Myth of American City Planning (Cambridge, Mass.: MIT Press, 1983); Daniel Schaffer, ed., Two Centuries of American Planning (Baltimore: Johns Hopkins University Press, 1988); Harvey A. Kantor, "Modern Urban Planning in New York City: Origins and Evolution, 1890-1933" (Ph. D. dissertation, New York University, 1971); Donald
urgent matter. The "new city" envisioned in both milieus was expected to be the "better

city," where novel forms were supposed to resolve the magnitude of problems that both

Moscow and New York, to different degrees, were then experiencing. In Moscow, the

Bolshevik Revolution, the Civil War and economic collapse had left the city's

infrastructure shattered, creating extremely difficult circumstances for the new

communist city to provide the growing population with basic accommodation. New

York City during the 1920s represented an extreme version of a new 20th century urban

form by being concentrated and congested at its core, and dispersed almost without limit

at its periphery. Hence, regulating these cities then became a part of the modus operandi

for restoring balance to both. Although New York and Moscow had similar problems to
deal with, the fact that each place represented opposite sites on the political spectrum
greatly informed the ways each city approached its urban dilemmas. In searching for
resolutions and in proposing remedies for these ailing cities, the fostered ideas thus
demonstrated a predictable contrast next to a quite complicated correspondence. The

suggested urban solutions coming out of Moscow and New York during the 1920s


8 The events of 1917 certainly prepared the ground for massive urbanization. However, urban growth did not begin to accelerate significantly until the late 1920s and indeed "exploded" during the 1930s, when the Soviet Union experienced the most spectacular urban transformation. Therefore since 1917, when the new political order was established, and particularly since the New Economic Policy in 1921, it would take almost a decade merely to repair the damage inflicted during the Revolution and the Civil War. Hence, the period of recovery in the 1920s was not one of modernization, although there was much discussion and
constituted an exemplary modern environment, communist on one hand, and capitalist on the other. Nevertheless, the proposed solutions, whether in New York or in Moscow, were a mixture of ideas, from very expedient and matter-of-fact to highly utopian and matter-of-fantasy. Krutikov and Ferriss, while constructing their own visions of the future cities, would be provoked, motivated, and inspired especially by the skyscraper and the various fears and dreams that it instigated in Moscow and New York.

**Moscow**

Moscow during the 1920s was not just a metropolis; the city of Moscow was the socialist metropolis. As the capital and the pioneer site of the new political system, it was the exemplar for all Soviet urban places of any size. Moscow was also a paragon of Russian history. An editorial article published just a few days after Moscow regained its status as the capital in 1918 announced, “[a] young and new Russia is raising its head …

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9 Moscow regained its former role as a capital when Lenin and the Bolshevik government moved there from Petrograd on March 11, 1918. Moscow had lost its position as a capital to St. Petersburg in 1712 (renamed Petrograd in 1914, and since 1924, called Leningrad). As a result, the beginning of the 18th century brought a major setback to Moscow’s development when Peter the Great founded in 1703 his Baltic “window on Europe,” the city of St. Petersburg. In 1712, the Tsar made St. Petersburg the capital of the Russian Empire. That the loss of its central and leading function should affect Moscow adversely is not surprising; however the city recovered, even during Peter’s reign, first through state action and then through private enterprise. The 18th century witnessed the beginnings of conscious planning in Moscow. The plan, with grandiose concepts of wide squares and boulevards, was never accomplished, but the Neo-Classical revival in architecture of this period embellished Moscow with many of its finest buildings. Moscow’s skyline was representative of the Russian tradition with its spaciousness of built-up areas, the vastness of open spaces, and the contrasting silhouette that combined long, sprawling volumes with
where the old Russia in its time confirmed its greatness." While the Bolsheviks were turning the city into the new Red Moscow, they could not instantaneously put to rest the epithets traditionally associated with her, such as Holy Moscow, Third Rome, Gold-

individual vertical structures which dominated the cityscape. Moscow’s formal designation as capital was confirmed at the First Congress of Soviets in 1922. Moscow then became the exemplar of the socialist metropolis for all Soviet urban places of any size. P.V. Sytin, *Istorii planirovki i zastroyki Moskvy* (History of Planning and Building in Moscow) (Moskva: Muzei Istorii i Rekonstruktii Moskvy, 1950); S. S. Khromov, ed., *History of Moscow*, trans. Iuri Shirokov (Moscow: Izdatel’stvo Nauka, 1976); Timothy J. Colton, *Moscow: Governing the Socialist City* (Cambridge, MA: Harvard University Press, 1995).

10 Editorial, *Izvestiia* (News), (March 14, 1918), 1.

11 The Bolshevik leaders, realizing the power of symbols, fully utilized them in projecting their own identity via the propaganda machine. Red colour as a symbol of the Bolsheviks was established during the Civil War. Red as a colour associated with revolution goes back to its use by the Jacobins in 1792. During the 19th century it signified the tradition of the European labour movement, and in Russia, in 1917, red emblems emerged during the February Revolution, well before the October, or Bolshevik Revolution. Red colour as a symbol lent itself to etymological linking in Russian of krasnyi (red) and krasivyi (beautiful) and to the “spiritual” centre of Soviet power, the Red Square (Krasnaia Ploshchad') next to the Kremlin.

The history of the Red Square goes back to the 15th century, when it was first mentioned in a chronicle under the name of Torg (market). Later it was called the Troitskaia Ploshchad' (Trinity Square), after a wooden church, which originally stood on the site of St. Basil’s. Finally, after 1625 (officially in 1658) the square got its present name, Krasnaia Ploshchad'. Then the word krasnaia meant the beautiful, finest, and this name was referring to the overall “beautification” of the square achieved by building of St. Basil’s in 1555-1561, and an addition of a decorative crowning to the Spasskaia bashnia (Gate-Tower of the Savior) in 1625. After the October Revolution the name of the square was retained, preserving not only its original significance, but imparting to it a new symbolic meaning connected with the red (krasnyi) colour of the banner of the Revolution, and from 1921 the state flag of the USSR. Construction of Lenin’s Mausoleum in 1924 changed the function of the Red Square. From its historical role as a site of commercial activities, festive religious celebrations and state rituals (coronations, beheadings), the Krasnaia Ploshchad' was assigned the function of an official ceremonial space for political demonstrations, military parades, and state funerals. A.V. Anisimov, *Moskva. Arkhitekturnyi putevoditel’* (Architectural Guide of Moscow) (Moskva: Izdatel’stvo Krasnaia gora, 1997), 30-31; Richard Stites, *Revolutionary Dreams*, op. cit. 85-87.

12 In 1328 the metropolitan Feognostii moved his residence from Vladimir to Moscow. His presence made Moscow the spiritual centre of Russia. Furthermore the holiest Russian abbey and seminary, the Trinity-St. Sergius Monastery, was founded shortly thereafter 70 km north of Moscow.

13 When Constantinople fell to the Ottoman Turks in 1453, Moscow strove to continue the thousand-year old tradition of Byzantium. Ivan III married Zoe Paleologue, a niece of the last Byzantine emperor, and took the Byzantine two-headed eagle as his coat of arms. In the 16th century Vasilii III embraced the doctrine of Moscow as the “Third Rome.” This concept was prompted by the vision of the monk Filofei (Philotheus of Pskov), whose descriptive letter to Vasilii III, the grand prince of Moscow in 1510, named Moscow as the “Third Rome.” According to these ambitions Moscow, unlike Papal Rome and
Domed Moscow, Calico Moscow, and the Big Village of Russia. The ancestral site to Russia’s Orthodox Christianity, nobility, and mercantile economy, Moscow was, according to Izvestiia, “the embodiment of Russian thick-headedness, where Asiatic tradition uses the latest word in capitalist technology.” It was apparent that the author(s) of this article, recognizing the historically important role that the city had established over the centuries, appreciated the needs and the challenges ahead for the new Bolshevik

Constantinople, was predicted to stand for all time as the bastion of Christian piety. As a result Vasilii III’s successor, Ivan IV the Terrible, assumed the title of Tsar in 1547, a Russian word for “Caesar.”

Zlotoglavaia Moskva (Gold-Domed Moscow) was no mere turn of expression. Pre-Revolutionary Moscow, with large number of churches surmounted by gold plated cupolas, remained to be a religious treasure house for all of Russia. According to Galina N. Ulianova, more than 500 churches adorned Moscow in the beginning of the 20th century. In 1913, there were 9 cathedrals, 15 monasteries for men, 10 convents, 292 Orthodox and 40 Old Believers (the fundamentalist sect of the Orthodox Church) congregations, 98 in-house chapels, and 20 other temples. Galina N. Ulianova, “Old Believers and New Entrepreneurs: Religious Belief and Ritual in Merchant Moscow,” in James L. West, Iurii A. Petrov, Merchant Moscow. Images of Russia’s Vanished Bourgeoisie (Princeton: Princeton University Press. 1998), 61-71; I. P. Mashkov, Putevodiitel’ po Moskve (Moscow’s Guide-Book) (Moskva: Moskovskoie Arkhitekturoie Obschestvo, 1913), 147.

This nickname was given to Moscow in the second half of the 19th century for the dominant role that manufacture of textiles, above all cotton cloth, played in the city’s economic and public life (up into the Soviet era). In 1912, out of 165,000 factory workers, thirty-five percent were in the textile industry (half the share fifty years before). Diane Koenker, Moscow Workers and the 1917 Revolution (Princeton: Princeton University Press, 1981), 21-23.

In 1917, beyond the Sadovye kol’tso (Garden Ring) in the rabochiie okrainy (workers’ outskirts) lived approximately three-quarters of the city’s inhabitants and 90 percent of its industrial workers. In 1912 seventy-five percent of all buildings outside the Sadovye were built of wood. Semi-rural settlements, where factories overlooked meadows and fields, were just across the city’s border. It was the rustic, weathered log cabins and tenements, added to the leafy streets within the Garden Ring, that prompted Russians, with a mixture of condescension and affection, to call Moscow bol’shaia derevnia (big village). Walter Benjamin, upon his 1926/1927 visit to Moscow, observed: “There is one thing curious about the streets [in Moscow]: the Russian village plays hide-and-seek in them. … In fact, nowhere does Moscow really look like the city it is, rather it more resembles the outskirts of itself.” Walter Benjamin, Moskauer Tagebuch, trans. Richard Sieburth, Gary Smith, ed., Moscow Diary (Cambridge, MA, and London: Harvard University Press, 1986), 67.

In 1443, Russia’s bishops, dismayed by the fleeting union of the Greek and Roman rites, constituted a separate Russian Orthodox Church.

Editorial, Izvestiia, op. cit.
government. Moscow was the city that the leaders of the new government could not leave unreconstructed physically, nor could they leave without embedding it with new symbolical meaning. However, the beginnings of a new era for Moscow were slow and exceptionally difficult.

Although the Bolshevik uprising led by Vladimir Il’ich Ulianov – Lenin had won, the country had to weather years of hard-fought Civil War and grim War Communism. While the strategy ultimately guaranteed the Red Army’s victory and the survival of the Soviet state, War Communism devastated the economy, bringing industry to a standstill and emptying the cities. Moscow’s population toward the end of the Civil War was thus  

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19 What should be noted here is the specific strategy that the Bolsheviks executed in reclaiming the Tsarist/bourgeois infrastructure. Namely, the tactics they used, which was the modern day adaptation of the spolia opima tradition, that was paramount in securing chances of success for the Revolution. Hence, their aim was to seize the machinery of state intact by overpowering its high command and to gain control of the nerve centres of a modern city. The objective was to take over railway and telegraph stations, telephone exchanges, banks, printing presses, all of the technical and administrative apparatus necessary for the function of urban life, without the control of which the capital city and hence the whole structure of state would become paralyzed. On the other hand, when after the Revolution the industrial millionaire dynasties (the Morozovs, the Perlovs, the Riabushinskiis) fled the country, they left behind the industrial plants that were amongst the best items of material infrastructure received by the Soviet government. By the same token, the Bolsheviks took over the great art collections, the native Russian art amassed by the Tret’iakovs (ca. 4,000 items), and the modern European art collected by the Morozovs, the Shchukins and the Riabushinskiis. Jo Ann Ruckman, The Moscow Business Elite: A Social and Cultural Portrait of Two Generations, 1840-1905 (DeKalb: Northern Illinois University Press, 1984); Beverly Whithey Kean, All the Empty Palaces: The Merchant Patrons of Modern Art in Pre-Revolutionary Russia (London: Barrie and Jenkins, 1983).

20 According to Sheila Fitzpatrick, the Civil War from June 1918 till March 1921 undoubtedly had a huge impact on the young Soviet Republic. Unlike state capitalism, War Communism was not perceived as a transitional stage but a survival strategy. Several features characterized War Communism: nationalization of virtually all economic enterprises and activities, centralization of economic policy, requisition of peasant produce, “abolition” of money and its replacement by natural wages and a socially organized barter system, the increasing use of state power to raise industrial production. On early economic policies, state capitalism and War Communism, see Sheila Fitzpatrick, The Russian Revolution (New York: Oxford University Press, 1994); Alec Nove, An Economic History of the U.S.S.R. (New York: Penguin Books, 1989).
half of what it had been in the midst of the 1917 Revolution. As the result of this sudden process of depopulation, the crisis in housing was postponed for the time being.

Soon after the Civil War was over, the Soviet government proposed a plan for economic recovery based on a nationwide scheme of electrification (GOELRO). The electrification of the entire country was supposed to improve the standard of living of every Soviet citizen. An improvement of the quality of life was fundamental to the proletariat’s revolutionary agenda. In the meantime, the workers experienced frustration in their quest for modernized housing. To deal with the housing shortages, the large

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21 In Moscow the turmoil that followed the Revolution, the flight of upper- and middle-class citizens for political reasons, the uncounted deaths through starvation, disease, and fuel shortage in 1919 and 1920, and above all, the exodus of many hundred thousands of Muscovites back to their villages of families origin in search of food and the relative safety of the country, all resulted in a drastic reduction of the population. Between May 1917 and April 1918, the city of Moscow lost 300,000 of its 2 million inhabitants. From 1918 to 1920, the city lost another 700,000 people. Leninskie dekrety o Moskve (Lenin’s Decrees Regarding Moscow) (Moskva: Moskovskii rabochii, 1978), 12-13; Diane Koenker, “Urbanization and Deurbanization in the Russian Revolution and Civil War,” Journal of Modern History 57 (September 1985), 424-450.

22 The plan GOELRO (State Commission for the Electrification of Russia) was ratified on December 22, 1921, by the Eighth Party Congress. It envisaged the construction within ten or fifteen years of some thirty power stations with a total capacity of 1.5 million kilowatts. Electrification was the first centralized state plan for economic development. The importance of this programme was attested by Lenin’s notorious phrase “Communism equals Soviets power plus the electrification of the entire country.” Cited in Jonathan Coopersmith, The Electrification of Russia, 1880-1926 (Ithaca: Cornell University Press, 1992), 175. Electrification actually was regarded world-wide as a catalyst of modernization, and electricity was taken up as a revolutionary movement. Patrick Geddes, for example, considered electricity a “magic wand” that would emancipate the woman in society and consequently society itself. See idem, Cities in Evolution (London: Williams and Norgate, 1915), 129. Electrification was Henry Ford’s objective for the entire region of Muscle Shoals on the Tennessee River in Alabama, the planned synthesis of agriculture and industry expressed in his Today and Tomorrow of 1926. See, Paul Hutchison, “Revolution by Electricity. The Significance of the Tennessee Valley Experiment,” Scribner’s Magazine (October 1934). For a discussion of Ford’s concept of “village industry,” see Terry Smith, Making the Modern. Industry, Art, and Design in America (Chicago and London: Chicago University Press, 1993), 137-155.

23 On the eve of the October Revolution, Moscow’s population passed the 2,000,000 mark. The rise of its inhabitants resulted from an industrial boom at the turn of the century (textile, metal and engineering
residences of the bourgeoisie and aristocracy were sub-divided into dwellings for workers from the overcrowded slums. As a result, the city's labouring population had moved from substandard apartments and factory barracks to mansions formerly occupied by the city's now déclassé wealthy and middle-class.\textsuperscript{24} By 1921, about 500,000 people were resettled in Moscow, or half the city's population.\textsuperscript{25} Despite its problems, this whole programme not only resolved the most acute housing shortages, but also the resettlement of worker families from the suburbs to the inner city tended to mitigate the glaring differences between the centre and the suburbs. The body of the city was beginning to gain its social homogeneity. Despite these relocations, however, the living conditions remained appalling.

Lenin decided that palliative measures had to be introduced to save the Revolution, and on March 17, 1921, he announced the New Economic Policy (Novaia ekonomicheskaia politika, or NEP). Calling a halt to the rigid economic programmes of War Communism, Lenin proposed a much larger degree of internal private trade and

\textsuperscript{24} In Boris Pasternak's portrayal of the confiscation of the Zhivago family's house and the conditions of life there-after, the redistribution is probably an accurate representation of what occurred in the houses of many formerly well-to-do residents. Palaces, mansions and large town houses were seized from their owners and turned into flats for working-class families.

\textsuperscript{25} S. Lapitskaia, "Zhilishchnoe stroitel'stvo novoi Moskvy posle oktiabr'skoj revoliutsii," (Construction of Housing in a New Post-October Moscow), Bor'ba klassov (Class Struggle) 7-8 (1934), 216-17.
enterprise in order to rescue Russia from the disaster toward which she had been heading under the impetus of industrial underproduction, food shortages, inflation, and lack of capital. Although the introduction of NEP, allowing private enterprise on a limited scale, temporarily put the fulfillment of socialist ideals into the background, it did permit the rapid restoration of the city economy. By the 1926 census, the pre-Revolutionary population size had been regained and industry had once more started up. Wealth increased and the flow of population reversed, so the cities, particularly Moscow, again became overcrowded. In fact, with the influx of the population into the city, the average housing space per person declined from seven square meters in 1917 to six square meters in 1928. The prolonged problem of new housing could no longer be postponed.

However, with economic devastation and the chronic shortage of trained manpower, even the small-scale efforts at development control were predestined to be ineffective. Up to 1925-1926, there was little to show in support of new city planning and new architecture other than lectures, manifestos, decrees, and drafts. The first city

26 NEP permitted private trade in order to revive a stagnant economy, retaining however crucial industries and foreign trade under state control.
planning debate took place in 1922-1923 in connection with the GOELRO electrification plan and while NEP was in progress. A second debate was triggered by the construction of new towns and accelerating industrialization under the First Five-Year Plan. Other than a few scattered buildings, the 1920s saw relatively minor changes to the appearance of Moscow. Nevertheless, the main issue at stake was to address a larger strategy to achieve a proper urban model for the new Socialist form of society. In other words, what should the sotsgorod (socialist city) look like?


29 Previous to 1928, there was a rather limited construction undertaken in Moscow. In 1923 Nikolai Markovnikov designed the first Soviet housing in the Sokol suburb of Moscow. Based on the Garden-City concept, it provided for houses built of timber, with large plots of land around them. Contemporaries criticized the social ramifications of the one-family house as being opposed to that of the collective dwelling then regarded as the single most promising type of housing structure. Other housing complexes were: Usachevka, the four- and five-storey housing blocks of 1925-1931 designed by Aleksei Meshkov; Dukstroi co-operative of 1927-1928 by Aleksandr Fufaev, a corridor-type house with small flats and only some of the public services; the first communal house designed by G. Volfenzon of 1927-1928; and Narkomfin (dwellings for the workers of the People’s Commissariat of Finance) apartment building of 1928-1930 by Moisei Ginzburg and Ignatii Milinis, the six-storey block housing communal kindergarten, cafeteria, library, gymnasium and roof garden. Among the public buildings there were, for example, workers’ clubs, such as Ivan Rusakov House of Culture of 1927-1929, Club of the Kauchuk Factory of 1927-1929 by Mel’nikov, or Sergei Zuyev Club-House of 1927-1929 by II’ia Golosov; or other types of building like Izvestiia newspaper headquarters of 1925-1927 by Grigorii Barkhin; the State Trade offices in 1925-1927 by Boris Velikovskii; the department store on Krasnaia Presnia of 1927 by the Vesnin brothers; and two structures started in 1928: Le Corbusier’s Central Consumers’ Union Building (Tsentrosouiz), and Alexsei Shchusev’s Ministry of Agriculture. Then there was the ideological centre, Lenin’s Mausoleum on the Red Square designed by Shchusev and built in 1924.

30 Already in 1918, Grigorii Dubelir, the first head of the Economic Commissariat’s Office for Planning, Regulation and Building of Towns and Villages stated: “Everyone is aware of the shortcomings of our modern cities … The first goal shall be the elimination of the housing shortage. … The second shall be the creation of the city and the development of its parts as an organic whole. … The city master plan is a programme for organizing urban life and a vehicle for social creativity.” Quoted in Afanas’ev and Khazanova, eds., Iz istorii sovetskoi arkhitектury 1917-1925, op. cit.,15-16.
The architects and urban planners were full of ideas for the capital of the new, planned society. They faced, however, a very grim reality. Confronted with the urban destruction caused by the Revolution and the Civil War, hardly anyone was prepared professionally to undertake the task of urban renewal, because of lack of experience.\footnote{31} To make things worse, throughout the 1920s, materials and technical skills were in desperately short supply. Furthermore, no matter how much the new generation was looking to the future, it still had to cope with the urban physical structure of the past. With the policy of building new ideological messages, the Bolsheviks, before they could construct with brick and mortal, came up with an idea of organizing street festivals in an effort to adopt the inherited city by creating a combination of political education and entertainment.\footnote{32} The implementation of the Monumental Propaganda Plan in 1918 gave architects a stage for playing out their desires for theatrical settings for state ceremonies.\footnote{33}

\footnote{31} As pointed out, the Soviet-educated young city planners and architects had never seen “a modern city” at first hand. Direct experience of such an environment was restricted to those who had traveled before and after the Revolution, and in general only their teachers were old enough to have had that opportunity. There was, however, a growing flow of illustrated publications from the West that impacted the Soviet milieu. See, Cooke, Russian Avant-Garde. Theories of Art, Architecture and the City, op. cit., 188.


It was not only easier logistically but it was economically necessary to adapt existing structures to new functions. At times, decorating the city with banners, emblems and inscriptions was used not only to convey a political message, but also to cover up the remnants of the Tsarist regime. Furthermore, Soviet street ceremonies appropriated an important part of the traditional Russian cultural heritage, the pre-Revolutionary religious and civic prazdniki, or festivals. 

Neverthelesss, the biggest impetus for reshaping the urban fabric was inspired by the vision of a new mode of life, entirely different from what had gone before. The establishment of the “necessary conditions” for a new philosophy of urban planning and a new architecture depended on the needs of the moment and on the vague notion of this “new form” and “new way of life” (novye bytie). This “novelty” for some meant only

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34 One of the first visions of the “city of tomorrow” in early Soviet Russia was connected to Bolshevik festivals. In 1920, the Moscow designer and artist Aleksei Mikhailovich Gan, submitted to the Theatrical Section of Anatolii Vasil’evich Lunacharskii’s Narkompros (Commissariat of Enlightenment) a proposal for the May Day celebrations. This project consisted of a “mass action ... in which the whole city would be the stage and the entire proletariat masses of Moscow the performers.” Anatolii Vasil’evich Lunacharskii, “O narodnykh prazdnestvakh” (On popular festivals), Vestnik teatra (Theatre Courier) 51 (February 5-8), 1920, quoted in Tolstoy et al, Street Art, op. cit., 124. Instead of decorating the city, Gan wanted the whole city and its outskirts to contain specially built stages that would have been a part of his imagined “communist city of the future.” The entire population of Moscow was supposed to participate in this highly theatrical enactment of a brighter tomorrow. Gan’s radical redefinition of artistic activity, as well as his intervention into the urban fabric, found support in Lunacharskii, although it was never realized due to claimed logistical difficulties.
access to comforts that they had always been denied, comforts broadly the same as those enjoyed by the former top echelon of the society, whereas for others it was a matter of a new humane and communal existence, often bordering on utopia. To these factors should be added the desire, particularly strong among the younger planners, architects and students, to break completely with the past.\textsuperscript{35}

The new, socialist conception of social existence demanded novel structures for its development. The life of tomorrow, as the Soviets envisaged it, was supposed to break with the traditions regarded as outmoded, of the duality of separate housing and services. It aimed to be based in new land uses, and a new built environment in which social and collective activities would take precedence over individual activities. From the very beginning, fundamental measures were taken to abolish private ownership of land and rented property.\textsuperscript{36} The state assumed sole responsibility for all matters relating to housing, urban design, and land use. Consequently, the Soviets attempted a radical restructuring of the social and material world based on Marxist economic theory.\textsuperscript{37} Within this schema, an

\textsuperscript{35} The propositions of the future city, which were coming out of the young avant-garde architects' and planners' drafting boards, while opposing the past, had overall positive overtones in imagining the future. Conversely, their counterparts, particularly in literature, demonstrated a rather sinister, dystopian urban vision, with Evgenii Zamiatin's \textit{My (We)} of 1920 leading the list. See, Gary Kern, ed., \textit{Zamyatin's We. A Collection of Critical Essays} (Ann Arbor: Ardis, 1988); Katarzyna Duda, \textit{Antyutopia w literaturze rosyjskiej XX wieku} (Anti-Utopia in the Russian Literature of the 20\textsuperscript{th} Century) (Kraków: Uniwersytet Jagiellonski, 1995).

\textsuperscript{36} The most paramount for the new socialist state was the promulgation of two legislative acts, the decrees “On the Socialization of Land” (February 9, 1918) and “On the Repeal of the Right to Private Ownership of Real Estate in Cities” (August 20, 1918).

\textsuperscript{37} To situate early Soviet urban planning in its historical context, it is important to recognize the paramount importance of Marxist doctrine on its development. Marxist ideology, besides explaining human affairs in
artifact, a particular building type and the whole form of a city was understood only in terms of the economic and social structures that produced them. Capitalism, on the other hand, was viewed as producing a particular kind of material culture with its own building types, such as the American skyscraper, whose size and shape was determined by capitalist land speculation. The skyscraper would actually become, as I discuss below, the point of professional contention, raising rather ambivalent opinions. Unlike the situation in the United States, the urban realm under the Soviets became a public domain par excellence. The poet Vladimir Vladimirovich Maiakovskii expressed this socio-political transformation, enthusiastically proclaiming the artistic possession of the city in which “[s]treets are our brushes, / squares our palettes.” In his poetic euphoria, Maiakovskii

38 Vladimir Vladimirovich Maiakovskii, “Prikaz po armii iskusstva” (Order to the Army of Art), Iskusstvo kommuny (Art of the Commune) 1 (December 7, 1918), 1. The journal Iskusstvo kommuny was a weekly paper published by the Fine Arts Section (IZO, Otdel izobrazitel’nykh iskusstv) of the Narkompros (People’s Commissariat of Education) under Anatolii Lunacharskii. The Cubo-Futurist poets and writers were installed as the editors of the journal. They attempted to assert themselves as the semi-official leaders of artistic and literary life. In flamboyant pronouncements, they claimed to be the original revolutionaries in arts and to speak on such matters for the proletarian state. Their nihilism and their policy of “clean sweep” for the old order of things seemed at the moment to be in line with official policy. Maiakovskii’s statements
overlooked, however, a radical detail. The Bolshevik government, committed to Marxist ideology and its practical adaptation into all aspects of public and private life, from 1918 onward became the only client for urban planners and architects. Hence, “the streets” and “the squares,” with all the rest of the urban fabric, belonged *de facto* solely to the state.

Soviet communism, based on communal (state) ownership of land in the name of the people, consequently would aim to create radically different building types, urban structures and social formations. Thus the architectural profession received an unprecedented mandate to realize a new material world based on revolutionary principles of state ownership and communist labour relations. Architects were prepared for their responsibilities, which they had claimed from the earliest days of the Revolution. The consensus among Marxist social reformers of *byt* (everyday life) was that without a radically new material culture and economic infrastructure based on socialist principles, the old pre-Revolutionary order and its *perezhitki* (old social vestiges) would exert its influence and inhibit the development of socialism. As this infrastructure was just being realized during the 1920s, there was a great deal of room for speculation, discussion, innovation and experimentation. However, due to the limited number of large scale state-

of the artistic programme, usually in the form of brief poems printed as editorials (such as “Prikaz po armii iskusstva”), demonstrate strident extremism. Soon, however, the Cubo-Futurists found themselves not only out of step with the proletarians -- whose taste in literature, if it existed at all, tended to favour the classics and to reject the sophisticated linguistic contortions of the futurists -- but sharply at odds also with the leaders of the Party-State. It is well known that Lenin regarded Maiakovskii’s work with distaste. Consequently, Lenin and other Party leaders’ concerns for the “cultural heritage” led them to disapproval
financed development programmes and commissions -- given that all private sector
building enterprise had ceased -- these new explorations took the form of three principal
types of initiative: urban plans, exhibitions, competitions and diploma projects, most

of the futurist attack on the art of the past. On the approaches to “cultural heritage,” see also Chapter Two, 112 ff.

39 When offices for planning the reconstruction of Moscow and Petrograd were set up under their City Soviets in 1918 and 1919, they were headed by such architect-planners as Ivan Vladislavovich Zholtovskii and Aleksei Viktorovich Shchusev in Moscow, and in Petrograd by Ivan Aleksandrovich Fomin. All of them had received their training in academic tradition well before the Revolution. Each of these architects demonstrated a strong predilection toward older models with formal and geometric order and symmetry. The notion that a socialist city should be fundamentally different in content and form from the past and from its capitalist counterpart was entertained mostly by the younger planners and architects, many of them still students. Vigdariia Eftramovna Khazanova, Sovetskaia arkhitektura пиervыkh let Oktiabria 1917-1925 (Soviet Architecture of the First Years of October 1917-1925) (Moskva: Nauka, 1970), 43-100; Frederick S. Starr, “The Revival and Schism of Urban Planning in Twentieth-Century Russia,” in Michael F. Hamm, ed., The City in Russian History, op. cit., 222-242; Catherine Cooke, “Russian Responses to the Garden City Idea,” Architectural Review 163 (June 1978), 353-63.


41 The first competitions involving architects after the Revolution were monuments to victims and heroes and to crematoria-columbaria. By 1919, the highly popular designs of crematoria alternated with projects of Worker’s Palaces. Besides the Palace of Labour competition of 1923, which was the largest during the1920s, there were other competitions, whose numbers were constantly increasing. In accordance with the requirements of the new society, their topics ranged from administrative and industrial buildings, educational and cultural establishments, housing, clubs, markets and retail stores, to sports and recreational facilities. A survey of the visual material is published in Khan-Magomedov, Pioneers of Soviet Architecture. The Search for New Solutions in the 1920s and 1930s, trans. Alexander Lieven (New York: Rizzoli, 1987[1983]); see also Anatoli Anatol’evich Strigalev, ed., Problemy istorii sovetskoi arkhitektury. Sbornik (Problems of the Soviet Architecture History. Collection) (Moskva: TSNIIP gradostroitel’stva, 1983); Catherine Cooke and Igor’ Kazus’, Soviet Architectural Competitions 1920s-1930s (London: Phaidon, 1992); Catherine Cooke, “Mediating Creativity and Politics: Sixty Years of Architectural Compositions in Russia,” in The Great Utopia: The Russian and Soviet Avant-Garde, 1915-1932 (New
of them executed solely on paper. The new concepts related to the city contained a considerable amount of social utopianism and oversimplification of planning, budgetary and technical problems. All of these novel architectural and urban theories and schemes proposed for the ideal socialist city were debated in schools, critiqued in newspapers and technical magazines, and argued about at conferences, at professional gatherings, and at workers’ assemblies. In addition to sociopolitical pressures and to indigenous practices in planning and architecture, Western ideas imported to the Soviet Union, particularly via the channels of professional publications, exerted a strong impact on the formation of Soviet urban theories and architecture. Among them, industrial and technological
achievements in the United States were easily available sources of concepts for the Soviet designers, strongly affecting their formulation of new architecture and urban form.

Amongst the Soviet professionals were the young architects who demonstrated a special interest in American technological achievements and architecture. During the concepts and was based on the application of modified classical principles to the larger industrial and administrative centres. The second programme was modeled on the International Garden City Movement in England, instigated by Ebenezer Howard, and it incorporated its principles for satellite towns and smaller rural communities. The "revivalists" advocated large cities, while proponents of the Garden City affirmed the virtues of the small town. Thus, when a new socialist idiom emerged in the 1930s and the Communist Party called for an appreciation of the architectural heritage and of classicism in particular (Central Committee resolution of April 23, 1932), the principles of classical planning and architecture were well represented by architects and planners active throughout the 1920s like Zholtovskii, Fomin, and Vladimir Alekseevich Shchuko. In fact, Lev Davidovich Trotsky already in 1923 spoke of Neo-Classicism as a yearning for stable forms following the period of revolutionary newness.


During the 1920s, the field of architecture in Russia was dominated by two main competing avant-garde groups. One was AsNovA (Assotsiatsiia novykh arkhitektorov – Association of New Architects), established in 1923 by Nikolai Aleksandrovich Ladovskii with Vladimir Fedorovich Khranski, and Nikolai Vasil'evich Dokuchaev, whose members promoted so-called Rationalism. The other was OSA (Ob"edinenie sovremennykh arkhitektorov – Society of Contemporary Architects), formed in 1925 by Moisei Iakovlevich Ginzburg and the Vesnin brothers, and whose theory was described as Constructivism. Despite their differences, both agreed that revolutionary architects must consider contemporary materials and technology, and must create buildings and cities that answered actual needs. They perceived the environment as the prime determinant of behaviour and consciousness and regarded architecture to be paramount in the environment. Where these two groups disagree, however, was the nature of the environment, and more importantly, the Revolution. AsNovA looked at architecture from the outside – referring to its ideas as Rationalism, declaring that the psychological impact of external form should be the prime concern of the new architecture. It should emotionally saturate form with socialist content and thereby not only the built environment but also the values of society. By extension, the Revolution was an external force operating upon the individual. OSA, whose theory was described as Constructivism, approached architecture from the inside – architecture that is capable of transforming people by altering the
1920s the American city, with its towering structures, was a common currency in the Soviet debates on architecture and urban planning. The skyscraper (neboskriob) was actually one of many notions associated with a much broader term, which was "amerikanizm." Indeed it would be the skyscraper that Krutikov would use as one of the main factors in making his argument for his vision of the future city. Around the time when Krutikov was attending school and preparing for his project, Moscow’s architectural milieu became inundated with various tenets on skyscrapers. These opinions ways they interact with each other within an environment, within a particular building or city. They believed that human nature could be transformed by an environment that encouraged cooperation and community, and that the new architecture should produce buildings that maximized efficiency and promoted social interaction while preserving individuality. The end of 1920s witnessed the emergence of new groups, primarily consisting of younger architects whose work had not been accepted by the architectural community and who, like for example VOPRA (Vsesoiuznoe ob'edinenie proletarskikh arkhitекторov, or All-Union Society of Proletarian Architects), active between 1929-1958, started to base its programme in accordance with official political lines. 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, h. 4 (1986), 557-578; Anatole Kopp, *Town and Revolution, Soviet Architecture and City Planning, 1917-1935*, trans. Thomas E. Burton (New York: George Braziller, 1970), 86-98; S. Frederick Starr, "OSA: the Union of Contemporary Architects," in George Gibian, H. W. Tjalsma, *Russian Modernism, Culture and the Avant-Garde 1900-1930* (London and Ithaca, NY: Cornell University Press, 1976), 188-208. For documents see, Kirill Nikolaievich Afanas'ev, Vigdariia Efraitimova Khazanova, eds., *Iz istorii sovetskoi arkhitektury, 1926-1932 gg*, (From the history of Soviet architecture between 1926-1932), (Moskva: Akademiia Nauk CCCP, 1970), 65-105. For general information on VOPRA, see Chapter Two, note 124.

on neboskriob circulating then in Moscow oscillated from absolute fascination, through more balanced optimism, up to underlying skepticism, ending up in harsh criticism and disdain. Overall, Soviet artists, designers and architects, while admiring the high-rises built in the United States, looked for ways to improve and correct these structures that represented, as all agreed, the technological ingenuity produced under capitalism.

Already in 1922, El Lissitzky, who was an important link in the professional exchange between artists and architects of Russia and Western Europe, especially Germany, published his examination of amerikanizm in European architecture.46 While recognizing the technological achievements that had been advanced in the United States by their engineers, Lissitzky showed a great dissatisfaction with the American taste for historicism in architecture:

In the Old World, in Europe, the words “America,” and “American” are connected with notions about something ultra-perfect, rational, purposeful, universal. … Europe discovered in America a new guild of men – the engineers, who work day-to-day, hour-to-hour, for demands of the present time. … The truth is that New York itself knew nothing about this discovery. There they continue to build temples to the Greek gods above the underground stations, with the strong conviction that they are more beautiful than the original ones because they are ten times bigger. In New York and Chicago, engineers first invented and constructed the fantastic steel skeletons of skyscrapers fifty-storeys high, but then the artist-architects, trained at the ancient Paris academy, clothed this living skeleton so

skillfully with ostentatious embellishments that it was twenty years later before Europe recognized the crux of the matter.\textsuperscript{47}

While appreciating his European colleagues for their eager drive to become engineer-constructors instead of artist-architects -- the latter perceived by Lissitzky as symptomatic in the USA -- he concluded that only the Soviet Union was able to secure the future for architects and to correct the mistakes committed by American professionals. This bright future was secured in Russia because the country was undergoing its revolutionary transformations with an “international mental horizon, revolutionary activity and collective thinking.”\textsuperscript{48} One year later, in 1926, Lissitzky again centered his analysis on “America under construction,” this time paying attention to a technical evaluation of the structural framework of skyscrapers and industrial buildings.\textsuperscript{49}

He wrote, “[f]unctionalism, Constructivism, horizontalism, verticalism, and above all \textit{amerikanizm} are the watchwords of today’s architectural thinking.”\textsuperscript{50} Considering the

\textsuperscript{47} Ibid., 140.
\textsuperscript{48} Ibid., 141.
\textsuperscript{49} El Lissitzky, “Arkhitektura zheleznoi i zhelezobetonnoi ramy,” (Architecture of the Steel and Ferro-Concrete Frame), \textit{Stroitel’naia promyshlennost’} (Building Industry) no. 1, (1926), 59-63.
\textsuperscript{50} Lissitzky, “Arkhitektura zheleznoi i zhelezobetonnoi ramy,” \textit{op. cit.}, 59. Lissitzky in his list mixed characteristics typical of modern architecture in Europe, America and Russia all together, allocating priority to developments in the United States: functionalism, since Louis Sullivan’s dictum “form follows function” indicated modernist trends that consequently had been mastered by the architects of the Bauhaus, de Stijl and Purism; Constructivism, as promoted by the Soviet radical group stressed utilitarian simplicity and respect for the logic of materials; horizontal lines in a city were traditionally associated with monumentalism, implying public or civic purposes; verticalism, via the skyscrapers, was linked with corporate power. Revealing the internal cultural politics in the Soviet Union during the 1970s, is the omission of the word “amerikanizm” and instead filling the missing word with an ellipsis in a reprint of Lissitzky’s text in Barkhin et al., \textit{op. cit.}, v. II: 146. Apparently equating Americanism with other notions that Lissitzky regarded as positive and modern, was too much to be spelt out under Leonid Brezhnev. The
history of the tall building in the United States, Lissitzky noted and applauded both the emergence of the structural frame, which made for reduction in weight and allowed for a variety of cladding types such as terracotta, and of standardized components.51

The year 1926, when Lissitzky wrote about amerikanizm and skyscrapers, was a time when municipal regulations forbade the construction of neboskrioby in Moscow, while at the same moment the professional Soviet press exploded with texts devoted to the topic of high-rises. This proliferation of topics devoted to high-rises can be perceived as a challenge to this legislation and a conviction in the validity of the skyscraper, especially after its remodeling according to Soviet principles. An image by Kazimir Severinovich Malevich exemplifies the ambivalent attitudes toward the sky reaching towers that permeated the Soviet milieu at that time. In his Project for a Suprematist Skyscraper for New York City of 1926 (Fig. 1), Malevich intervened into a photograph of the towering skyline of New York, by imposing a drawing of his arkhitektonov (architectons) -- forms perceived as pure, non-utilitarian architecture -- into a densely built up section of Manhattan. Placed centrally in this montage, Malevich’s rectangular, vertically positioned slabs of elongated geometrical structures loom high above the

Cold War estrangement between the Soviet Union and the United States, with its confrontation, tension and competition between these two nations evidently led to whitewashing by the Soviets of their own “inconvenient” history, when one of the country’s highly esteemed architects associated America with a positive notion of modernity.

51 In his observations Lissitzky captured the elements that identify the skyscraper. According to Vincent Scully, the term “skyscraper” originally signified less a quality of height than a way of construction in
existing rooftops, taking primacy over the American epitome of functional and profitable real estate. This gesture, an expression of fascination and reverence mixed with artistic arrogance, irony, and a conviction of the supremacy of Soviet production over the leading economic and engineering power, was characteristic of the treatment given to the American symbol of urban contemporaneity.

Again in 1926, the most radical Soviet architectural group OSA, or Society of Contemporary Architects, launched its magazine *Sovremennaia arkhitektura* (SA—Contemporary Architecture),

on whose pages it presented a strong interest in skyscrapers, mechanization, and industrial buildings in the United States. The Constructivist architects within OSA, such as Moisei Iakovlevich Ginzburg and Ivan Il’ich Leonidov agreed with their colleague Aleksandr Leonidovich Pasternak, who proposed to view the skyscraper as the prototype of the “social condensers” by means of which the architects would transform Soviet lifestyles in the most expedient manner.

Despite his fascination with skyscrapers or perhaps because of his conviction in the structural possibilities they offered, Pasternak criticized the “old” American high-rises for

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52 The publication of the journal *Sovremennaia arkhitektura*, or SA, lasted from 1926 to 1931. SA was to become the best Soviet architectural review, with its contributors including Mikhail Osipovich Barsch, Aleksandr Leonidovich Pasternak, Lidia Konstantinovna Komarova, Aleksandr Sergeevich Nikolskii, Le Corbusier, and Ivan Il’ich Leonidov, among others. It was recognized not only for its content and militant stance but also for its design and original typography.

being ornamental,\textsuperscript{54} and praised the “new,” modern ones for exemplifying standard
procedures and the scientific organization of labour.\textsuperscript{55} Ginzburg admitted that although
Revolutionary Russia started to lead the world architecture with regard to new concepts,
Western Europe and America still continued to excel with respect to technique,
mechanization and standardization.\textsuperscript{56} His point was, however, that in accordance to
dialectical understanding, and precisely because Russia’s poverty and technological
backwardness, the new socialist state could jump immediately to the level of
development pioneered in the West and consequently lead the world beyond the limits
that bound the latter’s individualistic, unplanned, eclectic work.

Critical observations on American architecture were also expressed by AsNovA,
or Association of New Architects, which besides OSA, was the other leading group of
modernist architects in Russia during the 1920s. In the only issue of \textit{Izvestiia AsNovA}
(AsNovA News) published in 1926, its co-founder Nikolai Aleksandrovich Ladovskii\textsuperscript{57}
put forward pragmatic proposals relating to fire safety in skyscrapers, and contrasted

\textsuperscript{54} Ornamental architecture was regarded as anathema by Soviet avant-garde architects. For example, Ginzburg referred to Art Nouveau building decoration as the “most vulgar” style and a “scum of the most repulsive kind.” Quoted in Andrei Ikonnikov, \textit{Russian Architecture of the Soviet Period}, trans. Lev Lyapin (Moscow: Raduga, London: Collets, 1988), 13. Overall, the ornamental architecture of the late 19\textsuperscript{th} and early 20\textsuperscript{th} centuries world-wide -- in Russia, America and Europe -- was especially treated in the Soviet Union with distaste because it was perceived as an accessory to rapid capitalist development.

\textsuperscript{55} Aleksandr Pasternak, “Amerika,” \textit{Sovremennaia arkhitektura} no. 4 (1926), 92-94. Pasternak illustrated his article with photographs taken by Erich Mendelsohn in the United States, which he published in the book \textit{Amerika}. Two represented a silo in Chicago and one a back elevation of a hotel in Detroit.

\textsuperscript{56} M. la. Ginzburg, “Mezhdunarodnyi front sovremennoi arkhitektury” (International Front of Contemporary Architecture), \textit{Sovremennaia arkhitektura} no. 2 (1926), 41-46.

\textsuperscript{57} For information on Ladovskii, see Chapter Two, note 1.
American and Soviet realizations of high-rises. He wrote: "Architecture should not camouflage structure as it does in America; it should be 'sincere.' Yet it would be naïve to suppose that it is enough to express structure 'honestly' to attain architectural objectives." Continuing that "the expression of height [was] the primary problem of the skyscraper," Ladovskii rejected what he considered as the "Gothic" solutions adopted by the Americans, indicating that bankers of the twentieth century are no longer dressed like cardinals. Instead Ladovskii proposed a series of "plastic" solutions aimed at giving direct architectural expression to the vertical and horizontal elements of the structure. His text was illustrated with images of neboskrioby projected by Ladovskii's students at VKhUTEMAS in the academic year 1924-1925, Ivan Iosifovich Volodko and Vitali Alekseievich Lavrov (Fig. 2). In their designs both young, aspiring architects critically responded to the ornamental tendencies that, as they understood, dominated architecture in the United States, and suggested skyscrapers that, in agreement with Ladovskii's teaching, "sincerely" revealed their structure. Around the time of this discourse on American architecture and its shortcomings that was supported by the conviction placed in the emerging new Soviet model of building, Krutikov had already finished his basic courses at VKhUTEMAS and was preparing for his diploma project in the studio led by

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58 Naëi (N. A. Ladovskii), "Neboskrioby SSSR i Ameriki" (Skyscrapers of USSR and America), Izvestiia AsNovA no. 1 (1926), n. p.
Ladovskii. As we will see, the argumentation for improving the "deficient" skyscraper would become a crucial part of Krutikov's diploma project.

New York

The skyscraper, perceived as an ultimate symbol of contemporaneity, since its rise in the 19th century, by the 1920s was considered the lingua franca of modern European and American architecture. By then New York City had become the world's largest urban agglomeration, outdistancing all other places as well in the upward extension of

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51 The population of New York City in 1925 was 7,774,000 people. By the mid-19th century New York was established as the pre-eminent site of entry for European immigrants to the new "land of opportunity." In 1898, when New York achieved its ultimate physical size by annexing Brooklyn, the Bronx, Queens and Staten Island, its residents numbered 3.1 million, half of whom were foreign born. Between 1880 and 1919, more than 23 million Europeans immigrated to the United States. About 17 million of them disembarked in New York and many of them chose to remain in the city. During World War I, super-patriotism and xenophobia led to anti-foreign tensions, which grew even greater after the armistice as Europeans sought to escape the devastation of their homelands by fleeing to the United States. Between 1919 and 1920, the number of European immigrants quadrupled, and in 1921 that number almost doubled. The new wave of foreigners threatened the Old America – ever since the war and the Bolshevik Revolution many Americans worried about the potential radicalism of the newcomers. In 1924, the Congress passed an act limiting the
its buildings. Although some of the key prototypical experiments in the construction of the vertical city were initially worked out in Chicago, lower Manhattan was the site of the world's first major concentration of skyscrapers, the symbol of the modern city. Colonel W. A. Starrett, who owned the construction firm responsible for many of New York's best-known buildings, proclaimed that the city's skyscrapers were "the Mountains of Manhattan" that offered the metropolis a "badge of cityhood." While many argued that the resulting congestion brought lively commerce to Manhattan's business establishments, it was widely acknowledged that surrounding residential neighbourhoods were being rendered virtually uninhabitable. The specialization and differentiation of the Manhattan business district led to rising land costs, and in many commercial areas,


New York held the record for the number of very tall buildings. In 1929, New York had 188 of the 377 skyscrapers in the United States that were at least 70 metres high. The city also had most of the tallest commercial structures, from the Woolworth Building, completed in 1913, to the Chrysler Building, which was under construction during 1929. Kenneth T. Jackson, "The Capital of Capitalism: the New York Metropolitan Region, 1890-1940," in Sutcliffe, ed., *Metropolis 1890-1940*, op. cit., 319-353.

The Empire State and Bank of Manhattan buildings were among the skyscrapers built by Starrett Brothers & Eken construction firm, which Colonel W. A. Starrett headed, together with his brother Paul and Andrew J. Eken.

Col. W. A. Starrett, "The Mountains of Manhattan," *Saturday Evening Post* 200 (May 12, 1928), 24-5, 72, 74, 76, 78, 82.

buildings of less than six-storey had practically disappeared by 1930. The extraordinary concentration of commercial and manufacturing activities that led to the amassing of large buildings increased the volume of both pedestrian and vehicular traffic and exacerbated the housing crisis. In spite of growing density and overcrowding, this radical transformation of urban form, driven by high land values, steel-frame construction, and powerful elevators, was imbued with powerful ideological connotations such as progress, a reaching for the beyond, and the freedom of the creative spirit. The escalating skyline of New York was perceived simultaneously as an outcome of, and the symbol of, a growing economy. Despite its dominant position within the United States, New York, 

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65 The five- and six-storey height was the dominant altitude of structures in New York since the introduction of high-rises. According to Thomas Bender and William R. Taylor, there was a resistance of New Yorkers to tall buildings until about 1915. Since then monumentalism previously associated with horizontalism shifted to verticalism and towering skyscrapers became accommodated into a new urban aesthetic. Thomas Bender and William R. Taylor, “Culture and Architecture: Some Aesthetic Tensions in the Shaping of Modern New York City,” in William Sharpe and Leonard Wallock, Visions of the Modern City. Essays in History, Art, and Literature (Baltimore and London: John Hopkins University Press, 1987), 189-219. To find a remedy for the increasing number of skyscrapers and the overcrowding they were perceived to be causing, the New York Times in 1926 polled a group of architects. Thomas Hastings, despite his participation in the design of numerous tall structures, denounced skyscrapers as the “craziest buildings” and demanded that an eight-storey height limitation be imposed; idem, “Divergent Views by Architects on City Planning and Skyscrapers,” New York Times (October 31, 1926), XI: 1. William A. Boring, dean of Columbia University’s School of Architecture, proposed to decrease the number of storeys in the buildings even further. He wrote that “[w]hen the buildings are of abnormal height, the streets become too narrow for the traffic … New York city can be housed in six stories spread over the whole city;” idem, “Building Plan,” New York Times (June 18, 1926), 15. In the same year, Ernest Flagg set forth the most radical proposal in the ongoing debate on the height of buildings in New York. According to him, all buildings should be restricted to five-storey. Ernest Flagg, “Limiting Building Heights,” letter to the editor, New York Times (November 27, 1926): 16. Also see Mardges Bacon, Ernest Flagg: Beaux-Arts Architect and Reformer (New York, Cambridge, MA, London: MIT Press, 1986), 220-23.

however, unlike Moscow, was not the capital of a nation, a region, or even of a single state.

Nonetheless, because of its central location and thriving port, New York City had become key to the circulation of commercial, financial and political information within the whole country, while achieving also its dominant cultural position.

New York, in striking contrast to Moscow, was a place where complete freedom of action for private enterprise was limited only by the intervention of public administration. The use of urban land depended on the aspirations of individual owners (private or public), on whom the administration exercised an indirect influence by means of regulations that controlled the size of buildings in relation to the adjacent public areas, and that fixed the relationships between adjoining buildings. Private landlords retained all the profits that they made from the city’s expansion, and as a result, the administration was most often unable to recoup the expenses involved in laying on public services. New York, particularly Manhattan, was built up with such a density and volume of large buildings that the corporate/commercial sector turned to public regulation as a necessary measure to facilitate and protect new investment and development, in order to continue growing bigger and taller without interruption or stagnation.

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One of these regulatory interventions that had a lasting effect on New York’s urban fabric was the Zoning Law of 1916. This ordinance also made a strong impact on the manner in which Ferriss would conceptualize the skyscraper and its effects on an urban form of tomorrow. Adopted on July 25, 1916, the zoning legislation followed almost two decades of debate, reports and political pressures. Its aim was to “stabilize and conserve property values, to relieve the rapidly increasing congestion in the streets and transit lines, to provide greater safety in buildings and in the streets, and in general to make the city more beautiful, convenient, and agreeable.” Thus, the main concerns of this building resolution were supposed to synthesize aesthetic and practical considerations while responding to specific urban ills, mostly overbuilding and congestion. In order to preserve a measure of air and light in the densely built-up space, the code dictated that after a fixed perpendicular reach, a building had to be stepped back in accordance with a designated angle drawn from the centre of the street. Consequently a tower covering no more than one-quarter of its site could then rise to a specific height.

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69 From the introduction to Building Zones by George B. Ford, a handbook published in 1916 by the Lawyer’s Mortgage Co. of New York; quoted in Willis, “Zoning and Zeitgeist,” op. cit., 47.
with a tempered top. The legislation also designated districts within the city, which were regulated by the prescribed function and divided into business, residential and industrial areas.

The slow comprehension and acceptance of the possibilities and limitations that the Zoning Law offered, particularly to large commercial buildings, was due to the fact that the legislation was introduced during World War I and to the subsequent economic recession. This subject, however, attracted renewed attention with the recovery of the construction business in the early 1920s. Various articles published during that period in New York testify to the high currency of zoning that was rekindled in professional circles a few years after its introduction. The architectural community declared itself anxious to examine the ordinance’s effect on design and particularly on the shape of the city skyline. One of the first articles written on this topic during the 1920s was by Harvey Wiley Corbett, a prominent New York architect, who gained a reputation as the chief expicator of the setback principles. In the conclusions to his text, “High Buildings on Narrow Streets,” Corbett demonstrated his conviction that the setback idiom would improve future skyscrapers by forcing architects to design high buildings by approaching them

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70 The building setback requirement would dominate the New York skyline until it was replaced in 1961 by the “tower-in-the-plaza” approach, which encouraged street level open space around high-rise buildings, in contrast to the 1916 concept aiming to preserve open space in the sky.

from all angles, not solely from the street facade. To illustrate the premise of the zoning code, Corbett used both the simple diagrams illustrating the setback concept, which dated to 1916 and were drawn by George B. Ford for the committees preparing the ordinance (Fig. 3), together with photographs of recently constructed buildings in New York. However, it was Ferriss's visualization of the zoning regulations that popularized the topic and made the architectural delineator's way of execution well known locally and abroad.

In four consecutive images (Fig. 4), Ferriss gave the setback formula an iconic character identifiable with the zoning law of New York City. These four images that Ferriss started to render in 1922 were widely published and exhibited throughout the

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73 All the photographs depicted New York buildings that were constructed observing the 1916 Zoning Law, such as Fisk Building and Gotham National Bank Building.

1920s, evoking the power and massive dominance of the setback form, yet somewhat softened by a mystical atmosphere. They represented, according to Ferriss, “the evolution of the setback building,” also called “the four stages,” set up to demonstrate the successive steps of the “carving” of the zoning envelope into a viable skyscraper. These images were in striking contrast to the diagrams done a few years earlier by Ford (Fig. 3), that represented the allowed bulk of buildings for various zoning sites. While Ford’s schematic sketches were executed in an analytical, rather schematic and drafting-like manner using just a single line, Ferriss’s drawings rendered in pencil with heavy application of chiaroscuro created instead dramatic nocturnal effects revealing a considerable artistic license leaning toward painterly qualities. These qualities would be fully developed and subsequently employed by Ferriss in *The Metropolis of Tomorrow*, becoming indeed his *oeuvre’s* trademark.

The first appearance of Ferriss’s illustrations of the zoning envelope occurred in his article entitled “The New Architecture.”\(^75\) In both text and images, Ferriss equated the simple setback mass with modern style and suggested that “the most fascinating potentiality of the new laws may lie in their ability to bring forth the much-debated ‘new style’ in architecture.”\(^76\) In a prophetic manner, he proclaimed the commencing of a new era, in which “we are not contemplating the new architecture of a city, we are

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\(^76\) Ibid.
contemplating the new architecture of a civilization." Ferriss's statement, echoing the sentiments expressed in 1916, that the Zoning Law had initiated "a new era in urban civilization," should be situated within the discourse on American civilization that took place in 1922, the year of Ferriss's text. It was then that Harold E. Stearn edited a book consisting of the considerations of thirty individuals, prominent in many walks of national life, who perceived that the state of civilization was in jeopardy. The first essay, "The City," was by Lewis Mumford. In it Mumford criticized contemporary building practices that led in his opinion to the diminishing of a community. While regretting what he considered as the disappearance of a communal bond, he posed a question: "Have we begotten a civilization?" Hence, Ferriss's claim about the Zoning Law as initiating a novel epoch of "urban civilization" can be perceived as a response to the dilemma posed by Mumford.

The same belief in a modular setback resulting from the zoning ordinance prompted Ferriss to prophesy a future urbanscape in the United States that would be transformed "within a generation" by erasing "the congested areas of large cities" by virtue of control and organization. The next year, in 1923, Ferriss speculated that the

77 Ibid.
zoning law would encourage the incursion of skyscrapers into area previously occupied by three- and four-storey buildings. He expected this to offset their existing concentration on Wall Street, around Grand Central Station, and along Broadway, redistributing the "human 'load' of the city." Moreover, he suggested that the new zoning measures would encourage the formation of a new type of city that would "possess a spacious and harmonious uniformity." In reality, tall buildings did indeed increasingly replace low ones, but major corresponding shifts in population concentration did not occur. Actually, the skyscrapers together with the growing number of automobiles led to an ever-growing urban congestion.

Ferriss's enthusiasm for zoning, as well as his fantastic visions, greatly impacted Corbett, who, since their collaboration between 1922 and 1925, changed the style of his professional writing, as Carol Willis has noticed. It evolved from a technical and straightforward tone to a much more inspired and rhetorical prose, reminiscent of

83 Ibid.
84 Whether the New York's traffic was worsen or even partly caused by the proliferation of high rises, the sheer number of automobiles in the city skyrocketed during the twenties -- the number of registered cars began to rise around 1918, reaching its peak in 1923, to fall in 1932. Indeed, the automobile was the transportation innovation that prompted a new building cycle during the 1920s, particularly the spread of suburban development. The City Club of New York correlated high buildings with motor vehicles and accused both of their "monstrous" effects on urban living. This rhetoric was based on the argument that the skyscraper increased traffic congestion that in turn lead to road accidents in which over 300 New York children, and 600 adults were killed by motor vehicles in 1925. Quoted in Kantor, "Modern Urban Planning in New York City, 1890-1933," op. cit., 361-362.
85 The collaboration between Ferriss and Corbett generated a series of five texts, which they published together and separately, in addition to numerous interviews they gave to the press over that time. Willis, "Zoning and Zeitgeist", op. cit., 55.
Ferriss’s grandiloquent optimism. Furthermore, regarding the subject matter, Corbett, in agreement with Ferriss, applauded the Zoning Law as the major instrument of urban planning, in which setback principles were supposed to dominate in the future. In 1924, Corbett, while praising the regulations of 1916 as an effective tool of urban planning, predicted that “[t]he new type of city with its innumerable spires, towers, and domes, set back from the cornice line, will provide a fascinating vision. ... brought under a large scheme.”

The setback concept in fact led to a new building type, a super-block, a huge stepped-back tower rising over a full, or even multi-block base. In effect, the buildings achieved a “wedding cake” silhouette resembling a Babylonian ziggurat, or a pyramid. When the developer wished to build the maximum envelope of his lot, the shape of the structure was pre-designed by the code. All over New York, these setback resolutions began to transform the urban landscape from the flat-topped boxes or thin towers into proportioned ranges of “sculptured mountains.” As the result of the demands of real estate markets, however, only a few super-blocks were actually built during the 1920s,

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although the many projects of this period illustrate the wide appeal of this idea that became the new symbol of corporate wealth and urban dynamism.

However, the rash of skyscraper development, at first demonstrating the widespread acceptance of the zoning ordinance as well as the new aesthetic of setback architecture, reached such an unprecedented volume by 1926 that the previous enthusiasm for the 1916 zoning regulations turned into dissatisfaction and controversy. Critics began to voice serious objections to the existing height and bulk measures that permitted too many new buildings to be too tall and massive, despite the restrictions and the setback formula. In effect, the professional community became greatly divided with regard to skyscraper construction and its effects on congestion. The chairman of the Traffic Committee for the Broadway Association, J. E. Harrington, blamed the excessive number, size, and growth of skyscrapers for transit and traffic congestion and stated that “the Zoning Law in New York has outgrown itself and needs revision.”

Mumford challenged all prevailing notions that would contradict his own claim that the skyscraper was just the product of the desire to “bring a congested use to the land, which automatically increased the economic rent.” For Ferriss, however, this criticism did not deter his steadfast appreciation of the skyscraper and the Zoning Law. Indeed, this

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89 Lewis Mumford, “Is the Skyscraper Tolerable?” *Architecture* 55 (February 1927), 67-69. According to Mumford almost all American cities accepted the concept of metropolitan expansion. Motivated by the desire for increasing land value, they based their future expectations on unlimited population growth.
enthusiasm would lead Ferriss to translate the setback formula into an aesthetic vision of a future city despite the opinion, expressed by Carol Willis, that the Zoning Ordinance was not conceived as an aesthetic issue. Although the early advocates of zoning supported the City Beautiful ideology, zoning itself was apparently promoted as a functional and rational objective. In the advisory reports of successive municipal commissions, the influence of zoning on the appearance of the city was discussed only in general terms. The comments of architects working on this legislation made clear that while they were convinced that a code would indeed create a more attractive city, they had no intention of implementing aesthetic guidelines relating to the law itself. Similarly, the planners and politicians who wrote the law were motivated not by a vision of an ideal city, but by practical, economic, and political factors of urban reform.

In effect, while the construction of skyscrapers remained a contentious issue throughout the 1920s, some urban critics eventually started to point towards the need for effective planning to resolve the problem of congestion. For many, however, the problem

Directed by this premise of expansion and subsequent congestion, the only beneficiaries of these tendencies were landlords, mortgage holders, and real estate speculators.

91 The City Beautiful movement, inspired principally by the “White City” of the World’s Columbian Exposition of 1893 in Chicago, was grounded in the idea of civic urban beautification. Around 1907, there was a considerable drive to get a City Beautiful plan adopted for New York City. The movement had still many supporters during the time when the Zoning Law was introduced. Harvey A. Kantor, “The City Beautiful in New York,” New York Historical Society Quarterly 57, no. 2 (April 1973), 148-171; William H. Wilson, The City Beautiful Movement (Baltimore and London: Johns Hopkins University Press, 1989). See also Chapter Four, note 3.
of congestion seemed symptomatic of a larger failure of municipal organization, resulting from the assumption that big cities were inherently ungovernable and unmanageable. Hence, the development of skyscrapers and their impact on increasing urban size prompted questions of whether the city should further expand in an already existing pattern, or take a radically different course. By the end of the 1920s, hostile arguments against metropolitanism were commonplace, and expectations for a new, widely dispersed urbanism became popular. In addition, planning extended its horizon and included regional concerns.

Two of the major regional planning solutions proposed in New York during the 1920s had a particular impact on Ferriss's professional career. First was the monumental Regional Plan of New York and Its Environs (RPNY), begun in 1921, whose ideas echoed Ferriss's own approach to architecture and urban planning. The other was the Regional Planning Association of America (RPAA), founded in 1923, whose concepts regarding the improvement of the American cities were in stark contrast to Ferriss's professional credo, causing heated polemics between him and the members of the RPAA.

The commission that devised the Regional Plan of New York and Its Environs (RPNY), led by Thomas Adams, was a group organized privately by businessmen and financiers and financed by the Russell Sage Foundation, with a budget of $1.2 million,
and promoted conservative proposals. Carrying over the spirit of the City Beautiful movement from the pre-war era, the RPNY aimed to develop techniques for gathering the best architectural talent to implement public works. Beside Ferriss, other architects such as Corbett, with whom Ferriss collaborated on the visualization of the Zoning Law, and Cass Gilbert, the designer of Woolworth Building (1911-1913), in whose office Ferriss inaugurated his professional career in New York, joined together with the statisticians, engineers and city planners to fulfill the RPNY's mandate.

The Regional Plan's concepts were predicated on three assumptions: first, on the growth of the region's population and urbanized area; second, on the primacy of the economic function in urban life and planning; and third, on the continued domination of the region by New York City, particularly its port. With regard to specific structures, the

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skyscraper was accepted as an inevitable essential part of a free market in land development. Housing had, however, a low priority in land allocation. While the latter prerogatives of the RPNY would also govern the imagined future metropolis suggested by Ferriss, this plan was harshly criticized by the Regional Planning Association of America (RPAA) for its social and spatial conservatism.

The members of the RPAA were radically-inclined professionals, such as the group's principal spokesman, the writer Lewis Mumford, the architect-planners Clarence Stein and Henry Wright, the ecologist Benton MacKaye, and the housing reformer Catherine Bauer. They saw themselves as an alternative voice to the RPNY, and developed more socially progressive planning ideas than those of the American mainstream. While in reality this association was rather a circle of like-minded friends,


94 "Where land has a value based on a more profitable use than low-cost housing, such as business or expensive residences, it should not be used for such housing." There was also a provision that, in order to settle workers close to their places of employment, it might be necessary to compromise between healthy surroundings and the demands of economic efficiency. Thomas Adams, et al, Regional Plan of New York and Its Environs. The Building of the City (New York: Regional Plan of New York, 1931), 202-203.

95 For an analysis of the RPAA, see Roy Lubove, Community Planning in the 1920s: The Contribution of the Regional Planning Association of America (University of Pittsburgh Press, 1963).

96 The RPAA demonstrated also strong interest in the new planning developments of continental Europe. Bauer, Mumford, Wright and Stein were amongst the first American planners to see the German, Dutch and other modernist housing and played an important intermediary role by introducing their modern European ideas to the United States. They also viewed the new Soviet Union with considerable sympathy. Stein for example, worked briefly in the USSR. He made a trip there in 1927 to discuss Benton MacKaye's regional planning studies for agriculture and settlement in the Arkhangel region of North Caucasus about 130 km north of Krasnodar in southern Russia. See, Kermit Carlyle Parsons, ed., The Writings of Clarence S. Stein, Architect of the Planned Community (Baltimore and London: John Hopkins University Press, 1998), 148-9, 167. See also, Daniel T. Rodgers, Atlantic Crossings: Social Politics in a Progressive Age (Cambridge, MA: Harvard University Press, 1998).
never constituting a formal organization, the group nonetheless was significant in formulating and articulating regional planning strategies. Mumford encapsulated the diametrically opposing views demonstrated by the RPNY and the RPAA:

[O]ne [group] assumes that technical ability can improve living conditions while our existing economic and social habits continue; the other holds that technical ability can achieve little that is fundamentally worth the effort until we reshape our institutions in such a way as to subordinate financial and property values to those of human welfare.97

Ferriss, associated with the RPNY since 1923, found himself systematically targeted by Mumford’s polemical wrath. In fact, Mumford, who firmly believed in the paramount role of housing reform and imagined the future to be improved by the creation of regional transportation lines with small garden cities nestled into the countryside,98 was not able to find a common ground with Ferriss’s vision of a grand and ever growing metropolis.


98 Lewis Mumford with the members of the RPAA wanted to undermine the RPNY’s more compromised interpretations of Garden City ideas, and presented themselves as the ones who fully understood and incorporated Ebenezer Howard’s concept in their own schemes. The most important tangible planning innovation associated with the RPAA was the Radburn City, promoted as the Garden City for the motor age. The name refers to a failed project in New Jersey, planned by Stein and Wright. Work eventually began on Radburn in 1928 but the Depression restricted development to one neighbourhood, albeit of very distinctive layout. Its key provision was the complete separation of pedestrian and vehicular movements. Conceived within a “superblock,” much larger than was then typical of American cities, the housing turns its back on the street to face an inner park that is accessible only to pedestrians and from which all communal facilities may be reached without the need to cross roads. Clarence S. Stein, *Toward New Towns for America* (Liverpool: Liverpool University Press, 1958); Stanley Buder, *Visionaries and Planners: The Garden City Movement and the Modern Community* (New York: Oxford University Press, 1990).
Throughout the 1920s, the unprecedented control over urban growth supported by zoning and regional approaches to planning engendered in many architects and planners a new confidence in their ability to plan the modern metropolis. Their sense of efficacy and optimism was represented in the proliferation of writings and prophetic drawings of the vertical city that appeared in the 1920s. The euphoria, especially over the salutary effects of zoning, often erupted in rhetorical prose or fictional poetics. Books on architecture and urban planning as well as articles in popular magazines and newspapers, though often written by architects, concentrated on speculative interpretations of zoning and its impact on the city of the future.99 These predictions, often illustrated with visions of a forecasted city, provide a rich source of information and imagery about the non-technical aspect of the zoning topic. Ferriss’s *The Metropolis of Tomorrow* would epitomize this trend.

“Paper Architecture” by Krutikov and Ferriss

For Krutikov and Ferriss, Moscow and New York constituted not only lived spaces, but also spaces of the imagination, provocative launching pads from which their representations of the future metropolis could be hurled. Just as the Zoning Law would flare up Ferriss’s imagination and his understanding of an ideal city form where a setback

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99 The list of the authors who incorporated visionary urbanism in their writings of this period, among others, includes: Claude Bragdon, Harvey Wiley Corbett, Hugh Ferriss, Richard Buckminster Fuller, Raymond Hood and Francisco Mujica. For a discussion of this topic, see Carol Willis, “Skyscraper
high-rise would take on a prominent role, Krutikov would construct his project of the future city prompted by, among other factors, the American skyscraper.

Krutikov and Ferriss, following the established tradition of utopian imagining, would demonstrate that while the “real city” often falls short of providing a completely satisfying milieu for its residents, an envisioned city can highlight contemporary shortcomings and articulate desires for an alternative urban life. Utopian thinking, the capacity to imagine a future that is different from the prevailing order of things, is a time honoured mode for overcoming the status quo, one that allows entry into a sphere of the imagination precisely to overcome everyday experience. Although suggestions of


100 In Russia, the classics of utopian writing were widely published after the Revolution. Tomasso Campanella’s City of the Sun (of 1623) appeared twice after 1918; there were ten editions of Charles Fourier’s works between 1917 and 1926, Robert Owen, Etienne Cabet, Philippe Buchez, Louis Blanc and Henri de Saint-Simon received new translations during the 1920s. In 1922, B. I. Gorev wrote a long history, From Thomas More to Lenin, placing the leader of Bolshevism within the utopian socialist tradition. All these classics were praised and castigated in the Leninist tradition, having nonetheless an impact on the shaping of ideas such as community, work, housing, life style, and equality. There was also a promulgation of utopian “home-grown” writing before and after the October Revolution. Vassili Kamensky, Velimir Khlebnikov and Nikolai Aseev among others were engaged in evoking utopian stories. In America since the end of the 19th century, a body of utopian literature was produced which particularly wedded the improvement of mankind squarely to technology. Among the utopian texts Edward Bellamy’s Looking Backward: 2000-1887 of 1888 and King Camp Gillette’s The People’s Corporation of 1924 were the most widely known for their spread of the gospel of progress, in which social betterment would follow in the wake of technological development and technocratic management. In 1922, Lewis Mumford published Story of Utopias, a historical overview of utopian writing from Plato to H. G. Wells. Literature has traditionally been a privileged vehicle for evoking the utopian landscape. The comment of Trotsky, although related to the Soviet situation, could be applied to any other place: “[a] poem that sings the skyscrapers, the dirigibles and the submarines can be written in a far-away corner of some Russian province on yellow paper and with a broken stub of a pencil. ... The human word is the most portable of all materials.” Yet, as S. Frederick Starr suggested, it is “[t]he architect [who] could leap into the future even more easily than the novelist. Sitting at his drafting table, he could simply obliterate present reality with a few strokes of the pen and create a new world with a few more strokes.” Lev Davidovich Trotsky,
idealized utopian cities are a far cry from the "real city" promoted and built by political, administrative, civic and business leaders, future-oriented concepts are nonetheless based, as the Benjamin passage quoted at the beginning of this chapter asserts, on inherited urban form and content.

Krutikov and Ferriss, in their fantastic representations of the metropolis, reached back to the past precisely to reformulate and transform the present for a better and improved future. Both the Soviet and American authors included in their projects current elements as well as the old and still existing urban forms in order to bring forth and emphasize the changes they were forging for the new city. Utopian thinking, after all, involves two moments that are inextricably joined – the first constituting a critique of a status quo, and the second being a constructive alternative to the former.

The topic of the representation of architecture and of whole cities on paper has often been approached in the relationship of buildings and/or urban planning to the drafting board and sketches revealing their conception. Krutikov's diploma project and Ferriss's book are autonomous and abstract creations of an imaginary city with attention to its specific architectural structures. They use pictorial representation and various forms

of synthetic views to illustrate their future cities, total buildings, spaces and sites. Each of them exploits to a different extent the visualization of their architectural thought, and each transforms immutable buildings into images that communicate the architect’s ideas.

While Krutikov’s objective was to submit his proposal as the requirement of the academic curriculum, Ferriss compiled his images with publication in mind. They did, however, both enter the public domain with just a different degree of circulation. What Krutikov’s proposition shared with Ferriss’s book is its highly visionary, utopian character. Krutikov and Ferriss both had a desire to construct a model for a future city. To convey their ideas, both architects employed a form in which visual representation was “buttressed” by text. By combining visual images with textual commentaries, Krutikov and Ferriss followed an existing trend. It was popular during the 1920s for architects to use illustrations and explanatory texts to support their own ideas while analyzing or professing architecture and urban planning in their published works. At the same time, however, each author utilized a different platform to communicate his message. Krutikov, as a vehicle for dissemination of his concepts, used a diploma project called *Gorod budushchego* (City of the Future),\(^{101}\) which he presented in Moscow in 1928, in the

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Department of Architecture at VKhUTEMAS/VKhUTEIN,\textsuperscript{102} the school Krutikov had attended since 1922. Ferriss, on the other hand, revealed his convictions in the book entitled \textit{The Metropolis of Tomorrow}, which was published in 1929 in New York.\textsuperscript{103}

\textsuperscript{102} Immediately after the Revolution, most art and architecture schools in Russia were reorganized into SVOMAS (\textit{Svobodnye masterskie}, or Free Art Studios). In 1920 the Moscow SVOMAS became consolidated into the multi-disciplinary teaching institution called VKhUTEMAS (\textit{Vysshie gosudarstvennye khudozhestvenno-tekhnicheskie masterskie}, or the Higher State Artistic and Technical Workshops). The school was instituted by State Decree, signed by Lenin. The document stated that this institution is “for advanced artistic and technical training, created to prepare highly qualified master artists for industry as well as instructors and directors of professional and technical education.” Quoted in Christina Lodder, \textit{Russian Constructivism} (New Haven and London: Yale University Press, 1983), 112. Training artists for industry was regarded as such a high priority for the economy that it warranted deferment of active military service. The establishment of this school should be viewed as a part of the government policy of improving the quality of industrial production. Thus the purpose was to provide designs for mass production and to train “artist-engineers” for the needs of Soviet production. Over the years, among the faculty were Gustav Gustavovich Klutsis (colour theory), Aleksandr Mikhailovich Rodchenko (metal armature), El Lissitzky (furniture and interior design), and Vladimir Evgrafovich Tatlin. The department of architecture included: Vladimir Krinskii (monumental architecture), Nikolai Vasil’evich Dokuchaev (planning), Nikolai Aleksandrovich Ladovskii (decorative-spatial) and A. Efimov (communal architecture), Il’ia Aleksandrovich Golosov and Konstantin Stepanovich Mel’nikov. In 1927-1928, the school was again reorganized and renamed VKhUTEIN (\textit{Vysshii gosudarstvennyi khudozhestvenno-tekhnicheskii institu}, or the Higher State Art and Technical Institute), although the renaming was stipulated by Narkompros already in 1925. In 1930, the school was closed and replaced by two schools of conventional teaching methods. Kestutis Paul Zygas, has pointed out that the contemporary Soviet avant-garde was as strongly connected with the VkhUTEIN as modern German art of the 1920s was inseparable from the Bauhaus. For a comparison of VkhUTEIN and the Bauhaus, see Christina Lodder, “The VKhUTEIN and Bauhaus,” in Gail Harrison Roman and Virginia Haelstein Marquart, eds., \textit{The Avant-Garde Frontier: Russia Meets the West, 1910-1930} (Gainesville: University Presses of Florida, 1992), 196-237. Paul Wood argues, however, that the similarities between these two institutions are only formal and technical and that attention to social and ideological contexts brings up differences and gives a more complex picture; see, Paul Wood, “Art and Politics in a Workers’ State,” \textit{Art History} 8 (March 1985), 105-124. For a history of the VKhUTEIN and its curriculum, see Khan-Magomedov, \textit{Arkhitekturna Sovetskogo avangarda} (Architecture of the Soviet Avant-Garde) (Moskva: Stoizdat’, 1996), 139-154; Natal’ia Adaskina, “The Place of VKhUTEIN in the Russian Avant-Garde,” in \textit{The Great Utopia. The Russian and Soviet Avant-Garde, 1915-1932} (New York: Guggenheim Museum, 1992), 282-293; Szymon Bojko, “VKhUTEIN,” in Stephanie Barron and Maurice Tuchman, eds., \textit{The Avant-Garde in Russia, 1910-1930: New Perspectives} (Los Angeles and Cambridge, MA: Los Angeles County Museum of Art and MIT Press, 1980), 78-83; Lodder, \textit{Russian Constructivism, op. cit.}, 112-140, including bibliography, 316-317.

Comparing these two projects, Ferriss's proposition was a more "polished" work, executed with support from the publisher, in a form accessible to a whole range of professionals, such as editors and graphic designers. On the contrary, the vision offered by the Soviet student of architecture, as one would expect, instead had qualities of a scholarly "work in progress." These differences of "presentation" should be regarded as indicative of the point each had reached in his architectural career – the Russian author was just earning his professional credentials, while the American already enjoyed professional recognition – rather than solely conveying the state of the publication business in Soviet Russia and America at that time. What was strongly divergent in their projects, however, was the great chasm that separated the overall technological abilities of Russia with those in America. Krutikov's imagination and propositions were in inverse proportion to Soviet industrial ability to actually construct the modern new city during the 1920s, whereas Ferriss's ideas sprang from an environment that championed engineering prowess and technological expertise.

Even though the United States was at the forefront of the technological revolution, it would appear that European authors first explored the machine as the dominant metaphor in the modern vocabulary of architecture. In 1923, it was Le Corbusier, who, in Vers une architecture (Towards New Architecture),\(^\text{104}\) set forth in

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\(^{104}\) Le Corbusier, Vers une architecture, Paris, 1923. This book had previously been published between 1920 and 1922 as a series of essays in L'Esprit Nouveau (though not in the same order). In this form Le
dialectical terms the split between engineering and architecture, and illustrated that rift by a fusion of images (many of them taken from Gropius's *Jahrbuch* of 1913\(^{105}\)) representing different aspects of technology.\(^{106}\) He compiled photographs of architecture - - from the ancient Parthenon, through contemporary Canadian and American grain elevators, to drawings of his own house projects together with engineering works (the Pont de Garabit designed by Eiffel, automobiles, airplanes, ships) and a proliferation of standard, mass-produced objects (dynamo, fan, pipe). A similar approach Krutikov would later follow in his project while at VKhUTEMAS. It was Le Corbusier, along with László Moholy-Nagy from the Bauhaus, who started to disseminate modernist ideas by

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\(^{105}\) Engineering structures, together with newly mechanized means of transportation, had already been recognized before World War I as the technological elements of the new industrial age, as demonstrated in the 1913 *Deutsche Werkbund Jahrbuch* (German Art and Craft League Yearbook). Walter Gropius published two essays there on this theme ("Die Entwicklung Modernes Industriebaukunst" in 1913, and "Die Stilbildende Wert Industrielles Bauformen," in 1914), pleading for an intellectual concept for the age to be devised, and saw the beginnings of it in the organizational management of modern international transport. According to Gropius, it was railroad stations, factories and motor vehicles that confronted the contemporary artist with the challenges of the age: "automobile and railroad, steamship and sailing yacht, airship and aircraft have, through form, become symbols of speed.... In them, technological form and artistic form have become a close organic unity." Quoted in Andreas Haus, "Bauhaus: History," in Jeannine Fiedler and Peter Feierabend, *Bauhaus* (Cologne: Königemann, 1999), 14-21. For analysis of the 1913 text by Gropius and its impact on the architectural ideas in Europe, see Reyner Banham, "Modernism and Americanism," in idem, *A Concrete Atlantis. U.S. Industrial Building and European Modern Architecture 1900-1925* (Cambridge, MA, London: MIT Press, 1986), 181-253; also Jean-Louis Cohen, *Scenes of the World to Come. European Architecture and the American Challenge, 1893-1960*, op. cit., 63-64.

exploiting an endless proliferation of modern graphic and photographic images. It seems that when Le Corbusier challenged the practice of contemporary architects by juxtaposing engineering objects with built structures, he aimed to critique the École de Beaux Arts and the Art Deco movement (the styles to which Ferriss was affiliated by training and by his own predilection) and to promote his own Purist affiliations with machine rhetoric.

Already in 1924, in Russia, Moisei Iakovlevich Ginzburg had responded to Le Corbusier’s ideas (as demonstrated in Vers as well as in the magazine L’Esprit Nouveau) in his own book Stil’ i epokha (Style and Epoch). Ginzburg’s publication was in many respects a Constructivist gloss on Le Corbusier’s thesis promoting the airplane and silos.

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107 According to Kenneth Frampton, Le Corbusier was one of the first architects of the 20th century to promote his works in the photographic record, by including them in his various publications. Kenneth Frampton, Le Corbusier (London: Thames and Hudson, 2001), 33.

108 During this time, in France, the Saint-Simonian view that the organization of industry would form the basis of an emerging new order, which would be run not by a state but by an élite of industriels (industrialist, scientist and artists), was taken up again by neo-Saint-Simonians and a group called “Technocrats,” who also advocated the rational organization of production and distribution by technically trained managers. To Le Corbusier, for whom the society of administration would supercede political systems, it seems that it did not matter whether bourgeois capitalism or communism won the day. For Le Corbusier, the universe required an all-powerful master planner who had both the wisdom and the supreme power to bring its realization and successful management. Le Corbusier’s vision of the future city was attacked, however, by French critics on the left for the architect’s reactionary tendencies in promoting an authoritarian type of a “machine city.” The Communist newspaper L’Humanité dubbed Le Corbusier’s project of Ville Contemporaine of 1922 as a reactionary vision (for some religious references). This accusation seems to have found further ground when Le Corbusier included an image of the “absolute monarch,” Louis XIV in his Urbanisme of 1925. For the correspondence of Ferriss’s plan of the future city and ideas set forth by Saint-Simon see my discussion below.

as indicative of the forms that modern architecture should adopt. The book’s conceptual and visual strategies owe a debt to Corbusian ideas, despite the absence of any reference to him in the text or illustrations. At the same time, Ginzburg’s approach in extrapolating a design method grounded in observations of the machine and applying it to the analysis of some contemporary projects -- for example the Vesnin brothers,' (Aleksandr, Leonid and Viktor Aleksandrovich) design for the Palace of Labour of 1923 -

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110 It has not yet been established precisely how and when the message of Le Corbusier and L’Esprit Nouveau reached the Soviet Union. The first copies to arrive were those which Le Corbusier sent to the Commissar of Enlightenment, Anatolii Vasil’evich Lunacharskii in 1922, long before the establishment of diplomatic relations between France and the Soviet Union. During the 1920s, Le Corbusier’s ideas were widely popular in the Soviet Union, particularly among the Constructivists. They praised him as someone who opened their eyes to the “truth already existing but unrecognized,” namely, how “machines have been gradually teaching a new way of life, and how mechanization has changed the tempo of urban life.” In Boris Andreevich Korshunov, “Le Corbusier, ‘Urbanizm’” (Le Corbusier “Urbanisme”), Sovremennaia arkhitektura, no. 1 (1926), 37-38. The reception was not, however, uncritical. Leonid Vesnin wrote in 1924: “I am reading Corbusier-Saugnier but fairly slowly, and therefore more carefully than I did last winter. I see that there are certain questions on which one could already disagree with him. We have gone further and we look more deeply.” Quoted in Catherine Cooke, “Ginzburg and Le Corbusier: Engineering and the Modern State of Mind,” in Cooke, Russian Avant-Garde. Theories of Art, Architecture and the City, op. cit., 122-129. Le Corbusier’s involvement with the new Soviet state lasted from 1928, with the commissioning of Centrosoiuz in Moscow, to 1932, when his entry for the Palace of the Soviets was rejected. According to Jean-Louis Cohen, Le Corbusier’s relations with the Soviet Union, its architects and officials, continued to “shift from symbiosis to repulsion and from elation to bitter disillusion for almost fifteen years.” Jean-Louis Cohen, Le Corbusier and the Mystique of the USSR. Theories and Projects for Moscow 1928-1936 (Princeton: Princeton University Press, 1991), XII.

111 Ginzburg took care not to use the same photographs as Le Corbusier, but rather used different sources, in all probability Russian technical reviews; see Reyner Banham, op.cit., 231-32. Ginzburg diverged from Le Corbusier in reserving a seminal role to wooden construction (not considered by Le Corbusier), as featured by such works as Konstantin Stepanovich Mel’nikov’s all-timber Makhorka Pavilion of 1923. The magazine Sovremennaia arkhitektura, edited by Ginzburg, followed Le Corbusier’s career from its very first issue of 1926, giving special acclaim to the books Urbanisme and L’Art Décortatif d’aujourd’hui soon after they were published in 1925.
- is more systematic than the attempts of his Swiss-French colleague. The main objective of the Soviet architect was to encourage the modernization of the newly established socialist state on its path to constructing the material environment for novel and revolutionary human interactions. Ginzburg maintained that the emergence of new architecture was linked to the rise of a modern sensibility stemming from a conception of technological progress predicated on the organizational efficiency of the machine and mechanized methods of production. He asserted that Western Europe and America, with their new industrial and engineering structures, offered the most compelling paradigms for modern architecture. In Soviet Russia, he claimed the proletariat as the dominant new group of consumers who had effectively generated a new set of demands of urban development by projecting human labour as the prime content of the new society. In effect, the architectural concerns of this new society should revolve around solving problems related to labour, including worker's housing, factories, places of education and areas of rest and recreation.

In the United States, it was only during the second part of the 1920s that authors who published on architectural subjects incorporated comparisons to modern engineering achievements in their analyses of contemporary buildings. It must be emphasized, however, that this fascination with, and wide exploration of the machine as a theme was

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112 For an analysis of the relationship between Ginzburg's book and Le Corbusier's Vers une architecture, see Senkevitch, Jr., "Introduction," in Ginzburg, Style and Epoch, op. cit., 10-33, Cooke, "Ginzburg and Le
picked up first, not by architects, but by visual artists, among them Alfred Stieglitz, Ralph Steiner, Stewart Davis, Charles Demuth, or Charles Sheeler.\textsuperscript{113} There were also those who emigrated from Europe, like Francis Picabia,\textsuperscript{114} Marcel Duchamp, Man Ray, or Louis Lozowick, who demonstrated their unreserved fascination with modern American technology, and who championed machine oriented art. However, the Dadaists’s approach to the machine, combining the elements of fascination with a large dose of irony and parody, created a more complex reception than the usually optimistic view of technology.

The first American publication that linked engineering feats with modern architecture was a catalogue accompanying the Machine Age Exposition of 1927.\textsuperscript{115} Jane Heap, the director of the gallery Little Review and the founder and editor of the magazine of the same name, in that year, organized a pioneering show from the perspective of both its installation and its content and catalogue, that examined the theme of the machine in arts and architecture. This event was staged in protest against an article in the Bulletin of the Metropolitan Museum that denounced “the Bolshevik philosophy applied to art” and

\textsuperscript{113} In 1927 Charles Demuth painted My Egypt, representing two grain elevators, Charles Sheeler took photographs of the Ford Motor Company plant at River Rouge, and Stuart Davis begun his Eggbeater.

\textsuperscript{114} After arriving in the United States in 1915, Picabia wrote: “Almost immediately upon coming to America it flashed on me that the genius of the modern world is in machinery and that through machinery art ought to find a most vivid expression.” Quoted in Caroline Jones, “The Sex of the Machine: Mechanomorphic Art, New Women, and Francis Picabia’s Neurasthenic Cure,” in Caroline A. Jones and Peter Galison, ed., Picturing Science Producing Art (New York, London: Routledge, 1998), 145.
the “ego maniacs and satanists” of abstract art whose work causes “insanity and
deterioration of the optic nerve.” To set right such outrageous and harmful opinions,
Jean Heap and *The Little Review* invited Ferriss and Lozowick to assemble a
representative collection of works by the most innovative designers from around the
world. The show displayed photographs of contemporary architecture, models,
machinery, paintings and sculpture that either depicted the machine or used machine
aesthetics. Lozowick, who wrote a text for this catalogue, hailed America’s “gigantic
engineering feats and colossal mechanical construction” such as the skyscrapers of
New York, the grain elevators of Minneapolis, the steel mills of Pittsburgh, or the oil
wells of Oklahoma. It was, however, only during the 1930s that the proliferation of

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was held at 119 West 57 Street, New York City between May 16-28, 1927.
116 "A Protest Against the Present Exhibition of Degenerate ‘Modernistic’ Works in the Metropolitan
Museum of Art," *Bulletin of the Metropolitan Museum of Art*, (1921), 179; quoted in S. Frederick Starr,
117 The *Machine Age Exposition* was organized by Jean Heap of the *Little Review*; Louis van der Swaelmen
and M. Gaspard of the Société des urbanistes, Brussels; the American branch of the USSR Society of
Cultural Relations with Foreign Countries; Professor Josef Frank of Kunstgewerbeschule, Vienna; Szymon
Syrkus, member of the avant-garde architecture group "Praesens," Warsaw; André Lurçat of Architects D. P. L. G., Paris; and Hugh Ferriss, advisor of the American section. See also Chapter Three, 172 ff.
118 Although only a few critics responded to the show with serious consideration, the major review by
Herbert Lippmann, an architect, highly praised the importance of the exhibition and its theme. Herbert
also Virginia Hagelstein Marquardt, ed., *Survivor from a Dead Age. The Memoirs of Louis Lozowick*
streamlined, machine-centered vocabulary had its full impact in almost every cultural realm in America.\

Krutikov and Ferriss, propelled by their own desire to make an intervention into the shape and content of the existing city, were thus able to reach to various concepts and methods that circulated during the 1920s in both Europe and in America. Krutikov, by attending the leading architectural school in Soviet Russia, and Ferriss, a licensed architect, who also took part in the *Machine Age Exposition* and contributed to its catalogue, were both well situated with regard to contemporary discourses on architecture, technology, and their application to urban planning.

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120 Although Heap’s exhibition and its catalogue were a groundbreaking presentation of the machine in art, it took another three years for architectural historians to make the link between the machine as art and the new architecture. It was Sheldon Cheney, who made this leap in his *The New World Architecture* (London, New York, Toronto: Longmans, Green and Co.) of 1930, when he included photographs of ships, cars, bridges and silos while analyzing contemporary architecture. Cheney, in the chapter “Face to Face with the Machine,” presented a selection of photographs and drawings of beacons of technology and engineering, announcing that in the current situation, when the building became a machine, the “architect must be architect-engineer” (77). Then followed the promotion of modernism in architecture that was identified by the Museum of Modern Art (opened 1929) as the “International Style.” See Henry Russell Hitchcock and Philip Johnson, *The International Style: Architecture Since 1922* (New York: W. W. Norton, 1932).
CHAPTER TWO

Krutikov's Diploma Project

Now!
Now!
Now!
Out into space!
Straight and sure!

Vladimir Vladimirovich Maiakovskii, Pro eto (About This), 1923

Content, Layout and Medium

Krutikov believed that man's capacity for speed had increased continuously throughout history along with developments in transportation and that this had had an impact on architecture, especially housing. For his diploma project (diplomnaia rabota), Krutikov argued that a form of mobile architecture could lead the way to the most advanced means of transportation and modern living. As he envisioned it, this development would open up new vistas in the relationship between architectural structures and nature. He suggested that architectural structures could be released from the ground entirely, thus allowing for the clearing of vast areas of land previously occupied by housing, which could then be put to other uses. Not only would mobile living structures increase efficiency by freeing housing from fixed stationary locations, but if dwellings were raised above the surface of the earth, this would have a profound effect upon the means of transportation.
Krutikov developed his diploma project, entitled Gorod budushchego (City of the Future), in the studio led by Nikolai Aleksandrovich Ladovskii\(^1\) at VKhUTEMAS. In his work, Krutikov concentrated on the idea of mobile architecture, which he approached in terms of the relationship between buildings and nature. In 1927, he wrote, “the very idea of movement has a great potential for development.”\(^2\) While working with Ladovskii, he developed these problematics in a research paper entitled “On the Path to a Mobile

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1. Upon entering VKhUTEMAS, Krutikov, like all the other students, had to take a Basic, or Foundation, Course before moving to a chosen discipline. This course was largely in hands of Ladovskii, who promoted ideas on composition and formal dynamics. Later on, Krutikov decided on Ladovskii as his leading supervisor. Ladovskii taught a studio at VKhUTEMAS in the architectural department from its conception in 1920, and during this time he was overall director of the school’s progressive or “leftist” architectural studio, the so-called Obmas. His teaching methods were based on the ideas of “architectural rationalism.” In Ladovskii’s definition of 1919, “[a]rchitectural Rationalism stands for the economy of psychic energy in the perception of spatial and functional aspects of a building,” and he specifically contrasted this to “technical rationalism,” whose priority is an “economy of materials.” Quoted in Mikhail Grigor’evich Barkhin, and Iurii S. Iaralov, eds., Mastera sovetskoi arkhitektury ob arkhitekture (Masters of Soviets Architecture on Architecture) (Moskva: Iskusstvo, 1975), v.1: 343-4. Ladovskii started his training in the Moscow School of Painting, Sculpture and Architecture in 1914 (at the age of 36). From 1919 onwards he was the leading architectural figure in Moscow’s new aesthetic research groups, first Zhivskulptarkh, then INKhUK (Institute of Artistic Culture) established in 1921. In 1923, Ladovskii formed the first revolutionary architectural group AsNovA (Assotsiatsiia novykh arkitektorov, or Association of New Architects), to further propagate Rationalism. In 1928 Ladovskii broke away from AsNovA to form ARU (Assotsiatsiia arkitektorov urbanistov, or Association of Architects-Urbanists), whose aim was focusing on the larger questions of dynamics and composition of the scale of the city. Krutikov was a member of both groups AsNovA and ARU, and was actively engaged with the experiments into dynamic perception of form in a Psychotechnical Laboratory opened by Ladovskii at VKhUTEMAS in 1927, that was devoted to empirical experimentation on perception of formal dynamics. On the latter activities, see Footnote 67 below. On Ladovskii’s career, see Selim Omarovich Khan-Magomedov, “Nikolaj Ladovskij” Lotus International, Sept. 20, 1978, 104-26; Kestutis Paul Zygas, “Ladovsky and VKhUTEMAS,” in idem, Form Follows Form. Source Imagery of Constructivist Architecture, 1917-1925 (Ann Arbor: UMI Press, 1981), 51-68; Catherine Cooke, Russian Avant-Garde. Theories of Art, Architecture and the City (London: Academy Editions, 1995), 29-30, 160-68. For AsNovA and OSA, see also Chapter One, note 43.

In effect, the diploma project was the crowning achievement to his explorations of mobile architecture. One year after graduation Krutikov continued to promote this concept, proclaiming that “today’s dead, immobile and inconvenient planning of our towns must be replaced in the future by mobile planning based on new principles of spatial solutions. It is already our task, as the architect-inventors of today, to assist in the birth of such a mobile architecture.”

Krutikov’s entire diploma project consists of images accompanied by textual commentary. The visual imagery is further divided into two parts. The first part is devoted to his analysis of existing architecture as it is impacted by various means of transportation. In this part, all the visual material is spread over sixteen panels on which Krutikov collaged images that include cut-and-paste photographs interspersed with drawings of plans, diagrams and illustrations, as demonstrated by the first two opening panels (Panel 1: “Optical Deformation of a Mobile Form,” and Panel 2: “Composition of Mobile Buildings” — Fig. 5). The second part represents a model of the future city and is

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3 Krutikov, “Arkhitekturnaia nauchno-issledovatel’skaia laboratoriia arkhitekturnogo fakul’teta VKhUTEINa. Rabota laboratorii v 1928-29 uchebnym godu,” (Architectural Scientific-Research Laboratory of the Architectural Department at VKhUTEIN. Activities Conducted by the Laboratory During 1928-29 Academic Year) in Arkhitektura i VKhUTEIN (Architecture and VKhUTEIN) 1 (January 1929), 4.
4 Ibid.
5 The visual section of Krutikov’s diploma consists of images glued to grey cardboard panels, each measuring 47.8 cm by 143 cm. The textual part contains information typewritten on sheets of white paper attached to panels of the same colour and the same measurements as used in the visual part. For translation of Krutikov’s text of his diploma project, see Appendix below.
laid out on four panels (Fig. 6). There, the images evoking the new city are conveyed through the architect’s own set of drawings, plans and diagrams, with occasional utilization of mass-produced photographs. The objective of this latter part is to demonstrate the crucial elements of the future city, such as housing complexes hovering above the earth, and a mobile cabin for transporting the occupants to their dwellings, as envisioned by the architect. While the visual material presented by Krutikov is quite extensive, the textual segment is relatively succinct, with his comments being presented in point form. This text corresponds to the visual component of the project and explains to readers Krutikov’s analysis of existing problems, and his ideas about a new urban form.

Krutikov’s stated objective in this project was to set a “series (riad) of new questions in architecture.” Some of the issues he raised included “the expansion (razshyrenie) of the architect’s horizon in accordance with a number of scientific disciplines” (such as mathematics, movement technology, or knowledge of space in nature), and the introduction of the idea of mobile planning that, consequently, would

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8 Ibid., R1a 11196/1.
foster an architecture in outer space. The starting point of Krutikov’s argument was that
the socialist transformation of the economic, political and social basis of society was in
full progress, and he emphasized the important role that the built environment and
architecture could play as active agents in those changes. Krutikov’s scheme to free the
residential areas of the city from the land surface -- and to suspend all houses in space --
can be perceived, in my opinion, as a professionally grounded but ideologically
motivated “upward” extension of the early decrees introduced by the Bolshevik
government, as I will demonstrate in this chapter. I am referring here to the proclamations
of 1918, which were of paramount importance for urban and architectural activities of a
new state; one of these decrees proclaimed the nationalization of land, and the other
nullified private ownership of real estate.\(^9\) By removing the erstwhile contradiction
between the cities’ indivisible integrity as social organisms and their fragmentation into
privately owned estates, the acts opened up prospects for their development as single
systems.

All of the images gathered by Krutikov in his project are organized in a manner
that separates his own vision of the optimal future city from the material illustrating the

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\(^9\) Ibid.

\(^{10}\) These two edicts were “On the Socialization of Land” of February 9\(^{th}\), 1918, and “On the Repeal of the
Right to Private Ownership of Real Estates in Cities” of August 20\(^{th}\), 1918. The first dealt with the
redistribution of land, and was geared towards resolution of the housing shortage. The latter decree
declared all urban real estate to be state or municipal property and placed it under the jurisdiction of locally
elected authorities. See, *Dekrety sovetskoi vlasti* (Decrees of the Soviet Authority), XIV vols. (Moskva:
changes in the means of transportation and their relation to architecture. The former he executed in drawings, while the latter are rendered predominantly through reproduced photographs and illustrations. The photographs he used in this project were not taken by Krutikov himself; he preferred to rely on clippings that convey the sense of a ready-made and of spontaneity. This medium suggested a documentary quality that was helpful in revealing the mechanics and materiality of the world.¹¹ The person taking and reproducing photographic images with the use of a camera and chemical processes can be perceived through these activities less as an artist and more as a constructor/technician. Also, the variety of images selected by the Soviet architect from a wide range of items might function to undermine the myth of individual authorship. Instead, Krutikov became a constructor, a monteur, forcing the audience to reconsider the significance of the interplay of visual codes consolidated by society and re-introduced by him in the project of re-visioning.

By creating this polarized arrangement, that is through separating his own works from the images of others, Krutikov made a clear distinction between his own

¹¹ Walter Benjamin in his seminal essay “The Work of Art in the Age of Mechanical Reproduction,” analyses the emergence of new cultural forms typical of the 20th century (although with its roots in the 19th) through technologies of mass reproduction, printing, photography and cinema. Benjamin argues that the “aura” of the original, unique work of art is lost to reproducibility, and that this, far from being a loss, opens up progressive possibilities. For Benjamin, photography, film records, etc. are more democratic than painting or other traditional art media, arguing that “painting simply is in no position to present an object for simultaneous collective experience”(234). Walter Benjamin, “The Work of Art in the Age of Mechanical Reproduction,” (first published in 1936) in Walter Benjamin, Illuminations. Essays and Reflections, trans. Harry Zohn, Hannah Arendt, ed. (New York: Schocken Books, 1968), 217-251.
contribution to furthering urban planning and housing, as prompted by the inefficiencies
and shortcomings of the existing state of architecture and means of transportation.

Despite this split, by incorporating heterogeneous visual material produced and
reproduced by various people, Krutikov conveyed in his project a collective identity, a
notion strongly promoted by the newly established Soviets. All of these juxtaposed
images, their eclectic subject matter, the multiplicity of techniques and media they
represent, and finally the lack of attribution (there is an overwhelming absence of names),
constitute a grand visual collage of mixed but nonetheless shared and common
experiences. It seems that for Krutikov, as it was for the European avant-garde artists,
this was a conscious choice that led to the disappearance of the author’s hand behind the
more anonymous tools of the graphic designer and the director of images. These tactics

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12 Individual rights were a bourgeois concept for the Soviets. The interests of the collectivity (often
understood as that of a proletarian state) was expected to be placed ahead of any personal interest. The
disdain of the individual by the Bolsheviks as a cultural phenomenon was characteristic of their ethics, in
which anyone with the right degree of proletarian consciousness was supposed to put the well-being of the
total commune as a paramount objective. As Kazimir Severinovich Malevich stated “Collectivism is one
of the paths marked out on the road map which leads to the ‘world-man,’ but perhaps it is still no more than
one of the necessary crossings on the main highway, restraining the millions of egos.” Quoted in T. J.
Clark, “God Is Not Cast Down,” in idem, Farewell to an Idea. Episodes from a History of Modernism
(New Haven and London: Yale University Press, 1999), 226. Any claim of an individual was regarded as
almost treasonous and unpardonable. One should however remember that during the 1920s in Russia there
was a gap between the requirements and the expectations of the newly established state and reality in
reference to a “collective society.” Furthermore the concept of collectivity should be differentiated from
collectivization, which started around 1928 to unfold dramatically during 1930-34, when Stalin launched it
together with devastating dekulakization. Collectivization was an attack on the market-oriented farming
established during NEP. For analysis of collectivization, see Robert Conquest, The Harvest of Sorrow:
were all the more appealing when searching for new modes by which to convey contemporaneity, and to break down barriers between high art and ordinary life.

This approach demonstrated by Krutikov resonates also with Productivist sentiments and ideas expressed by its theoretician, Aleksei Kapitanovich Gastev. In 1919, Gastev proclaimed that collectivity, and not individuality, was the hall-mark of the new system, stating that "a new working-class collectivism ... is manifested not only in relations between persons but in relations of whole groups of people to whole groups of mechanism... The manifestations of this mechanized collectivism are so foreign to personality, so anonymous, that the movement of these collective complexes is similar to the movement of things." After all, the primary objective in Soviet Russia was the dissemination of a promise of social transformation and a collective culture.

Photography was indeed a very well established and widely used technique for creating images in Russia when Krutikov was working on his project. The utilization of photographic images was, during the 1920s, grounded in the popular products of magazines, postcards, illustrations, and advertisement. Photography was actually understood by Soviet artists to be the most efficient and objective of all media. The mass-produced magazines that utilized photography were then regarded as the epitome of the recombination, recycling and reproduction of visual language.
Photography was widely used in montage and collage, when these techniques were popularized in the early 1920s, to function as an operative mode between a modernist critique of the conventions of representation, and an emerging awareness of the novel demand to construct visual representation for a new mass audience. At first, the gathered and mixed photographic pictures revealed the power to produce a sense of estrangement through the process of extracting the reproduction of an object from its common context by rearrangement, in order to situate it, artificially, on a different plane of reality. In this way, the distorted images linked to the technique of the montage broke the chain of habitual associations or perceptual automatism. The form became the agglomeration of various devices, brought together to achieve harmony or clash. In the montage, the emphasis was placed on the various materials, which were its constituent elements, and on the procedure of their assemblage.

To some extent the ideas of materials and procedures emerged as substitutes for the traditional concepts of form and content. The montage amplified the displacement of time and space internal to the work, vis-à-vis those of real life. This disordering of images allowed a new recognition of the relationship between art and life. The new objectivity sought not to domesticate or beautify reality, but to document the visible

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world by new, at times shocking, but ever enlightening, juxtapositions. Thus the Soviet artists and critics associated with the group LEF (*Levyi front iskusstva*, or the Left Front of the Arts) demonstrated widespread contempt for fiction and all forms of aesthetic illusionism. In 1924, the magazine *Lef* announced:

> The combination of isolated photographs is to be substituted for the composition of graphic images. The rationale for this substitution is based on the fact that *photography is the exact retention of visible facts and not their illustration*. For the viewer, this precision and documentary fidelity endows the photograph with such a force of persuasion that no type of graphic representation can ever equal it. ... Photographs of cities, landscapes, faces move the viewer much more than when they are rendered in paintings. (original emphasis)

In the years 1923-24 in Russia, the abstract avant-garde resolutions that were intended to reorganize a collective sensibility came under criticism as being too esoteric for mass consumption, along with doubts about the factographic capacity of photography, supposedly rendering aspects of reality visible without interference or mediation. As

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15 The LEF group was a loose alliance of artists, theorists and intellectuals, which was formed around the journals *Lef* (Left), with seven published numbers between 1923 and 1925, and *Novyi Lef* (New Left), with twelve numbers issued between 1927 and 1928. Amongst its members was Sergei Mikhailovich Triet’iakov, Vladimir Vladimirovich Maiakovskii, Varvara Fedorovna Stepanova, Aleksandr Mikhailovich Rodchenko, Dziga Vertov (Denis Arkadevich Kaufman), Sergei Mikhailovich Eisenstein and others. These artists wished to continue modernist tendencies such as the self-referentiality of pictorial signifying devices, the transparency of construction procedures or reflexive spatial organization. For the study of the Left Front of the Arts and the journal *Lef* (Left), see Halina Stephan, “*Lef* and the Left Front of the Arts (München: Verlag Otto Sagner, 1981); Richard Sherwood, “Introduction to ‘Lef’: Journal of the Left Front of the Arts, 1923-1925,” *Form* 10 (1969), 27-30. For English translations of excerpts from *Lef* (Left) and *Novyi Lef* (New Left), see *Screen* 12, no. 4 (Winter 1971/1972), 25-100; including essays by Richard Sherwood, “Documents from *Lef*,” 25-32; and by Ben Brewster, “Documents from *Novyi Lef,*” 59-66.  
Benjamin Buchloh demonstrates in “From Faktura to Factography,” Soviet artists gradually shifted their interest from an anti-mimetic aesthetics used to critique the conventions of representation, towards a more “factual,” *iconic* paradigm, in a new strategy to reach the Soviet audience. It was thought that a more factual expression would better serve the cause, that is, spread the ideas of the new ideology to the emerging new audience. This led to the promotion of film, photography, and photomontage, which were seen as more truthful media for promoting the social and political realities of contemporary Soviet life. As a result, the homogeneity of the single print came to be favoured over fragmentation, and spatial references were exchanged for the monumentality of the camera’s angle. Another few years down the road, around 1928, photographic images in general, and photomontage especially, became used as effective weapons in the rapid dissemination of state industrialization. Photography and photomontage were at this time not only promoted and controlled by the government, but were also preoccupied with the representation of productive forces carried on by

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17 Benjamin H. D. Buchloh, “From Faktura to Factography,” *October* 30 (Fall 1984), 82-119.
18 It is important to recognize that the film industry was nationalized in Russia in 1919 and gained immediate and widespread popularity. Its use for propaganda and agitation was well recognized and promoted by Lenin. The technical innovations in film construction, for example, montage mastered by Lev V. Kuleshov, Dziga Vertov and Sergei Eisenstein, and the ideological syntheses that films proposed were instrumental in the development and acceptance of the media of photography and photomontage.
predominantly anonymous workers, and the huge industrialization projects undertaken by the state.

In the year 1928, when Krutikov completed his project, the Communist Party launched a “Cultural Revolution” and made a concentrated effort to, so called, “proletarianize” all aspects of Soviet cultural life. These policies went hand in hand with the First Five-Year Plan programme for rapid industrialization as the country’s leading priority. The years leading to this moment were fractured with divergent opinions, creating an opposition to the official line, the issue that will play a role in my argument later. For now, what I wish to establish are the points of references that will help us to situate Krutikov’s visual mode of operation in the context I have just laid out.

What type of strategy did Krutikov apply in his visual imagery? Was his method typical of experiments that used fragmentation during the 1920s, or was he rather leaning towards a monumental assemblage in constructing an ideal image of reality, the one that

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20 It was a time when Stalin’s government orchestrated the massive industrialization of urban Russia and collectivization in the countryside. In the process, significant moral and social shifts were pressed upon the population by successive alterations of the code of law. The changes toward a more conservative social organization have been called a revolution in itself. Everyday life reemerged then as a massive spectacle of signs of which the cult of the leader and of various socialist heroes was one of its many aspects. On the Soviet “Cultural Revolution” see, Sheila Fitzpatrick, Cultural Revolution in Russia, 1928-1931 (Bloomington and London: Indiana University Press, 1978); Brandon Taylor, Art and Literature Under Bolsheviks, 2 vols., 1: The Crisis of Renewal, 1917-1924 (London and Concord, MA; Pluto Press, 1991), and 2: Authority and Revolution 1924-1932 (London and Boulder, CO: Pluto Press, 1992). See especially volume 2: chapter 2, “Cultural Revolution Once More 1928-1932,” 83-182.

21 Victor Serge explains how the goals of the Bolsheviks were replaced under Stalin: “Socialism in one Country” replacing the internationalist goal, and an increasingly powerful bureaucracy instead of the withering away of the state, etc. See Victor Serge, From Lenin to Stalin (New York: Monad Press, 1973 [1937]), 57-58.
was prevailing at the end of the decade (and came to dominate the 1930s)? In answering these questions, it is instructive to compare Krutikov’s works to those done by artists who used collaged photography before and after 1928. Images by Aleksandr Mikhailovich Rodchenko, from 1923, and by Nikolai Andreevich Dolgorukov, from 1931, will serve as points of reference.

Before 1928, especially in the first part of the decade, photomontage as a method was applied primarily to design magazines, notably those dealing with films, to advertise the New Economic Policy (NEP), and to illustrate literary works. Rodchenko’s series of photomontages for Vladimir Vladimirovich Maiakovskii’s poem *Pro eto* (About This), of 1923, are exemplary of the latter. In one of the images (Fig. 7), Rodchenko illustrated verses that were placed just below the photomontage: “I catch my balance, / waving violently.” The composition consists of juxtaposed photographs of people, structures, and objects representing incongruities of subject matter and scale. It shows the moment when the main hero of the poem, Maiakovskii himself, is topping the cupola of the Bell-Tower, built by Ivan the Great in the Moscow Kremlin, while stretching his arms to achieve a balance. The crowd of people below does not appear to be aware of either the acrobatics above, or the looming airplane that passes by. The poet’s anxiety, and literal and metaphorical separation from his lover, Lili Brik (wife of Osip Brik), who is shown in the lower left corner, is conveyed through a congested urban environment. The silhouettes of New York’s Equitable Building and the spires of the Trinity Church flank the Moscow
Bell-Tower on one side, while on the other a huge tire bulges out. The armed vehicle with its canon directed towards Maiakovskii reinforces his vulnerable, risk taking position as a poet and a lover. The overall technique used by Rodchenko in *Pro eto* demonstrates unexpected clashes of images of diverse contexts, to render the poet’s fascination with Western culture, and to convey a complex world of private imagination and romantic references to his lover. The unrestricted poetic license that Rodchenko employed in this montage changed drastically a few years later with the advent of a major programme of Socialist reconstruction and the introduction of the Five-Year Plan.\(^2^2\)

The conscious build-up of documentary factographic information that began during the latter part of the 1920s and ruled the visual iconosphere since 1928, is well represented by Dolgorukov. In his poster *Transportnik, vooruzhaisia tekhnicheskimi znaniemii, boris' za rekonstruktsiu transporta* (Transport Worker, Armed with the Knowledge of Technology, Fights for the Reconstruction of Transport System), of 1931 (Fig. 8), Dolgorukov used fragments of photographs to create a cohesive and visually comprehensive composition. Indeed, the subject matter of this photomontage, supported by the sequencing of images and their size and scale, aligns this image squarely with the

\(^{22}\) In 1928, Varvara Fedorovna Stepanova, Rodchenko’s wife and his artistic partner, wrote on Rodchenko’s conscious attempts to distinguish photocollages, as those done by him for *Pro eto* in 1923, from photomontages dealing with strictly political iconography, such as the one he executed in 1925-26 for the *Istoria VKP(b) v plakatakh* (History of VKP(b) – All Russian Communist Party[Bolsheviks] in Posters). Thus, Stepanova commented that in political photomontage, “the individual snapshots are not fragmented and have all the characteristics of a real document.” Varvara Stepanova, “Photomontage,” quoted in David Elliot, ed., *Alexander Rodchenko*, (Oxford: Oxford Museum of Modern Art, 1979), 93.
aesthetics of monumental propaganda. In Dolgorukov’s image, the superimposed figure of the worker, who is rendered as concentrating on the task at hand, dominates the composition. His photographed head extends from the drawn torso. Attention is directed toward an outstretched arm -- the sleeve is folded up showing an arm depicted in a vibrant red colour. The hand equipped with a compass enables the worker to take measurements from the technical blueprint of machine components below. Behind the looming figure of the man there is a glass and steel-frame factory rendered schematically in architectural perspective. Next to the worker’s torso, and inside the industrial hall, a photographed locomotive is suspended from a horizontal crane. The colossal figure of the worker, portrayed as a contemporary demiurge, is depicted as emerging from the interior of the factory filled with workers, cranes and locomotives. The allusive play set up between the head of the worker and the locomotive emphasizes the industrial object’s status as the product of the worker’s mental labour. The slogan behind him calls for accomplishing the Five-Year Plan in just four years. All considered, this last image

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23 In 1930, the critic O. L. Kusakov wrote in the Sovetskoe foto (Soviet Photography) an article entitled “The Social Meaning of Photomontage.” In it he proclaimed: “the solution to the problem of the proletarian, dynamic photomontage is inherently connected to the simultaneous solution of the question for a monumental style, since the monumentality of the tasks of the construction of socialism requires a heroic pathos for the organization of the consciousness of the spectators. Only in a successful synthesis of dynamics and monumentality – it conjunction with the constitution of a dialectical relationship between the levels of life – can photography fulfill the functions of an art that organizes and leads life.” Quoted in Benjamin H. D. Buchloh, “From Faktura to Factography,” op. cit., 115.

24 Dolgorukov seems to expand the iconographic trope from a Gothic moralized Bible showing God as an architect of the world, through Michelangelo’s God creating Adam, to El Lissitzky’s cover for VKhUTEIMAS’s almanac of 1927.
represents the explicit adoption of industrialization and the new notion of “socialism in one country,” heralding the shift from the “restoration period” (i.e. of pre-war production levels) to the “reconstruction period.”

When we compare Krutikov’s visual strategies to those adapted by Rodchenko and Dolgorukov, the affiliation becomes apparent, revealing not only artistic preferences but also indicating his political stance. All of the sixteen panels, on which Krutikov collaged photographs with illustrations, demonstrate an assemblage that is closer to the one mounted by Rodchenko than the photomontage by Dolgorukov. Krutikov in his project integrated a large number of photo stills and drawings into a composition, which helped bring into relief the individual images within the framework of the overall theme. All the images are arranged in an irregular formation, creating a visually dynamic network of heterogeneous fragments, serving a function of individual units that reference specific aspects of the overall theme that each panel introduced. For example, on panel number four, under the heading “Evolution of the Form of an Automobile and a Train” (Fig. 9), Krutikov compiled photographs as well as illustrations of various cars and trains. The selection ranges from examples of old and outdated models, to those looking like prototypes that were taken from a science fiction magazine. The organization of these

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25 Krutikov’s mode of operation recalls the techniques used in Russian film, as described, for example, by Lev V. Kuleshov: “To make a film the director must put together separately photographed pieces that are unordered and do not in themselves make a whole; individual shots must be juxtaposed to create the most
images follows a structure by which the images are divided into titular means of transportation; thus renderings of cars are situated on the left side of the panel, while on the other side are various drawings of a train. The specificity of each group is actually the only distinction behind this separation. Other elements, such as the size of each clipping, as well as the scale of the illustrated subject, seem to be incidental and scattered. Also, the degree of technological advancement of these vehicles is sporadic and without imposed order. Actually, this abandonment of hierarchy prevails amongst the material gathered on each panel. Thus panel number three, the “Form Organization of a Dynamic Element” (Fig. 10), is yet another example of this lack of dominance of a specific image that prevails throughout Krutikov’s work. Even when the subject matter underscores the evolutionary changes within the existing forms of speed and means of transportation, thus indicating a progression, the haphazardly arranged visual components complicate this linear reading. Thus illustrations of a swimming fish, a running sprinter, racing horses, or a person falling from a speeding motorcycle create a dynamic melange of representatives of various and complex mobile forms, rather than a rigidly prescribed index of ascendancy. On one level the placement of all these images on the panel suggests a dynamic, “moving” space for vision, in which the eye passes from one picture to another, advantageous, coherent, and rhythmic sequences, just like a child takes letter-blocks out of a disorderly heap and composes a word or a phrase. This is the most elementary concept of composition or editing.”
invoking in a viewer a sense of movement. On another level, the underlying theme is what matters: the notion of flow, movement, and speed.

All together, Krutikov's mode of operation fits the description of the "first stages" of the photomontage technique as characterized by Stepanova in 1928. According to her, "[c]ontrast in photographs of various sizes and, to lesser extent, the graphic surface itself formed the connective medium. One might say that this kind of montage had the character of a planar montage superimposed on white paper ground." Indeed, when we substitute the colour described by Stepanowa from white to grey, we may read her text as a commentary on Krutikov's visual project. As I will argue below, Krutikov's affiliation with the tendencies that dominated the early 1920s, rather than those of his own day, can be traced not only to visual language but also to ideological orientation. As a result, his project of the future city resonated strongly with already outdated concepts, those fostered by the post-Revolutionary avant-garde during the early 1920s, but still strongly efficient and full of meaning. Thus in some circles it was an apolitical act to use them.

Analysis of the Status Quo

The analytical part of Krutikov's project is centered on the existing state of affairs in architecture, as impacted by various means of transportation and speed. These issues

are presented in twelve groups. Starting with the problematic related to the "theory of architecture of a mobile form," and ending with considerations devoted to "dreams, fantasies, beginnings, caricature, achievements," the architect managed to include quite diverse topics. They ranged from the "form-evolution of car, train, boat, dirigible and airplane," through the "foreign mobile country homes," up to the "progress of power engineering," and the "conquest of a new space." 27 Krutikov's main preoccupation revolved around the perception that architecture was directly affected by the evolving means of transportation and ever increasing speed.

The dynamism of the polymorphous images re-organized by Krutikov, their syncopated rhythm, renders the pulse of the modern city, the evolution of which is impacted precisely by the intensification of speed, which in turn correlates to the progress of means of transportation. Krutikov's interest in velocity corresponds to the wide-spread "cult" of speed that in turn was part of the aesthetic of modernism in the early part of the 20th century, as demonstrated, for example, by the Futurists on the one hand, 28 and Le

27 Krutikov, "Gorod budushchego," op. cit. See Appendix below.
28 Filippo Marinetti in the "Foundation and Manifesto of Futurism" of 1909, extolled the virtues of male energy and audacity, while asserting the supreme magnificence of mechanical speed. Under number four of his Manifesto, published in Le Figaro, Marinetti writes: "We affirm that the world's magnificence has been enriched by a new beauty: the beauty of speed. A racing car whose hood is adorned with great pipes, like serpents of explosive breath -- a roaring car that seems to ride on grapeshot is more beautiful than the Victory of Samothrace." He then went on to idealize the driver of an automobile as being integral with the trajectories of the universe. Marinetti finished his programme with the apotheosis of the ideal context of a Futurist architecture: "factories hung on clouds by the crooked lines of their smoke; bridges that stride the rivers like giant gymnasts ... and the sleek flight of planes whose propellers chatter in the wind like banners and seem to cheer like an enthusiastic crowd." Quoted in Charles Harrison and Paul Wood, eds.,
Corbusier on the other. In Russia, even before the Revolution, artists embraced Futurism out of a commitment to advance art by finding a source of inspiration in the city and industry -- for them automobiles, airplanes, trains and speed were the emblems of modernity.

Art in Theory, 1900-1990. An Anthology of Changing Ideas (Oxford, UK and Cambridge, USA: Blackwell, 1992), 147-48. His evocative passage was an homage to the triumph of industrialization, the technical and social phenomena as they were then being extended through aviation and electrical power. Marinetti correctly recognized the advent of a new cultural milieu dedicated to anything large-scale and a highly mobile society. In the face of the passé values of Italian Classical culture, it proclaimed the primacy of a mechanized environment that later informed to an equal degree the architectural esthetic of Italian Futurism (Antonio Sant'Elia’s Città Nuova of 1914).

Le Corbusier, also took up this idea so highly cherished by the Futurists and in his projects proposed an open city form, which was supposed to facilitate locomotion, in accordance with his motto that “A city made for speed is made for success.” Le Corbusier, Urbanisme (Paris: 1925), trans. Frederick Etchells, The City of To-morrow and Its Planning (New York: Dover Publications, 1987 [1929]), op. cit., 179. This statement was a part of Le Corbusier’s rhetoric accompanying his “Plan Voisin” project for Paris of 1925, a rather paradoxical concept that the car having effectively ruined the great city could now be exploited as an instrument for its recovery.

Knowledge of analytical Cubism and Futurism reached Russia almost simultaneously, around 1911-12. The Russian artist challenging Symbolist art before World War I, responded to the burgeoning urban centres and industrialization by promoting values consistent with Futurism and combining it with the style of Analytic Cubism (and “its study of surface,” according to David Davidovich Burliuk, in his futurist manifesto “A Slap in the Face of Public Taste” of 1912). Due to the fact that knowledge of Analytic Cubism and Futurism arrived in Moscow almost at the same time, and because they were superficially similar, the Russian artists (Mikhail Fedorovich Larionov, Natalia Sergeevna Goncharova, Malevich, Tatlin, and poets Maiakovskii, and Vladimir [Viktor] Vladimirovich Khlebnikov) tended to link them. Thus, the style that evolved from them in the period 1911-14 is known as Cubo-Futurism, although it had less to do with Cubist than with Futurist values. In 1912, while speaking in St. Petersburg, Marinetti stimulated Goncharova and Larionov into developing a Russian version of Futurism known as Rayonism. In 1913 the term Cubo-Futurism was applied by Malevich to works done by Goncharova (Cats of 1912) and his own painting, The Knife Grinder of 1912. The reception of Cubism and Futurism happened at a moment of friction between the pro-Russian, pro-rural and pro-agrarian Slavophiles, centered in Moscow, and the pro-Western, pro-urban, and pro-industrial European stance that was strong in St. Petersburg. The Cubo-Futurists aligned themselves strongly with the later movement. Overall the Italian Futurism and the Russian Rayonism, however diverse, both represented the new reality of urban growth and metropolitan culture, and on men dependent on machines. In effect, to a limited extent, the Italian and Russian versions of futurism did share a common interest, i.e. the concept of dynamism, of mechanical movement, and of speed, light, and energy. However, the relationship between Italian Futurism and the Russian Cubo-Futurist movement is complex and controversial. Marinetti, for example, during his visit to Russia in 1914, received a rather cold welcome for his blatant glorification of war.
There is a parallel between the time when the Futurist phraseology entered Russia and Krutikov's preoccupation with the contemporary urban environment characterized by speed. Namely, when Krutikov was asked during his defense examination how much time he spent on developing his ideas about the future city, his answer was that it took him fifteen years to develop this concept.\(^{31}\) If indeed Krutikov asserted such a long period of deliberation on his project, it would mean that its gestation had started a few years before the October Revolution, in 1913, thus at the moment of the growing popularity of Futurism in Russia. It was also in 1913 that a series of eight popular postcards was issued representing images called *Moskva budushchego*, or Moscow of the Future\(^{32}\) (Fig. 11). It projected a science-fiction vision, with fantastic images of city streets filled with cars, dirigibles and airplanes. Considering that the publication of these postcards coincided with the widening knowledge of Futurism in Russia, their appearance on the market can be interpreted as a growing desire in Russia for modernization and technological progress. It is entirely possible that the colourful and whimsical prognosis of the future metropolis evoked by the postcards would make a memorable impression on the then-fourteen-year-old Krutikov. Thus this uncanny imagery, by being after all representative of calls for industrial development in still Tsarist Russia, might be

\(^{31}\) Selim Omarovich Khan-Magomedov, “Proiekt 'letaiushchego goroda,’” (Project of a “Flying City’’). *Dekorativnoe isskustvo* (Decorative Arts) no.1 (1973), 30-35.

regarded as inspiring Krutikov’s interest in means of transportation and their effects on the city of tomorrow. These images vividly announcing the city yet to come, which while certainly tantalizing the imagination with the glamour of technological advancement, represented at the same time the darker underpinnings of urban modernization, which were congestion, noise, pollution, and chaos. Perhaps the Revolution of 1917, and the explosive changes it triggered, was considered by Krutikov as an historic moment that constituted a catalyst for speeding up the delivery of the bright and industrialized life envisioned on the postcards. Consequently, as the postcards embodied desires under the old regime, the new conditions brought about by the Bolshevik government opened up possibilities to act on them, safeguarding at the same time against the disorder of the past system.

In his work, Krutikov created an overall effect by exaggerating, altering and fragmenting reality. He achieved this effect by mixing visual materials together, juxtaposing image with image, photography with drawing, and elevation with plan. In the end, however, through his calculated arrangement Krutikov conveys a sense of control and constraint. Nonetheless, this variable iconic material that Krutikov compiled creates a collision of form and metaphor invoking aesthetic connotations of Cubism and particularly Dada, but with a content that is optimistically futuristic. The technique of collage associated with synthetic Cubism was a well known and an often-utilized mode in Russia among the Cubo-Futurists even before the Revolution. Similarly, during the
1920s, Dada collages and photo-montages were not only highly popular but well mastered by Gustav Gustavovich Klutsis, Rodchenko, and El Lissitzky (Lazar' Markovich Lisitskii). While the Dadaists manipulated images to convey chaos and crumbling order, Krutikov applied the same manipulation but to opposite ends. He used images of existing structures and evolving means of transportation as the building blocks to construct a new image of an improved city. Because the current models were inefficient and confusing, they needed to undergo this justifiable confrontation and revision that would lead to the new and improved urban form. The motivating desire was not so much to negate as it was to radically improve.

Hence there is a difference and a distance between the representation of the city’s environment by Krutikov and, for example, the one rendered by Paul Citroën in his *Metropolis* of 1923 (Fig. 12). When Krutikov conjures up a city -- however fragmented, as in the “Composition of Mobile Constructions,” from panel number two (Fig. 13) -- he conveys his own role of a mediator, a socialized man who intervenes into an urban fabric to ameliorate its shortcomings. Isolating selected images, such as the plan of St. Peter’s in Rome, a postcard of the skyline of New York, and the photograph of a semaphore, all of them juxtaposed and placed next to a drawing of a skyscraper piercing a cloud -- Krutikov proceeded with his analysis that diagnosed the existing city’s shortcomings. The next step would be to propose an efficient cure -- a novel city form. Citroën, on the other
hand, conveyed the sense of being overwhelmed by the massive proliferation of buildings
and the simultaneity of images rendering the free-floating, dizzying, and kaleidoscopic
vortex of the urban rhythm. The Dutch artist communicated a mixture of fascination and
panic, a sort of modern neurosis, caused by the dynamic city, which closes in on its
dwellers with a piling up of buildings and machines. But Krutikov, by maneuvering and
adjusting the images, demonstrated instead a desire to reconcile the various aspects of the
urban conglomerate and offered a possibility of cultural continuity on a higher,

33 Citroën’s photo-montage was published in Russia by the magazine Lef no. 4 (1924), 43.
34 Citroën’s Metropolis brings to mind the associations observed by Ezra Pound: “The life of the village is
narrative. In the city the visual impressions succeed each other, overlap, overcross, they are
cinematic.” Quoted in James Donald, Imagining the Modern City (Minneapolis: University of
Minnesota Press, 1999), 74. In the Soviet Union, in 1926, Lissitzky perceived cinematographic qualities in
photographs -- predominantly of urban subjects -- taken by Erich Mendelsohn (and other photographers) in
the United States and published in his Amerika, das Bilderbuch eines Architekten (1926). In the article
“Glaz arkhitektora” (The Architect’s Eye), Lissitzky considered the images presented in this book as “a
film scenario,” which he recommended “holding up above one’s head when reading.” Idem, “Glaz
arkhitektora” (The Architect’s Eye), Stroitel’naia promyshlennost’ (Construction Industry) no. 2 (1926),
144-146. English translation in Christopher Phillips, ed., Photography in Modern Era: European
Documents and Critical Writings, 1913-1940 (New York: Metropolitan Museum of Art, Aperture, 1989),
221-222. See also, Christopher Phillips, “Twenties Photography: Mastering Urban Space,” in Jean Clair,
35 What has to be stressed here, however, is that when comparing the Soviet use of contemporary
photographic imagery with the utilization of it by the contemporaneous movements emerging in Europe,
what appears is the fact that, whereas the desires to rationalize the visual culture were identical, the context
was nevertheless entirely different. Western adaptations of reproducible material represented the values
associated with capitalism. Free expression and democratic egalitarianism, individual experience, material
comfort and prosperity, as well as the reality of advanced technology were the motivating factors for social,
economic and stylistic change. In other words, the capitalist dream was different, as was its targeted
audience. Consequently Western Europe’s incorporation of photography developed in the arena of
commercial advertising for a consumer market, while Soviet adaptations were based on ideological
commitment to reshape the proletarian conscience. Despite the best efforts of Rodchenko and Maiakovskii
in advertisement of the nascent Soviet Union, particularly under the NEP period, the fully-fledged socialist
commodity never really emerged. On the relationship between photomontage and advertisement, see Maud
Lavin, “Photomontage, Mass Culture, and Modernity. Utopianism in the Circle of New Advertising
Designers,” in Matthew Teitelbaum, ed., Montage and Modern Life, 1919-1942 (Cambridge, MA, London:
communist level, while at the same time challenging the achievements of the capitalist system. The last strategy he extended into questioning, for example, the efficiency of structures such as skyscrapers that were then epitomizing the technological building prowess of the United States. Through reorganizing the visual material according to the general premise -- the need for an unprecedented type of city -- he arranged the images under different headings to support his objective. While doing so he does not seem to lose any control over this re-constructed material. Overall, the gathered clippings are actually systematically and purposefully glued to the cardboard panels (with plenty of space between the images); they do not introduce a chaotic and shattered composition, but rather a busy and dynamic system. Krutikov, through this plethora of images, invokes the energy of modern life with its seemingly haphazard and at times incongruous impressions. In the end, however, the urban environment, as evaluated by Krutikov, seems not only to require amendments, but is also worthy of improvements.

In this approach, Krutikov was closer to convictions prevailing at the beginning of the 1920s, rather than to dominating attitudes around the time when he was working on his project. The contradiction between the need to destroy and the need to preserve the inherited cultural fabric caused the ensuing politico-artistic struggle of the 1920s. Soon after the Revolution, the government had no intention or interest in destroying or

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annihilating the products of the bourgeois past. Lenin, together with Anatolii Vasil’evich Lunacharskii, the new Commissar of Narkompros (Narodnyi komissariat prosveshcheniya, or People’s Commissariat for Enlightenment), for example, demonstrated interest if not in actively preserving old buildings then at least in preventing unnecessary demolition. Thus, early in 1918 a declaration was issued that clearly expressed the government’s concern for the heritage of the past:

Citizens, the old masters have gone, leaving behind a vast heritage. Now it belongs to all people. Citizens, take care of this inheritance, take care of the paintings, statues, buildings – it is the embodiment of your spiritual strength and that of your forefathers. Art is something wonderful, that talented people were able to achieve even under the yoke of despotism. … Citizens, do not even touch one stone, protect the monuments, the old buildings, articles, documents – all this is your history, your pride.

Aleksandr Aleksandrovich Bogdanov, the most profound theorist of Proletkul’t, who generally was against old culture, believing that it was based on the individual “I” and on unconscious methods such as “inspiration,” nevertheless gave some concessions to Lenin’s policies regarding the inherited culture, and uttered favourable references to

36 Maiakovskii, for example, in the spirit of Marinetti, called for an attack on Pushkin and Raphael, claiming, that “It’s time / for bullets / to pepper museums.” Maiakovskii, “Radovatsya rano” (Rejoicing in the Morning), Editorial, Iskusstvo kommuny (Art of the Commune) no. 2 (December 15, 1918), 1. Kazimir Severinovich Malevich, in a similar tone, rejected the emphasis placed on the past in the museums. Malevich’s questioning of the cultural heritage: “Do we need Rubens or the Pyramid of Cheops? … Do we need old copies of clay towns, supported on the crutches of Greek columns?” appeared at the height of a government campaign in which the Bolsheviks aimed to persuade the intelligentsia, who had been responsible for the museums, to cooperate with the new regime in preserving the past. Kazimir Malevich, “O muzeye” (On the Museum) Iskusstvo kommuny (Art of the Commune) no. 12 (February 23, 1919).

past achievements. Hence, he proclaimed that the need for the proletariat to create its own culture does not mean or require them to reject or ignore the bourgeois culture of the past, whether it was related to the artistic or the scientific realm. Rather than indulging in the expression of their personal feelings, according to Bogdanov, post-Revolutionary artists must remember their social role and keep in mind that the proletariat is the heir to the material as well as the cultural wealth of the Old World. Consequently, proletarian artists must explore the entire cultural heritage in order to retain what is valuable while rejecting only what is harmful.

Later on, however, there was a growing animosity towards the past and its traditions, voiced mostly by the avant-garde, particularly after 1921, when the New Economic Policy (NEP) was introduced. As Aleksei Mikhailovich Gan complained: “As soon as we ended the military front of the Civil War and had turned to the peaceful tasks of reconstruction, art experts raised their heads … and started spouting on about the eternal values of the beautiful.” Gan’s support of the avant-garde stemmed from the fact that they were the first to sympathize with the Revolution and to offer cooperation with Narkompros, and not because he was committed to their abstract artistic vocabulary. On the other hand, even among the avant-garde artists there were those who came to terms

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with the inherited city, as for example Lissitzky, who wished to adapt the old city to the new socio-political situation: "We live in cities that grew up before our time. They do not satisfy our needs and the pace of our age. [However we] cannot demolish them overnight and build them 'correctly'." Lissitzky was evidently accepting the coexistence of the historical past with the new tempo of the modern and socialist city. At the end of the 1920s, voices such as his were overpowered by those who decided to put the inherited urban fabric on the chopping block.

Actually, the career of Lunacharskii and his patronage are very indicative of the ambivalent position on the destruction and preservation of the cultural heritage that was held throughout the 1920s. Thus, from the start the effect of his involvement with artistic production was to assure the existence and development of art forms that represented the continuity of culture. In effect, during the years immediately following the Revolution,

39 Quoted in Lodder, *Russian Constructivism*, op. cit., 295, n. 5.


41 The period when Lunacharskii was in office, from 1917 to the spring of 1929, was marked by his continued efforts to win over rather than destroy the established intelligentsia and the inherited culture. Lunacharskii, for example, rejected Bogdanov's original idea that the proletariat should start anew to develop their own culture without using the heritage of Western civilization. According to Lunacharskii, the peasants and workers had to assimilate bourgeois culture if they expected to make any cultural advances of their own. Throughout the 1920s he was fighting a continuous rearguard action and was forced from very early on to give up position after position in face of more boldly confrontational forces in the Party and in his Ministry. These forces wanted to break the old intelligentsia, and the inherited culture, as quickly as possible and replace it with a new socialist one, the roots of which would lie in the working class rather than the gentry and middle class, as was the case with the existing intelligentsia. In fact, from as early as 1918 his so-called soft line on culture was being eroded and undermined in a process of increasingly militant "proletarianization" of cultural and intellectual life. See, Timothy Edward O'Connor, *The Politics of Soviet Culture - Anatolii Lunacharskii* (Ann Arbor, Michigan: UMI Research Press, 1980).
10,000 buildings of special interest were brought under state protection and 3,000 of these were actually restored and repaired.\footnote{Among the dedicated art historians, archeologists, architects, and museum curators the most prominent was Igor Emmanulovich Grabar, who already before 1917 had been striving to achieve state control over the protection of old architecture.} The restorers’ impact began to draw to an end in about 1924, when, under Stalin, there was a move towards the rebuilding of the major cities, particularly Moscow, and interest declined in preserving its ancient edifices. In 1929, Lunacharskii left Narkompros after the defeat of his educational policy, and in 1930 the restoration section was closed. In the period of 1928-1934, destruction of important buildings went on voraciously.\footnote{Some of the buildings that disappeared in this period were, in the Kremlin: the Church of \textit{Spas na Boru} (Saviour in the Forest) of 1330, the \textit{Chudov} (Miracle) Monastery and the \textit{Voznesenskii} (Ascension) Convent, and the Nikolaievskii Palace of 1775-76; Kazan’ Cathedral on the Red Square (of 1636); an outstanding example of Moscow Baroque, the Assumption Church on the Pokrovka (of 1696-99); the Cathedral of Christ \textit{Spasitel’} (the Redeemer) of 1838-80. Thus the character of Moscow had been altered almost beyond recognition.}

Once again, Krutikov, throughout his project, was critiquing the past to improve it, not to destroy it. However, what is striking in Krutikov’s selection is that the visual material he gathered demonstrates advances, though with shortcomings, that solely represents foreign, not Russian, milieus. The omission of national examples of architecture not only amplifies the international dimensions of his project, but it may also indicate his resistance to the “renewal of the Russian heritage” that Stalin introduced in 1928. Constituting a part of the “Cultural Revolution,” this renewed hostile approach to the Russian built heritage was manifested in the escalation of attacks, from verbal
bashing, expressed shortly after the Revolution, to the systematic destruction of the historical monuments in Moscow at the end of the 1920s.44

In the part of his presentation in which Krutikov scrutinized historical achievements in architecture and transportation, and which served as the rationale for the construction of the new city, Krutikov introduced iconographic references to technology and the implied role of the architect/artist as engineer. By juxtaposing images of built structures with pictures of various means of transportation, he followed the modernist tradition in perceiving metropolitan life as a sublime manifestation of technology and engineering work.

Following also the modernist example, Krutikov, throughout his work, incorporated popular imagery, as disseminated in his milieu on postcards and through illustrations in magazines, establishing it as a dominant visual repertoire. Krutikov thus followed the avant-garde tradition by engaging and identifying himself with what

44 As already mentioned, just after the Revolution there was an adamantly opposition to the old, past and traditional. In the consciousness of many people, the social order destroyed by the Bolsheviks was associated directly with the forms of the environment that characterized the old order of things. Hence the process of reassessing the cultural values amassed by the discarded system became inevitable. This gave rise to an uncompromising negative attitude towards all the achievements of the especially recent past, as they were considered to be associated solely with the interests and tastes of the ruling classes overthrown by the Revolution. This sort of bias was especially directed toward the late 19th and early 20th centuries, the period of the country's capitalist development. The prevailing view was that everything created after the decline of Neo-Classicism did not have any cultural nor artistic value, but only material worth. Thus, Stalin's attack on past architecture embraced much wider and different bias than the one shortly after 1917. One of the explanations of attacking pre-capitalist vestiges may be the fact that this time the objects of assault were ecclesiastical centres, going back to Medieval, Baroque and Neo-Classical time.
Thomas Crow calls, “marginal, ‘non-artistic’ forms of expressivity and display.” All this gathered material, which sets up the framework for his envisioned city, had been drawn from many published sources, such as books, magazines and journals, both Soviet and foreign. The Soviet market, since the introduction of NEP in 1921, was quite saturated with foreign publications. In 1928, Rodchenko published a photograph entitled News-stand (Fig. 10), that shows a kiosk with its racks filled with various magazines.

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46 At this point of my research I have not been able to recognize the exact sources of the images appropriated by Krutikov in his project. There are, however, references to the access by other Soviet artists to a plethora of Western publications. Thus, for example Lavrentev writes that Zakhar Bykov, a student at VKhUTEMAS, while visiting Rodchenko’s studio found the entire floor covered with piles of French and German periodicals, from which the artist was clipping illustrations for his montages. In Alexander Lavrentev, Alexander Rodchenko: Photography 1924-1954 (Cologne: Konneman, 1995), 14. Rodchenko had first hand access to foreign material via his own trips abroad or through his friend’s (Maiakovskii, Brik, etc.) sojourns to Western countries. Lev Kopelev remembers “I kept my passion for reading the German [magazines] … the Berliner Tageblatt, the I-Z and the most expensive but most interesting magazine, Die Woche. At that time [1926] these publications were sold freely in a store on Vladimirskaya Street which specialized in publications from other cities and from abroad.” Lev Kopelev, The Education of a True Believer, trans. Gary Kern (New York: Harper and Row, 1980), 92.
47 The Soviet market during the NEP period, was also flourishing with a home grown proliferation of images due to newly generated activities in advertising. Maiakovskii who, along with Rodchenko was extensively involved in advertisement production, wrote: “The bourgeoisie knows the power of advertising. Advertising is industrial, commercial agitation. … But face to face with the NEP, in order to popularize the state and proletarian organizations, offices, and products, we have to put into action all the weapons, which the enemy also uses, including advertising.” Vladimir Maiakovskii, “Agitation and Advertising,” (1923), quoted in Victor Margolin, The Struggle for Utopia: Rodchenko, Lissitzky, Moholy-Nagy, 1917-1946 (Chicago and London: University of Chicago Press, 1997), 113.
both domestic and European. Indeed, the most vividly illustrated magazines in Europe, by the 1920s, were those of Germany. They followed, however, the model established already in America, where the image, particularly in advertisements, was an integral part of the message. Lissitzky, who divided his career between activities in Russia and Berlin, in 1926 made an observation on mass communication:

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49 Amongst the publications on Rodchenko’s photo are the Soviet film journals such as Sovietskoi ekrann (Soviet Screen), technical publications like Stroitels'tvo (Building) and Radio, or fashion magazines Moda (Fashion), and Iskusstvo odevand (Art of Clothing); while the foreign periodicals are represented by the French Le Monde, and the German Die Woche, AIZ (Arbeiter Illustrierte Zeitung), and Kölnische Zeitung.

50 For the names and profiles of some of the illustrated German magazines, such as Berliner Illustrirte Zeitung, Münchener Illustrirte Presse, Die Dame, Die Grüne Post, or Uhu, see Maud Lavin, Cut with the Kitchen Knife: the Weimar Photomontages of Hannah Höch (New Haven: Yale University Press, 1993), especially 51-61.

51 When photographs were introduced at the turn of the century in the illustrated press, they were used rather sparingly at first. World War I created a huge market for pictures, fostering growth and experimentation on both sides of the Atlantic. See Teitelbaum, ed., Montage and Modern Life, op. cit.

In America there was a new optimistic mentality. ... It was there that they first started to shift the emphasis and made the word be the illustration of the picture rather than the other way around, as in Europe. ... The invention of easel pictures produced great works of art, but their effectiveness has been lost. The cinema and the illustrated magazine have triumphed. We rejoice at the new media which technology has placed at our disposal.\footnote{El Lissitzky, “Our Book,” 1926. Published in English, Sophie Lissitzky-Küppers, ed., \textit{El Lissitzky: Life, Letters, Texts}, trans. Helene Aldwinckle (London: Thames and Hudson, 1968), 357-59.}

Krutikov was precisely amongst those who took advantage of the illustrated magazines, which provided a rich source of “raw” visual material featured through crowded, innovative layouts. It seems that Krutikov reached for these publications, from scientific journals, through the literary genre, to popular and pulp magazines. Good examples of this across-the-board selection, are images gathered on the panel number fourteen -- the “Conquest of a New Space” (Fig.15). What is exceptional about this panel is that in the explanatory notes to its content, Krutikov revealed the name of the author whose construct he represented. Actually this is the only instance throughout the entire commentary where he did this. In the left upper corner, beside the number “4,” Krutikov inserted a drawing of an airplane which, as Krutikov indicates in his text, is “a project of an airplane by M. Val’ie that [in the stratosphere] is able to reach speed of 2000 meters per second.” Max Valier was a German rocket scientist who participated in the First

\textit{Art and Politics in the Weimar Period} (London: Thames and Hudson, 1978). Overall, during the 1920s Soviet art was exhibited in many cities in the West. For example, in: Amsterdam in 1923, New York -- \textit{Exhibition of Russian Painting and Sculpture} at the Brooklyn Museum in 1923, and a \textit{Russian Art Exhibition} at Grand Central Palace in 1924, Venice in 1924, Paris in 1925, Milan in 1927, Brussels in 1928; see \textit{The First Russian Show}, exh. cat. (London: Annely Juda Fine Art, 1983).
World Exhibition of Interplanetary Machines and Mechanisms held in Moscow in 1927.\textsuperscript{54}

It is probable that the illustration of Valier's inventions and projects were publicized around that time in the Soviet press. Krutikov evidently was familiar with Valier's activity, because on plate number fifteen, still under the rubric "Conquest of a New Space," (Fig.16), we find another image of Valier's model. This time, in the lower right corner is an illustration showing a hermetically-sealed "ether" plane, identified by Krutikov as "the rocket into interplanetary space."\textsuperscript{55} The repeated selection of Valier's prototypes, and the fact that the architect credited the scientist by spelling out his name suggests Krutikov's fascination with the inventor who aimed towards outer space with vehicles breaking speed records. It is also possible that Krutikov's emphasis on the German scientist had political overtones. Thus we may also perceive Krutikov's choice of Valier's projectiles into the earth's orbit as a reformulation of the hopes that the Bolsheviks vested in Germany during the very early years of the Revolution. It was then hoped that this industrially developed and then politically radical country would help


\textsuperscript{55} Ibid., 161, ill.7. Winter reproduces Valier's model, the same as in Krutikov's project, as featured in the \textit{American Weekly} on January 13, 1929. This attests to the popularity of Valier's activities in particular, and exploration of outer space in general, in the Soviet Union as well as in America at the end of the 1920s.
technologically backward Russia to start the global spread of international communism.

This did not happen, but ten years later Krutikov seems again to believe that the German radical could be useful in Russia’s advancement of outer space exploration, this time in terms of scientific/technological experiments.\[56\]

Krutikov indicated this “homage” to Valier through the arrangement of images on panel number fourteen (Fig. 15), especially by ordering those from the lower right corner diagonally towards the upper left. Thus, at the lower corner there is a figure of Gulliver watching the flying island of Laputa, from Jonathan Swift’s *Gulliver’s Travels*, written in 1726.\[57\] Gulliver’s diagonal and upward trajectory, an original part of the composition,

\[56\] After the First World War, the Treaty of Versailles forbade the Germans to have any sort of military aviation. Despite that, in 1924, the Germans and Soviets agreed to cooperate. In effect, the Germans were allowed by the Soviets to clandestinely construct military aircraft and train pilots in the airfield at Lipetsk, near Moscow. While the Germans would continue to conduct their research, in exchange, the Soviets would acquire technical knowledge for their own aviation industry. Some joint training was also conducted. A test unit that evaluated prototypes of military aircraft and weapons grew from 50 to 200 German staff during 1925-1933. All German activities were conducted in the utmost secrecy. By 1933, with Hitler gaining power in Germany, the co-operation came to halt. See, Robin Higham, John T. Greenwood and Von Hardesty, eds., *Russian Aviation and Air Power in the Twentieth Century* (London and Portland, OR: Frank Cass, 1998), 40.

\[57\] Jonathan Swift, *Gulliver’s Travels*, Christopher Fox, ed., (Boston: Bedford Books, New York: St. Martin’s Press, 1995 [1726]). Since Aristophanes (*The Birds*, first performed in 414 B. C.) other writers had invented living in the air. Swift with his fanciful flying city was however the first author who attempted to explain Laputa’s properties in line with the findings of contemporary science. Therefore, the *Gulliver’s Travels* by Swift can be read as science-fiction, although its intention was to satirize men and their institutions. In the case of Gulliver’s third travel adventure, during which he was picked up by the flying island of Laputa, Swift was ridiculing the court of Great Britain and the Royal Society in England. The author was supposed to lampoon power and social hierarchy, towering high above the rest of the kingdom at the court, as well as to satirize the world of science, which, according to Swift, involves itself in abstract thought high above the conventional interests of ordinary people. At the time Swift’s published his book, Western Europe was experiencing the Enlightenment, a time when science and reason were triumphing. Swift, whose intention was to castigate all the human follies, did not hesitate to take on reason often alluding to Isaac Newton.
when extended includes, beside another drawing of a rocket, the image of Valier’s airplane. Krutikov seemed to indicate a progression of the flying objects, according to which the “space vehicles” evolve ascending towards the upper left, where the Valier airplane is situated. We may assume that the culmination of this evolving chain would be, of course, Krutikov’s “flying city.” However, despite the prominent place allocated to Valier’s inventions, we should remember that all the material presented by Krutikov on the sixteen panels demonstrate progressive achievements in architecture and mobility, containing however – and this is a crucial point – shortcomings and inefficiencies.

Consequently Krutikov’s own, original project was intended to resolve these shortcomings entirely. The fallacies that all of those, up-to-then, various attempts at mobility represent is indicated and emphasized by the drawing with a figure of Gulliver pointing to Laputa.

As the panel fourteen demonstrated, in addition to images derived from scientific publications, Krutikov also incorporated clippings that resonated with satirical commentaries. Indeed, throughout his project, Krutikov modulated the tone of his address by shifting it from encouraging, to seductive, to comical. Humour, however, was introduced only under specific circumstances; that is, only when Krutikov dealt with the material that documented the pressing need and stipulations for change. This occurred particularly when he reached to sources that were representative of capitalist modes of production, regarded by the architect as antiquated and inefficient. Then Krutikov
accentuated his target with paradoxical and satirical punch, changing his tone to ironical, so as to articulate the imperfections of the exploitative capitalist system. To achieve these comical and critical effects, Krutikov actually devoted a whole panel, number sixteen, to present what he called “Dreams, Fantasies, First Attempts, Caricature, and Accomplishments” (Fig. 17). These images were gathered to mock fears and failures of various means of transportation, ranging from 19th century examples, up to contemporary instances. An example of caricature drawing, which pointed out the economic inefficiency of the railroad, is an image of a locomotive represented as a “monster devouring incalculable capital.” To illustrate a contemporary depiction of automobile traffic, he inserted a view of a modern Western metropolis that aimed to personify overcrowding via a congested intersection.

This last segment of Krutikov’s analytical commentary can be perceived as his attempt to lampoon dreamers whose achievements indeed had shortcomings, due to the fact, we may guess, that they were representing developments generated on the wrong side of the political spectrum. It can also be interpreted as serving the function of a preemptive strike, a kind of safeguard against any potential accusation that his proposition of a flying city was unrealistic (was he ever right in sensing that!). By attacking the failed dreams for their shortcomings, it seems Krutikov sought to defend his very own

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imaginative fantasy as also being professionally/scientifically based, besides being ideologically motivated.

Overall, the general tone used by Krutikov throughout his project is earnest (but not alarming), presumably because of the assumed urgency of his objective and because the issues at stake are of great importance. He explicates his vision of the city with a sense of purposeful determination. His project aspires to be more than another fantastic divagation on the future. While Krutikov professes the new city, he agitates for the cause of a socialist “great experiment,” implicitly assuming that only the Soviet state with its socialist ideology would not only secure but moreover fulfill the promise of superior technology with a new rearrangement of social and spatial interaction. The Soviet regime intended to transform human consciousness and modify behaviour, a process in which housing was expected to play a crucial role. For architects and for party and government leaders, architecture became one of the tools of what at that time was called perestroika byta, or the reconstruction of the way of life. The “new socialist man” was supposed to regard work as a voluntary participation in the common task. This would translate into buildings that would constitute his or her environment, the factories, clubs and communal houses (Krutikov’s project aimed particularly at dwellings). This new citizen was to be freed of the old prejudices, and liberated from the “chains” of domestic servitude.

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Instead, his/her time was to be divided between productive and exciting occupation, self-improvement and study, militant activity, and the practice of sports. Furthermore, as the “alphabet” of communism spelled it out, the new ideology created an opportunity (and demand) for the increased flexibility of the population and its adaptation to multi-tasking in the sphere of production:

Under communism people receive a many-sided culture, and find themselves at home in various branches of production: to-day I work in an administrative capacity, I reckon up how many felt boots or how many French rolls must be produced during the following month; to-morrow I shall be working in a soap factory, next month perhaps in a steam laundry, and the month after in an electric power station. This will be possible when all the members of society have been suitably educated. 60

It seems that Krutikov recognized the effects of this heightened productive adaptability -- which Bukharin and Preobrazhenskii indicated in 1919, in their vision of the ideal system towards which the young Bolshevik state was mustering its resources and energy, and which resulted in a wide range of mobility – and responded with his vision of a mobile city. Consequently Krutikov’s model for a future ”mobile architecture” might be perceived as a form of propaganda. To promote mobile housing was to foster communism.

However, the concern at that time was that capitalism, which had supposedly been demolished by the Revolution, was still being recalled in the remnants of bourgeois housing. Thus it was necessary to eliminate not only the capitalist system of production itself, but all its remnants, such as the old housing and the old way of life. Perceiving in men/women the reflection of their living conditions, architects aimed to transform human nature through the agency of the environment. Krutikov’s attempt was to create a new physical setting for the new society. In 1928, the same year in which Krutikov presented his ideas, Ginzburg called for the creation of “social condensers.” Buildings and even entire cities the Constructivist architect regarded as “tools of social change,” or sotsialnye kondensatory. Like electrical condensers that alter the nature of the current, the architects’ proposed “social condensers” were to transform the self-centered individual of capitalist society into a new, socialist person. It seems that for Krutikov, the building blocks for the new city of the new society consisted of buildings as means of transportation, “space machines for living.”

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Technology and the City of the Future

Soviet Russia glorified science and worshipped machines. Krutikov, while attending architectural school in Moscow, was submerged in a milieu that totally adhered to this reverence. Henry Ford and Frederick Winslow Taylor, Albert Einstein and Thomas Edison were not only popular in academic circles for their achievements, but their discoveries were also highly promoted on the governmental level. It was confidently hoped that the success of the October Revolution would be guaranteed by a union of the economic achievements of "amerikanizm," with the political credentials of the Bolsheviks. Lenin had made very clear the urgency of using all means available to

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64 In Russia and in the Soviet Union “amerikanizm” was associated with the notion of modernity. More specifically, this term meant a whole complex of approaches to industrial production and labour relationships in the United States that led the country to its economic achievements. The Bolsheviks largely dismissed American commercial methods as capitalistic and inappropriate to Soviet society, but they greatly increased the emphasis on importing American machinery, processes, and techniques of industrial organization. See also Chapter One, 51 ff.

65 The guardians of orthodoxy warned against romanticizing America. Maiakovskii long before his visit to the United States in 1925 represented ambiguous attitude mixing fascination with however a higher dose of harsh criticism. See also, Mikhail Ilevidov, “Amerikanizma tragifars” (The Tragedy-Farse of Americanism), *Lef* no. 2 (1923), 45-46. A translation to Russian of William T. Colyer’s *Americanism: A
modernize Soviet Russia, including the achievements of capitalism. The two exemplary models of modernization were particularly those of Ford and Taylor. Ford had introduced the conveyor-belt system and standardization, which led him to design and produce the Model T Ford, the hallmark of standard parts. Taylor’s theory of scientific management was a system of organizing work in which the production process was separated into its most basic components, and each segment or task measured and timed, to maximize efficiency and output. According to Lenin, scientific management could be used to communist ends. He stated:

The Taylor system, the last word of capitalism in this respect, like all capitalist progress is a combination of the subtle brutality of bourgeois exploitation and a number of its greatest scientific achievements. … The Soviet Republic must at all

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World Menace (London, 1922) in 1925, also suggests that there was sentiment for resisting the American infatuation.


67 Both systems had been developed in the USA and were introduced in Europe as part of a general process of Americanization that was perceived as synonymous with modernization. The Italian Marxist politician Antonio Gramsci, writing his Prison Notebooks under a Fascist incarceration at the end of the 1920s, saw Fordism as setting the preconditions for a “transformation of the material bases of European civilization.” This, he argued, would not only “bring about the overthrow of the existing forms of civilization” but could potentially stimulate “the forced birth of a new.” Antonio Gramsci, “Americanism and Fordism,” in Quintin Hoare and Geoffrey Nowell Smith, trans. and eds., Selections from Prison Notebooks of Antonio Gramsci, (London: Lawrence and Wishart, 1971), 317. By the 1920s, scientific management, which extended the original approaches of Taylorism into all area of labour productivity and technological efficiency evoked enthusiasm in Europe as a typical feature of “American civilization.” However, Europe, with its established industries, trained workers, and experienced managers, might find American experience and methods useful, but it neither was nor felt backward as Russia did. See Charles S. Maier, “Between Taylorism and Technocracy: European Ideologies and the Vision of Industrial Productivity in the 1920s,” Journal of Contemporary History 5, no. 2 (1970), 27-61; Jean-Louis Cohen and Hubert Damisch, Américanisme et modernité. L’idéal américain dans l’architecture (Paris: EHESS, Flammarion, 1993); Terry Smith, Making the Modern. Industry, Art, and Design in America (Chicago and London: University of Chicago Press, 1993).
costs adopt all that is valuable in the achievements of science and technology in this field.\textsuperscript{68}

In effect, the representations of the machine in Soviet culture were intended to evoke an ethos of efficiency and productivity. This formula resonated particularly strongly following the Civil War, when the development of the technological means of production became the most urgent national priority.\textsuperscript{69} Around 1928, however, as a

\textsuperscript{68}Vladimir Il’ich Ulianov - Lenin, “The immediate tasks of the Soviet government,” \textit{Izvestiia}, 28 April 1918, quoted in Rainer Traub, “Lenin and Taylor,” \textit{op. cit.}, 86. Lenin, taking on a scientific rhetoric, presented his ideas in a form of a mathematical equation: “Soviet power + the order of the Prussian railroads + American technique and the organization of trusts + American public education etc. etc. $++=\Sigma$ = socialism.”

\textsuperscript{69}In response to these needs, the Central Institute of Labour (TsIT - \textit{Tsentral’nyi Institut Truda}) embarked, in 1921, on the national campaign for the scientific organization of labour (\textit{nauchnaya organizatsiya truda}, or NOT). The Institute was founded by Aleksei Kapitanovich Gastev, the Russian “bard of Taylorism,” a major figure in the development and popularization of Soviet ideas concerning scientific management. The NOT movement set out to rationalize working procedures by introducing a Soviet version of the assembly line mass production methods developed by Taylor and Ford. There was also a broad educational campaign to promote efficient habits, embracing all workers and even school children. By the end of 1924 the Central Institute of Labour organized laboratories for studying “psychotechnics,” the psychological and physiological aspects of labour. The applications of the experiment by the NOT were widely spread. Thus, in theatre, Vsevolod Meierkhol’d proposed his theory of Biomechanics, a system for training actors, by turning to scientific management particularly to American time-and-motion studies as a main model for his rationalization. In the realm of architecture, Ladovskii especially followed the experimentation promoted by the NOT. In his work for the architectural laboratory at VKhUTEMAS, Ladovskii designed special equipment for monitoring the senses. He also invented a device he called \textit{prostrometer} (space-meter) for examining spatial properties of forms, \textit{oglasometer} (volume-meter) for checking the accuracy of an individual’s judgement by eye of the properties of volumes, and the \textit{ploglasometer} (surface-meter) for testing the individual’s faculty for perceiving the qualities of surfaces. His plea for a rational management of psychological energy, achieved through the design of expressive architectural forms, can be interpreted as an application of Taylor’s industrial method to architectural aesthetics. Krutikov, as the assistant to Ladovskii, wrote a report on the laboratory operation describing aforementioned experiments and procedures. Krutikov, “Arkhitekturinaia nauchno-issledovatel’skaia laboratoriia pri arkhitekturnom fakul’tete Moskovskogo Vysshego Khudozhestvenno Tekhnicheskogo Instituta” (The Architectural Scientific Research Laboratory in the Architecture Faculty of the Moscow Higher Artistic-Technical Institute), \textit{Stroitel’naia promyslennost’} (Building Industry) 5 (1928), 372-375. Quoted in Cooke, \textit{Russian Avant-Garde, op.cit.}, 184-85. On Ladovskii’s experimental technique and his laboratory see Selim Omarovich Khan-Magomedov, “Psikhotehnicheskaia laboratoriia VKhUTEINa, 1927-1930” (The Psychotechnical Laboratory of the VKhUTEIN, 1927-1930), \textit{Tekhnicheskaia estetika} (Technical
reaction to the rhetoric of the Five-Year Plan, there was a shift when “the aura of the god-
machine was eclipsed by the aura of the god-man.”70 In effect, the theme of socialist
construction was transformed from a focus on huge agricultural and industrial projects,
demonstrated as triumphs of technology and social organization, to an emphasis on the
representation of individual heroism in conquering the elements. Over time, this
individual hero, for example the worker in Dolgorukov’s poster, will be replaced by the
figure of Stalin.71 In Krutikov’s case, his whole project can be perceived as an
interpretation and exploration of a machine as represented by various means of
transportation. The technologically improved city, with its hovering dwellings, which
was supposed to be reached via a sort of omnibus vehicle (serving plural functions), was
thus envisioned as an advancement at an urban scale along the path to communism. If
there was a hero in Krutikov’s vision it was his hovering city – literally a shiny star upon
the firmament.

Although Krutikov’s call for buildings to hover in space was definitely daring, he
was not the first or the only one who exercised this concept. To a certain degree, some of
Le Corbusier’s ideas might be perceived as precursors to debates that were centered on

Aesthetics) 1, (1978), 16-22. On Gastev and NOT, see Kurt Johansson, Aleksej Gastev – Proletarian Bard
of the Machine Age (Stockholm: Almqvist and Wiksell International, 1983); Kendal E. Bailes, “Alexei
Gastev and the Soviet Controversy over Taylorism, 1918-24,” Soviet Studies XXIX, no.3 (July 1977), 373-
94.

71 On the cult of Stalin and his tactics of self-representation, see Robert C. Tucker, “The Rise of Stalin’s
overcoming the laws binding architecture to the earth. Particularly the latter's association of architecture with the forms of airplanes and ships, along with his demand for the abolition of foundation walls in buildings, would fit into this category. According to Le Corbusier, the mastery of earthboundedness did not mean, however, the eradication of gravity, but rather an opportunity to gain space. He thus raised the ground floor of his buildings on stilts or *pilotis*, so that these became the buildings' only connection with the ground. It was never his intention to literally lift his buildings into the air. Le Corbusier adapted the aspects of “suspension” in a rational way. He was not talking about “flight-qualities” applicable to architecture. In his view, the airplane had to be regarded exclusively as a transporting machine. Nonetheless, much could be learned from it. In *Towards a New Architecture* (1923), he suggested what exactly the architects could gain from the airplane:

The lesson of the airplane is not primarily in the forms it has created, and above all we must learn to see in an airplane not a bird or a dragon-fly, but a machine for flying; the lesson of the airplane lies in the logic which governed the enunciation of the problem and which led to its successful realization. When a problem is properly stated in our epoch, it inevitably finds its solution.\(^7\)

Le Corbusier actually perceived the resolutions to any occurring issue quite mechanically. According to him, when there is an unattainable desire to enter the air, the machine to fly is its result; when the wish to travel faster emerges, the automobile comes

to the rescue; when the need to dwell is causing a problem, the machine for living is its solution. For him the airplane, ship, and car were used to describe what the new aesthetics of architecture should be, a rational solution to a problem with the 'honest' aesthetics of modern industry. Indeed rationality, supported by Taylorism and new industrial methods, led Le Corbusier to his notorious plea: “Architecture or Revolution. Revolution can be avoided.” Indeed, Le Corbusier’s ideas did not fly too high in overcoming the status quo. His was a call for reforms within existing political and economic systems, rather than a call to overthrow them.

There was an even closer link between Krutikov’s ideas on mobile architecture and the Soviet milieu. Ginzburg, in *Style and Epoch* of 1924, promoted his understanding of a close connection between architecture (particularly architectural styles) and the concept of movement. Only through a comprehension of movement in architecture could the meaning of an architectural work -- i.e. the articulation and organization of its

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73 Le Corbusier joined the voices that praised Ford and Taylor and in his own vision he sought to bring the French architects up to the level of “healthy and virile, active and useful, balanced and happy” engineers (Ibid., 14). The house proposed by him, then a town was to be transformed from monument to tool, a “machine for living.”

74 Ibid., 289.

75 Beatriz Colomina points out to the ambiguous meaning of the word “revolution.” This word has a dual meaning in the context in which is introduced by Le Corbusier. In *Vers une architecture* he had posed this dilemma three times, twice with the image of a ventilator (265), and a turbine (267). Hence the multiple puns: on the mechanical “revolution” as movement, on the Industrial Revolution, and on the Revolution as in the social unrest. The message that Le Corbusier had created is nonetheless less obscure. The function of the pathetic alternative “Architecture ou Révolution” is to indicate the bourgeoisie’s fatal choice: efficient housing policies as a remedy against social unrest. She also extends the reading of the word “revolution” to the spiral shape of the ventilator (a path from life to death, a spiritual-cultural rebirth). Beatriz Colomina, “L’Esprit Nouveau: Architecture and Publicité,” in Colomina, *Architectureproduction*, op. cit., 63.
elements -- be fully revealed. The form and sense of dynamic movement derived from the machine. Consequently, Ginzburg treated the different industrial and engineering structures presented in his book as paradigms of a dynamic modern architecture.

However, Krutikov's path of investigation bears the strongest affinity to the ideas on dynamic spatial form devised by the Rationalist movement in Soviet Russia, especially represented by members of the Association of New Architects (AsNovA). The fact that he based his whole proposal for the new city on the premise of mobile architecture and questions of aero- and astro-nautics might actually be traced to concepts promoted by this association. It was AsNovA, of which Krutikov and his teacher Ladovskii were both members, that advised the architects to consider in their work "earthly installation of aerial paths of communication," or "avia construction." There are also strong similarities between Krutikov's approach and ideas claimed by Lissitzky, another architect associated with AsNovA. Their commonality lies first in a

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76 In architecture there were two avant-garde groups that utilized some aspects of a scientific approach in their work. The AsNovA (Association of New Architects) group, of which Krutikov was a member, was concerned with building a "Rationalist" science of architectural and urban form on the basis of perceptual psychology, while the Constructivists and the OSA (Society of Contemporary Architects) group centered their activities on a "functional working method." The Rationalists derived their concepts from other sources than those concerned solely with the compositional dynamics of the machine. They regarded the elements of modern art, found by them in Cubism, Suprematism and the Prouns, as well as in perceptual psychology combined with the visual tension resulting from asymmetry, to be a prime means of energizing form. See Anatole Senkevitch, Jr., "Aspects of Spatial Form and Perceptual Psychology in the Doctrine of the Rationalist Movement in Soviet Architecture in the 1920s," VIA 6 (1983), 78-115.

77 See note 2 above.

78 Letter from AsNovA to El Lissitzky written on June 9, 1924, in Kazus', op. cit., 197.
shared strong dissatisfaction with existing skyscrapers, and second, in a mutual perception of the correspondence between architecture and human mobility. Krutikov’s criticism of skyscrapers reverberated with Lissitzky’s scrutiny of American high-rises and their negative effects upon the city. Among the commentaries to the twelfth panel entitled “Evolution of Constructions – from Cave to Housing in the Air” (Fig. 18), there is one directed toward an image showing a set-back skyscraper of dominating height.

According to Krutikov there was a “skyscraper crisis” which he wished to resolve. He wrote: “due to the fact that the skyscraper (neboskriob) takes over a huge amount of space on the ground with its foundations, and because it contains insignificant sections on top, there is a need to escape this waste by dividing the skyscraper into elements that would be separately hung in space.” To demonstrate the problems, as he perceived them, Krutikov attached a schematic drawing representing the tapering, uneconomic silhouette of a high-rise (Fig. 6 – Panel 3: upper left corner). What follows, then, is the architect’s response to this skyscraper crisis, in the form of a communist remedy, a technologically advanced floating architecture.

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79 For a discussion on Lissitzky’s approach to skyscrapers, see also Chapter One, 52 ff.
80 America, wrote Lissitzky, “had created a particular type of high building by transforming the European horizontal corridor into a vertical lift shaft. ... The spread of this type took place entirely in anarchistic way without any concern at all for the larger organization of the city.” El Lissitzky, “A Series of Skyscrapers for Moscow: Wolkenbügel 1 (1923-25),” op. cit.
Krutikov, in reproaching the construction of a skyscraper, not in its actual
tremendous vertical thrust but in its uneconomic elongated pyramidal shape, repeated
Lissitzky’s negative evaluation of American high-rises upon a city. Lissitzky’s antidote to
the problem caused by skyscrapers can be seen as the middle point between the status
quo and Krutikov’s suggestion. Between 1923 and 1926, Lissitzky designed eight sky­
hooks, which he proposed to be raised around Moscow’s centre (Fig. 19). Lissitzky’s aim
was to intensify the city by taking up a relatively small ground area for a vertical support,
and by elevating the street level activities onto the horizontally positioned structures
above economized and diminished foundations. The overall tectonics in Lissitzky’s
project created a sense of a rather unstable equilibrium of the balanced horizontal
structure above the street level, making the architecture appear as if floating weightlessly.
Krutikov pushed further the ideas forwarded by Lissitzky, and offered residences that
totally stay afloat in the upper level of the stratosphere, thus removing them from the
local domain and relocating them in a vast global space.

There is one more similarity between these two architects, namely, the
aforementioned correspondence between architecture and means of transportation. While
Krutikov demonstrated an evolutionary progression of means of transportation and their
impact on humans and architecture, Lissitzky rendered a system of evolutionary changes
between man, mobility and architecture. According to this scheme a “walking man” was
positioned in the foundation-oriented architecture which was shaped as a pyramid; the
next step coincided with the discovery of the wheel and its parallel in skeleton
constructions and the mobile architecture of trains and steamers. Finally, Lissitzky
expected a complete transcendence of the earth-embedded building foundations with the
advent of a “flying man,” which in effect would lead to architecture floating in space
“We are faced with floating and hanging. I want to help and discover this form,”
announced Lissitzky. A few years later, it was precisely Krutikov, Lissitzky’s colleague,
who pushed these ideas forward and freed architecture from the laws of gravity. His ideas
were based not on the current technological abilities of Soviet Russia, but rather he
grounded his proposition in a conviction that the new, socialist state, by first catching up
with the advanced technologies of the Western world, would soon take on the leading
role as promoter of a cutting-edge science that would advance the technological solutions
to support his proposal.

The cult of technology and the image of an electrified nation saturated the arts as
well as the political discourse of the age. Russian immense fascination with aeronautics
was part and parcel of this phenomenon. Rocketry and space travel had a similar appeal.

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83 Once again Krutikov’s convictions seem to reverberate Lissitzkii’s comments that only the Soviet Union is able to secure the future for the architects with “international mental horizon, revolutionary activity and collective thinking.” El Lissitzky, “Amerikanizm v evropeiskoi arkhitekturie,” (Amerikanizm in European Architecture), Veshch’-Gegenstand-Objet no. 1-2 (1922): 1-4.
84 Soon after the Civil War was over, the Soviet government proposed in 1921 a plan for economic recovery based on a nationwide scheme of electrification, GOELRO (State Commission for the Electrification of Russia). See Chapter One, footnote 21.
Long before the Revolution, Konstantin Edvardovich Tsiolkovskii had explored its possibilities and made discoveries, which were later incorporated into practical research by the first generation of Soviet rocket scientists. Tsiolkovskii’s work first became widely known in scientific circles in 1911, and he became a public figure in the 1920s. In 1925, Moscow University staged a forum on the subject of “Flight to Other Worlds.” All these ideas resonated within the artistic circles of Moscow.

Krutikov’s engagement with space investigation in the realm of architecture actually preceded his graduation project. In 1926, he participated, along with Lissitzky and the engineer P. M. Vinogradov, in the transport section of AsNovA, to give an architectural formulation for Tsiolkovskii’s dirigible. Indeed, there is a striking similarity between Tsiolkowskii’s spaceship designs dated to 1903, 1914 and 1915.

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85 Konstantin Edvardovich Tsiolkovskii (1857-1935), a provincial schoolteacher, began pondering the scientific basis of space travel as early as 1883 with his Izmenenie sily tyazhesti (Modification of the Force of Gravity). Before even solving the problem of getting into space, Tsiolkovskii was already considering lunar and planetary expeditions, space cities, space stations, and asteroid mining. Tsiolkovskii’s first mathematical expositions of a space rocket appeared as “The Exploration of Space with Reactive Devices,” in the Russian journal Nauchnoe obozrenie (Scientific Review) in May 1903 (just seven month before the Wright brothers flew the first successful manpowered airplane). In this article he began to explore the need for automatic instruments to navigate the spaceship, and a crew and equipment section for respiration in the nose of the ship. Frederick I. Ordway III and Randy Liebermann, ed., Blueprint for Space. Science Fiction to Science Fact (Washington and London: Smithsonian Institution Press, 1992).


87 Kazus’, op. cit., 197.
(Fig. 20), and Krutikov's proposal for the "cabin" (iacheika) (Fig. 21). The drawings of both vehicles demonstrate comparable streamlined bodies that aimed to conquer the resistance of air and to increase their velocity. For Krutikov, these inventive means of transportation were furthermore an integral part of his "flying city."

"Flying City"

Although Krutikov referred to his work as a proposal for a future city (gorod budushchego), it has become known as the design for a flying city (letaiushchii gorod), due to the fact that it promoted an urban form that was supposed to hover high above the earth's surface. Actually, the only flying element in Krutikov's vision was the above-mentioned "cabin" (iacheika), or an independent "cell" or a unit that served a twofold function, one as a vehicle, and second as part of a dwelling. Thus, the flying was done

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88 According to Khan-Magomedov, Krutikov himself always called his design "City of the Future." The "flying city" term was coined by the critics, and was given to this project soon after Krutikov's diploma defense. Khan-Magomedov, "Proekt 'letaiushchego goroda,'" in Dekorativnoe iskusstvo no.1 (1973), 30-35; Khan-Magomedov, Pioneers of Soviet Architecture. The Search for New Solutions in the 1920s and 1930s (New York: Rizzoli, 1987), 282-283.

89 The literal translation of the Russian term iacheika, into English denotes a "cell." As such it indicates the relationship between form and function, such as is found in cells of biological systems. This term was widely used in discourses related to architecture and urban planning during the 1920s. Lissitzky, in his Russland: Die Rekonstruktion der Architektur in der Sowjetunion, reprinted a comment by a German planner from Berlin, Martin Wagner, who wrote "The basic life cell of the Soviet City is the individual dwelling unit." Le Corbusier was also enthusiastic about this concept and prepared a memorandum for the 1930 Brussels Congress of the CIAM entitled, "The Biological Unit: The Cell of 14 square meters per Occupant." (regarded by him superior to the Russian model, then 9 square meters). See El Lissitzky, Russia: An Architecture for World Revolution, trans. Eric Dluhosh (Cambridge, MA: MIT Press, 1986 [1930], 212; Le Corbusier, La Ville Radieuse (1933), trans. Pamela Knight, Eleanor Lavieux, Derek Coltman, Radiant City. Elements of a Doctrine of Urbanism to Be Used as the Basis of Our Machine Age
by its inhabitants, rather than by the city. The entire spatial structure of the *City of the Future* was indeed designed by Krutikov with aerial transportation in mind.

The *iacheika* ("cabin/cell") constituted a crucial component of the future urban settlement. Krutikov actually allocated to the image of the cabin a dominant position within the whole sequence of his project (Fig. 6). The relatively large drawing of the *iacheika* dramatically enters into the picture plane of the first panel that opens the visual part of the *City of the Future*. According to Krutikov, it was meant to be the new and universal method of transport, accessible to everyone. It was supposed to be the vehicle between the ground and the buildings floating in the air. Besides flying, the *iacheika* was capable at the same time of conquering distance on land, in or under water — embodying the perfect model of expanded mobility and convertibility. Krutikov treated this cabin both as an individual vehicle and a short-term mobile home, which would provide people with the requisite degree of comfort in travel and at stops outside the "flying" city.

Krutikov's granting his imaginary citizens individually operated vehicles can be interpreted as the architect's willingness to credit the "commuters" with responsible use of freedom. It seems that his ideas were thus in the spirit of the early avant-garde, when it

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*Civilization* (London: Faber and Faber, 1967), 143-46. For the concepts of "living cells" during 1929-1931 in the Soviet Union, see my Conclusion, footnote 13.

90 Exploration of new means of transportation was popular during the 1920s. Petr Miturich, for example, a teacher of drawing at VKhUTEMAS — between 1923 and 1930 — was working on his models for undulators or volnoviki (mechanisms based on wave technology), as an alternative mode of transportation. According to his design, the *volnoviki* were adapted for various elements and could fly, be suspended in
was thought that the new society would provide limitless ways for persons to grow and
develop. The cabin was designed for a single person’s use and was furnished with
water, or move over the surface on the ground, while utilizing principles found in nature (bird, snake,

91 The introduction of an individually operated vehicle brings tension into Krutikov’s project. It would be
useful at this point to place notions of “individual” life and “private” life in a Russian context. Krutikov’s
vehicles were designed for individual persons to commute between place of living and places of work and
leisure. Individual people were treated by Krutikov in a similar way as he treated the cabins, i.e. as cells of
a larger, communal organism -- a city and a dwelling. It did not mean that these cabins were private, as
privately owned. Nonetheless, the presence of an individual complicates the reading of Krutikov’s project,
possibly suggesting his resistance to the hardening official line circa 1928. For the Bolsheviks “private”
was politically dangerous and deprived of social meaning. In fact, historically speaking, in Russia, “private
life” was often synonymous not with its Western understanding of “real life” or authentic existence, but
rather with foreign, inauthentic behaviour. For example, Benjamin, a Westerner visiting Russia, in his
memoirs from Moscow made a provocative observation: “Bolshevism has abolished private life.” Walter
Benjamin, “Moscow,” in *Walter Benjamin: Reflections, Essays, Aphorisms, Autobiographical Writings*,
1978), 108. Upon first hand observation in the winter of 1926-27, Benjamin was convinced that the Soviet
system meant to eradicate private life (in its “Western, bourgeois” idea of privacy), along with private
property. For Benjamin, the “collectivization” of private life and the disappearance of cafés were
connected, conspiring to transform a critically reflective intellectual into an endangered species. The free-
floating flaneur, was indeed becoming impossible to exist within the boundaries of Soviet communality.

Tatlin, in 1919, emphasized the importance of the interplay between the individual and the collective in his
text “The Initiative Individual and the Collective.” In Larissa Alekseevna Zhadova, ed., *Tatlin* (London:
Thames and Hudson, 1988), 237-38. Krutikov’s introduction of an individually operated vehicle, turned
into housing unit, and vice versa, underscores his own use of architecture and means of transportation as a
focus for the development of the individual, as opposed to the later uses of monumentality in the service of
conformity and mass obedience to the will of the leader. In Lunacharskii’s words: “Communal life is based
not on compulsion and the need to herd together for mere self-preservation, as it had in the past, but on a
free and natural merging of personalities into supra-personal entities.” Quoted in Peter H. Juviler,
“Contradictions of Revolution: Juvenile Crime and Rehabilitation,” in Abbott Gleason, Peter Kenez, and
Richard Stites, eds., *Bolshevik Culture: Experiment and Order in the Russian Revolution* (Bloomington:
Indiana University Press, 1985), 261-278. In 1930, during the last outburst of radical ideas, Mikhail
Okhitovich, the advocate of the de-urbanist tendencies (see Conclusion below) published his “Zametki po
teorii raseleniya” (Notes on the Theory of Resettlement), where he wrote: “A person is born individually,
not collectively. He eats, drinks, sleeps, dresses, etc. – in other words, he/she consumes always
individually. The higher the society develops the greater the right of the individual to consume; let us not
forget that socialism means abundance of goods.... Praising the [social] collective and ignoring the
individual is like eulogizing the Russian language while forbidding the pronunciation of [individual]
Russian words. ... The individual is not a mathematical unit [to be counted, reported in statistics, etc.] but
an [independent] social unit.” (original emphasis). He distinguished between the selfish egotism of
capitalist society and the self-realization, individual growth, and free choice made possible by socialism.
multi-purpose and retractable furniture. Through the cut-out section of the unit we can see prominently displayed the reclining seat/sofa of a driver/pilot. Portable, retractable, folding, multifunctional, flexible furniture was a staple of VKhUTEMAS’ curriculum, and an objective of Soviet radical designers. The avant-garde artists like Rodchenko, Tatlin and Lissitzky all designed novel objects for everyday life (byt). A bed turned into an armchair or a table, a wardrobe metamorphosed into a bookcase, meant to express adaptability and celebrate material culture that was ascetic and liberated from the frills of a bourgeois oak commode or bed. Serving multiple purposes, this mobile cabin unit was easily connected into the building in mid-air and was regarded by Krutikov as the mobile and autonomous component of any fixed house. The architect’s objective was to convey the convenience and freedom that an individual resident of the new communal living constructed under communism would enjoy.

Krutikov’s basic thesis in designing his future city was that, with the development of civilization, human beings would necessarily acquire a strong desire to free the planet of most of its structures. This in turn could be done, he felt, by providing buildings with

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Mikhail Okhitovich, “Zametki po teorii rasselenia,” Sovremennaia arkhitektura (Contemporary Architecture) 1-2 (1930), 12-13. Stalinist architecture of the 1930s would however emphasize not the freedom and growth of the individual but the permanence of the state. Permanence and the immobility of political power would be the new, correct concerns, and the architects would be required to subordinate.

the capability of hovering above the earth, utilizing nuclear energy at a certain point in the foreseeable future. Krutikov's city of the future consisted of two main elements, one positioned vertically and intended for residential purposes, and the other fixed to the ground horizontally and meant for industrial use. In his vision, Krutikov cleared the surface of the planet of houses by lifting them into space, and allocated this freed land for work, tourism and leisure. These ideas were represented on the fourth panel devoted to the new city, under the heading “City Organization” (Fig. 22). The industrial and recreational component was planned outwards from a central point along a spiral, a figure that was associated in Russia during the 1920s with the notion of freedom and liberation.93 The residential component, on the other hand, was suspended in space, in a bowl-like shape, that was dipped with its narrow end pointing towards the industrial area along an axis rising vertically from the center of the latter. The peak of this paraboloid trajectory designated the transition between ascent and descent, indicating a moment of weightlessness or floating. The dwelling complexes were arranged in tiers along the surface of this parabola.

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93 According to Nikolai Punin, when he was commenting on Tatlin’s Tower “Societies with antagonistic classes have been fighting for the possession of the land, the line of their movement is horizontal; the spiral represents the movement of liberated humanity. A spiral is the ideal expression of liberation.” Nikolai Punin, “The Monument to the Third International,” Petrograd, 1920, quoted in Zhadova, ed., Tatlin, op. cit., 344-346. For a discussion of Tatlin’s Tower, see also Chapter Five, 265 ff.
How we can explain Krutikov’s priorities in determining which area of the city should be lifted above the earth’s surface? Why did Krutikov decide to propel houses instead of hoisting, for example, factories into the air? Although there is no justification given by the author for this arrangement, the reasons seem to be evident. The most obvious rationale for designing the space on earth for work and leisure, is that the natural resources – soil to cultivate, mines to quarry, sea to harvest, as well as forests to explore, mountains to hike, or beaches to stroll on -- are all earth-bound and relatively fixed.

Furthermore, this binding of labour and recreation together fits the concept promoted by the communist ideology that under its auspices there would be a break-down of the antithetical nature of work and leisure. In effect, under the Bolsheviks, there was an aestheticising drive to connect both affairs and to present them as interchangeable activities that could be equally enjoyed. Finally, Krutikov’s emphasis on dwellings

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94 The concept was taken from the maxim of Marx that in a Communist society there should be no division between work and recreation environments, thus the systemic intertwining of the two across the country. The integration of sport and work was a persisting feature during the Soviet era, taking on utilitarian as well as utopian forms. The former is evident in the “production gymnastics,” that became a part of factory life after the late 1920s. The latter is incorporated into the sport pageant, in which work and sport images are fused in allusion to Marx’s prophecy of a future elevation of labour to the level of play or recreation. See John Milton Hoberman, Sport and Political Ideology (London: Heinemann Educational, 1984), 170-177, 190-198.

95 I am alluding here to such tendencies as those represented by Varvara Stepanova, and her classification of clothes executed for theatrical performances and for textile production. In her approach she divided garments into two basic categories: production clothing (prozodezhda – proizvodstvennaya odezhda) and sports clothing (sportodezhda – sportivnaya odezhda). For Stepanova’s clothing designs, see Lodder, Russian Constructivism, op. cit., 149.
attested to the urgent need and importance of housing after the Revolution.\textsuperscript{96} The timing of his project falls at a moment when increased importance was allocated to housing.\textsuperscript{97}

During the late 1920s, urban programmes proposed the mass development of large dwelling complexes to serve the new production plants resulting from intense industrialization. These programmes were especially concerned with workers' housing, and as a result the social problems involved in town planning and the reconstruction of a new way of life were then brought to the fore.\textsuperscript{98} The question, which will be answered later, remains: \textit{why} did Krutikov decide to steer the houses into an unlimited and open space high above the horizon?

Krutikov designed three types of houses in the air. All of the dwellings proposed by Krutikov were communal.\textsuperscript{99} The communal type of living arrangements in the Soviet

\textsuperscript{96} An improved standard of living and quality of life was paramount to the Soviet regime. However, the quantity and quality of housing in the post-Revolutionary Moscow was abysmal. To deal with the house shortages, the large residences of the bourgeoisie and aristocracy were sub-divided into dwellings for workers from overcrowded slums. Between 1918 and 1924, in Moscow alone, over half a million workers and their families were rehoused in this manner. This situation persisted throughout the 1920s. Walter Benjamin noticed upon his visit to Moscow during the winter of 1926/1927: “Apartments that earlier accommodated single families in their five to eight rooms now often lodge eight. Through the hall door one steps into a little town. More often still, an army camp.” Walter Benjamin, “Moscow,” \textit{op. cit.}, 108.

\textsuperscript{97} The policy for speeding up industrialization of the country was adopted by the 14th Party Congress in December 1925, and the resolutions of the 15th Congress in December 1927, for laying down the First Five-Year Plan (followed by its formulation, approval and early implementation in 1928-1932, set the Soviet architects and urban planners practical task in the realm of urban planning.

\textsuperscript{98} The period 1928-1931/32 is regarded as the time of the second debate about urban planning in the USSR, and follows the first discussion on cities that occurred around 1922-1923. On periodization and analysis of these two debates, see Khan-Magomedov, \textit{Pioneers of Soviet Architecture}, \textit{op. cit.}, 271-340.

\textsuperscript{99} The idea of communal living extends back to primitive societies. It was however widely popularized in the 19th century by Charles Fourier, as the most appropriate mode of life in socialism. Fourier’s rationally constructed social unit of about 18,000 people, called a Phalanx, was housed in a Phalanstery, a “miniature town without open streets.” Described in detail and illustrated in drawings, the Phalanstery was a
Union was expected to induce collective behavioural patterns corresponding to a new socialist political system. Following the October Revolution, many of the shared houses in Russia, although initially re-organized into common living spaces by sheer necessity, were actually renamed *dom-kommuna* (house-communes), and in Moscow alone by 1921 there were 865 such houses. The communal house, as an ideal, was pursued in design sketches at the beginning of 1919, although the house-commune as a building type was not developed until 1929. Already in 1920, Krutikov’s supervisor, Ladovskii, exhibited a design on the theme “architectural manifestation of a communal comprehensible solution to the housing problem in the 19th century and a model for a fulfilling and happy coexistence in the future. It was a combination of town and country, intended to replace the city. Communal activities (eating, playing, socializing) were located in the centre. Educational facilities were next to them. Factories and workshops followed in adjacent wings. Apartments of various sizes and prices extended in succeeding pavilions. A network of elevated, glass-enclosed galleries provided easy access to all activities and served as a gathering place for the community. For discussion of Fourier and his design see Jonathan Beecher, Richard Bienvenu, eds., *The Utopian Vision of Charles Fourier: Selected Texts on Work, Love, and Passionate Attraction* (Boston: Beacon Press, 1971); Charles Fourier, *Design for Utopia: Selected Writings of Charles Fourier*, trans. Julia Franklin (New York: Schocken Books, 1971).

100 Due to the fact that socialism in all its variants, including the Marxist one, implies community, i.e. some sense of sharing life, residence, and work in a spirit of harmonious and fraternal interaction, the architects and urban planners of socialist orientation are faced with certain issues. How far apart can people live and still be called a community? How much private space, and time within this space, does the person require without violating a sense of community? These were the questions that Krutikov was addressing in his project.

101 Pre-Revolutionary era apartments and houses had usually only one kitchen, and one bathroom, to be shared by the new inhabitants, and the entrance hall customarily functioned as a common living space. Thus many of these dwellings were renamed house-communes (*dom-kommuna*). See, Milka Bliznakov, “Soviet Housing During the Experimental Years, 1918 to 1933,” in William Craft Brumfield and Blair R. Ruble, *Russian Housing in the Modern Age. Design and Social History* (Cambridge: Cambridge University Press, 1993), 85-148; Barbara Kreis, “The Idea of the Dom-Kommuna and the Dilemma of the Soviet Avant-Garde,” *Oppositions* 21 (Summer 1980), 52-77.

102 Ibid., 88.
house,” (Fig. 23) whose dynamic structure and bent axis seemed to indicate the desire to overcome gravity, while recalling the silhouette of a rocket missile on its launching pad (similar to Valier’s prototype, Fig. 16).

The first variant of dom-kommuna that Krutikov advanced in his diploma project was, as he coined it, the labour commune, consisting of eight vertical, five-story housing blocks connected by lift shafts with a lower, circular, communal building (Panel 2: “Dwelling Organization” - Fig. 24). Each story of the dwelling block was divided into six units, consisting of a porch, the top of which provided sleeping compartments for cabin units, and a living space located above it. The communal ring building carried a honeycomb of cells intended as temporary berths for the mobile cabins. The second type of dom-kommuna was a tiered vertical block with, as Krutikov called it, a hotel-type accommodation, including a tiered honeycomb parking system for cabins in transit, a central portion with living space and a top part reserved for communal use (Fig. 25). The third variant of the hovering houses was a more compact version of the first type, in

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103 Ladovskii’s credo attached to his project stated: “Technology creates wonders. Architecture also must create wonders... The space where the contemporary wonders of architecture would dwell would be built by art... Space, not stone, is the material for architecture.” N. A. Ladovskii, “Credo,” in Barkhin, ed., *Mastery sovetskoi architektury ob arkhitekture, op. cit.*, v. 1: 344.

104 Throughout Krutikov’s project there is a rather conspicuous omission of information in regards to specification about division of housing into particular units serving various function: sleeping, eating, learning, to name just a few, or fulfilling diverse needs of people according to their age, marital status or family size. Again this schematic and rather generic term “communal housing” was a “blanket” term commonly applied to indicate new, post-Revolutionary codes of behaviour and social structure.
which all the vertical dwellings were consolidated into a single eight-storey cylindrical block, while the accommodation in the communal ring was gathered into a sphere (Fig. 26). According to Krutikov’s design, all the spaces needed to house the various amenities of the housing complex were interconnected, either horizontally, in a ring form, or vertically, or both. Krutikov offered a general outline of the dwellings, following the accepted ideologically based framework for the social behaviour of the citizens of the future city, without specifying particular roles or indicating spaces as related to gender, or age. The bare-looking, ascetically single interior of the flying cabin can be, for example, interpreted as neutral and “sexless,” blurring the distinction of private and public.

The graphic images of suspended communal living made by Krutikov, and his reference to the structures built by bee colonies in nature, recall the visions presented by the poet Velimir (Viktor) Vladimirovich Khlebnikov, who proclaimed in 1918, that the buildings of future cities would be built according to the honeycomb principle:

Glass blocks, transparent rectangles,
spheres, angles, expanses in flight,
transparent mounds, a concentrate
of clear glass honeycombs,
echoing streets built with these strange blocks,
and towering ramparts, dazzlingly white –
here we enter the City of the Sun,
where all is balance, order, and expanse.\(^{105}\)

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Krutikov’s honeycomb allusions are reminiscent as well of Lissitzky’s words expressed in 1920:

we left to the old world the idea of the individual barracks individual castle individual church. we set ourselves the task of creating a town. ... we are able to throw off the shackles that bind us to the earth and rise above it. therein lies the answer to all questions concerning movement. this dynamic architecture provides us with the new theatre of life ... the new town will not be as chaotically laid out as the modern towns of north and south america [sic !] but clearly and logically like a beehive.\textsuperscript{106} (original punctuation)

The beehive metaphor used by artists like Khlebnikov, Lissitzky and Krutikov derives its meaning from a long tradition that cites it as the model for an ideal society, while honey and wax have provided the ground for countless positive metaphors of sweetness and productivity.\textsuperscript{107} It is probable that the Soviet architects and artists were familiar with a statement made by Marx. Writing on the foundational principles of the Revolution. Khlebnikov wrote his poem in 1918, the year that Campanella’s two Russian translations of the \textit{City of the Sun} appeared in Moscow. This utopia projecting an ideal city-state, which turned religion into science and the urban landscape into a museum and outdoor school, and whose model with seven concentric walls, adorned on both sides with the rules and laws of the major sciences, alternating with statues of dead heroes of knowledge, religion and war, inspired Lenin to launch his Plan for Monumental Propaganda (1918-21). Lenin, however, was aware of this book long before the Revolution. It was Maksim Gor’kii (Aleksei Maksimovich Peshkov), who had brought Campanella’s book to the attention of Lenin and Lunacharskii. Therefore, the dissemination of the \textit{City of the Sun} was stipulated probably by the Soviet leaders, particularly Lenin, for whom the Italian text was highly inspiring.\textsuperscript{106} El Lissitzky, “Suprematism of the World Reconstruction,” 1920, in Lissitzky-Küppers, \textit{El Lissitzky. Life, Letters, Texts, op. cit.}, 328. In 1927, Konstantin Mel’nikov started a construction of his house in Moscow (finished in 1929), that consists of two intersecting cylinders. Especially the rear, garden-side cylinder with its hexagonal shaped windows reveals also the honeycomb-like structure applied by Mel’nikov in his private residence.\textsuperscript{107} On the symbolism of the beehive in architecture, see Juan Antonio Ramírez, \textit{The Beehive Metaphor. From Gaudí to Le Corbusier} (London: Reaktion Books, 2000). Unfortunately Ramírez, in his analysis, totally omits the Soviet milieu.
dialectics of socio-ecological change, Marx conjured up an analogy between bees and architects:

Labour is, in the first place, a process in which both man and Nature participate, and in which man of his own accord starts, regulates, and controls the material reactions between himself and Nature. ... By thus acting on the external world and changing it, he at the same time changes his own nature. ... We presuppose labour in a form that stamps it as exclusively human. A spider conducts operations that resemble those of a weaver and a bee puts to shame many an architect in the construction of her cells. But what distinguishes the worst architect from the best of bees is this, that the architect raises his structure in imagination before he erects it in reality. At the end of every labour process we get a result that existed in the imagination of the labourer at its commencement. He not only effects a change of form in the material on which he works, but he also realizes a purpose.\textsuperscript{108}

Marx’s evocation of bees has a double reckoning. Not only does it relate directly to the sophistication of their constructing abilities, but also emphasizes the prospect that human labour under communism obviously contrasts the idea of the degraded status of a “worker bee” under capitalism.\textsuperscript{109} Furthermore, Marx in his observation elevates the imaginary capacities of an architect, the very mode of operation that Krutikov highly utilized in his project. There is yet one more analogy between bees and the Soviet scene, namely the perception of bees as insects that work collectively.\textsuperscript{110} Thus, the words uttered


\textsuperscript{109} For a discussion on Marx’s figurative adoption of bee and architect, see David Harvey, \textit{Spaces of Hope} (Edinburgh: Edinburgh University Press, 2000), 199-212.

\textsuperscript{110} Realizing the important role of a queen in a beehive, it is pertinent to pose a question about the role of women in dwellings envisioned by Krutikov. The so-called “woman question” was closely linked with the signaled need in Russia for the reassessment of traditional family relations. There were various factors impacting this agenda. The political equality of women granted already by Aleksandr Fedorovich
by Bogdanov, "Collectivism illuminates the depiction not only of human life but also of the life of nature: nature as a field of collective labour," explicate well Krutikov’s

Kerenskii’s electoral law of July 20, 1917, demanded immediate social and educational reforms to be initiated by the Bolsheviks. Indeed, the “woman question” had been quickly absorbed into the larger socialist movement in Russia on the theory that the class struggle superseded the gender one, and that the abolition of private property would solve the gender problem. Although Aleksandra Mikhailovna Kollontai and Klara Zetkin attempted after the Revolution to bring the “woman question” to the fore, their efforts to combine socialism and feminism were rebuffed by the Party. However, the economic situation during the 1920s not only greatly impacted the lives of women, but in effect resulted in the inclusion of the “women question” into many programmes. Rapid industrialization necessitated the inclusion of women in the labour force, giving them enhanced status and economic independence. Above all, women had to be relieved of their domestic tasks, not only housekeeping, but also raising and educating their children. In 1919 the party programme described dom-kommuna as a means of emancipating women and giving them equal rights. The Bolsheviks proposed to free women from the burden of outmoded chores through the establishment of communal dwellings. Provided that the State took over the traditional duties of women (housekeeping, etc.), the result would be that domestic space would become the nucleus of personal life, a place for individual growth and private activities, and seclusion from social demands. This was the conclusion of many avant-garde theoreticians and architects. In their designs, families’ responsibilities were shifted to the social public sector. The preparation of food was assigned to cafeterias or restaurants, adjacent either to the workplace or to the housing sector. Public child-care facilities, recreational and educational structures, laundries and other services were all designed to benefit the homemaker. The urban models were based on time-saving systems with the location of daily activities as close to each other as possible. The intent of those projects was to provide opportunities for the intellectual growth and physical well-being of the individual at the lowest possible cost for society. Downplaying the role of the biological family, the “new man” and the “new woman” wanted to replace it with the “new family.” The communal kitchens and bedrooms not only freed women from the burdens of domesticity but also subverted the family and its procreative function. Besides viewing sex as a matter of physiological need, Soviet society introduced a utopian sexual code. Busy constructing the New World, women and men subordinated private concerns and personal pleasures to the larger public need. At the conclusion of Literature and Revolution, of 1924, Trotsky announced that emancipated man “will not ... submit humbly before the dark laws of heredity and blind sexual selection!” Idem., Literatura i revolutsia, trans. Rose Strunsky, Literature and Revolution (Ann Arbor: University of Michigan Press, 1960), 255. There is not enough evidence to suggest that Krutikov’s city is organized with an antifamily bias in mind. However, his repeated references to a beehive may hint at least at the possibilities of his preferences towards a non-traditional family structure. On the concept of the “Soviet woman,” and issues related to family and sex, see Barbara Evans Clements, Daughters of the Revolution: A History of Women in the USSR (Arlington Heights: Harlan Davidson, 1994); Richard Stites, The Women’s Liberation Movement in Russia: Feminism, Nihilism, and Bolshevism, 1860-1930 (Princeton: Princeton University Press, 1978); H. Kent Geiger, The Family in Soviet Russia (Cambridge: Harvard University Press, 1968); Eric Naiman, Sex in Public. The Incarnation of Early Soviet Ideology (Princeton, NJ: Princeton University Press, 1997).
desire to imbue the envisioned housing with meaning centered on natural, collective, efficient and functional associations.

Many Soviet intellectuals, during the 1920s, were searching for novel concepts for a newly established society, and several of them reached rather similar conclusions. One of the dominant elements emphasized in this discourse was movement. Hence, the link between Krutikov’s design of future houses and the urban visions of Khlebnikov that reoccur throughout the poet’s oeuvre. In *The City of the Future* of 1918, Khlebnikov, for example, envisioned domiciles that foreshadowed those of Krutikov. According to the poet, the houses of tomorrow would consist of a framework of steel bays to accommodate individual glass living units that could be docked and undocked. This would allow residents to move from one building, and from one city to another, simply by disconnecting and moving their apartments by rail, by steamship or by air (the latter by being equipped with a self-propelling engine). The veritable visualization of Khlebnikov’s images, as rendered by Krutikov on paper a decade later, indicates a strong tendency for Krutikov to reach out for the vocabulary that permeated Russian culture shortly after the October Revolution.

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The 1920s was a period of increased mobility and constant change. The October Revolution generated in the Soviet Union great movement or "spin" *par excellence*. This was a time when, according to Vsevolod Emilevich Meierkhol'd, the "earth was in turmoil." Trotsky called for a "permanent revolution." Malevich announced the coming of "a stormy movement." Everything seemed to be on "the go." The movie director, Dziga Vertov, declared "Now and forever, I free myself from human immobility, I am in constant motion." The member of the working class was turned, by Maiakovskii, into the "flying proletarian," who could "mount the building's wings and wheels and take off."

I'm off! Immediately!

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115 In 1925 Maiakovskii wrote *Letaiushchii proletarii* (Flying Proletarian). The poem is rather a lengthy one with 1860 verses. In the forward, Maiakovskii states that the newspapers give "facts" and "news", while what interests a poet is what would happen in two or one hundred years. Maiakovskii's own story is set in 2125, thus two hundred years from the time he writes it. The poem is divided into three parts. The first called "The War, That is Happening Presently" features a giant air battle between the Soviet proletarian and the American bourgeois air forces. The latter prevails until an uprising of New York workers against their government turns the tide. In the communist future, envisioned by Maiakovskii in the second part called "Future byr (everyday life)," electricity brings comfort and ease (electric razors, toothbrushes and such), and labour is totally mechanized - the worker merely operates a keyboard. Everybody owns an airplane, and Moscow no longer has any streets, just airports. The closing, third part "Appeal" indicates Maiakovskii as the agitator of the future, whose goal is to prepare his contemporaries to conquer the sky. Vladimir V. Maiakovskii, *Pelnoie sobranie sochinenii* (Completed Works), 13 vols. (Moskva: Gosudarstvennoe Izdatel'stvo Khudozhestvennoi Literatury, 1955-61), v. 6: 311-361.

In five minutes
I'll leap the
length of the sky.\textsuperscript{117}

Maiakovskii's science-fiction poem \textit{Letaiushchii proletarii} (Flying Proletarian),
which was published in 1925 by the association that spread the knowledge of aeronautics,
has a revealing cover designed by Grigorii A. Berdshatskii (Fig. 27). It represents the
titular-flying proletarian through the anthropomorphic arrangements of objects associated
with the technological accomplishments of the emerging socialist state.\textsuperscript{118} As
Maiakovskii, via his text, brought into relief the Soviet ideological phraseology in
promoting the victory of communism over capitalism, likewise Krutikov literally
highlighted the authority of socialism over capitalism. Thus, on Panel 2 of one of his
schemes (Fig. 28), Krutikov wrote phrases "Capitalism / Chaos," under crossed-over
diagonal lines that indicate disorder, and next to that is an arrow pointing to a caption,

\begin{flushleft}
\textsuperscript{117} Ibid., 353.
\textsuperscript{118} The human head is thus outlined with a circular formation of airplanes. For the eyes, the artist used
enlarged silhouettes of two airplanes in profile, and he shaped the nose from the silhouette of the
Shabalovka Radio Tower. (Shabalovka Radio Tower designed by Vladimir Grigor'evich Shukhov was built
in Moscow in 1922. From this tower, Radio Comintern made its first international broadcast in 1922.
Radio was incorporated by the new regime as the medium to disseminate its voice and to reorganize the
society.) The mouth is indicated by a large sphere, which is depicted in a red colour. The mouth seems to
be wide open, as if shouting the words of the poet who is exclaiming the global reign of the proletariat, who
is taking over the skies. This round, geometrical shape actually plays a double role by suggesting on one
hand the orifice, and on the other, the planet earth. This red globe, hovering on the blue firmament in its
revolution in the sun's orbit, seems to enact the Soviet version of the Copernican thesis, while being
"crowned" by technological insignia of progress, therefore demonstrating the superiority of the globe taken
over by Communism – the prediction set forward by the poet. For the significance of radio under the
Bolsheviks, see, Maria Gough, "Switched On: Notes on Radio, Automata and the Bright Red Star," in Leah
\end{flushleft}
“Socialism / Organization,” that is written under a drawn circle, the symbol of perfection.

It seems, however, that despite his strong conviction about the supreme nature carried on by the Bolsheviks, the project Krutikov submitted in 1928 met stiff resistance from the proponents of the newly emerging official doctrine.

Critical Reception

The Soviet press of 1928 testifies to strongly divided opinions on the students’ work coming out of VKhUTEMAS/VKhUTEIN, as well as the teaching that this institution was promoting. There were two poignant and opposite reviews of the school’s annual exhibition of diploma works mounted by the Faculty of Architecture, among which was Krutikov’s project. Thus, on the one hand Lunacharskii, the People’s Commissar for Education, after visiting this show commented:

In my opinion, the Faculty of Architecture at VKhUTEIN represents the school’s crowning achievement. It contains the tremendous supply of practical, objective, disciplined inventiveness and building creativity for which there is indeed a place in the whole spectrum of our socialist building project. The young people often swing too widely. They already dream of the city as it will be in fifty years’ time, but how do they dream! -- with an unheard-of practical imagination, with scientific calculation of the utmost accuracy. The Faculty of Architecture does not neglect any of the new tasks that have arisen in our Moscow. These new tasks, let them be established for an immediate realization or envisioned as a plan for near or further future, are answered by this faculty right away with brave and talented works. One emerges from the VKhUTEIN’s Faculty of Architecture exhibition positively refreshed with an even greater confidence in our building potential on the grand scale. Considering the insufficient class’ space, the scandalously low allocation of funds towards teaching, the low salary of the professors, the half-

Although Lunacharskii did not mention any names of teachers or students in his review, his highly positive mark given overall to the school is especially awarded for the ability to “dream large” despite the limiting material resources, the quality very much demonstrated by Krutikov in his diploma project. On the other hand, at the same time there were critics who accused the school for precisely encouraging and allowing its pupils to explore imaginary and fantastic ideas. Thus, the magazine \textit{Postroika} (Construction) used Krutikov’s project as a foil for attacking the school’s teaching policy and its faculty.\footnote{\textit{Postroika} was a newspaper published by the construction workers’ labour union. This newspaper and its ambitions represents the growing “proletarianization” that the “Cultural Revolution” promoted (see below, note 120 on VOPRA). In December 1928 the Central Committee of the union petitioned to Agitprop for increased circulation of \textit{Postroika} based on claimed high numbers of its readers, and the supposed necessity of issuing the paper daily rather than three times a week in order to reach construction workers. M. Lenoe, “NEP Newspapers and the Origins of Soviet Information Rationing,” \textit{Russian Review} 62, no. 4 (October 2003), 614-636.} The journalist Nikolai Levochskii, entitled his text, “Sovetskij Zhil’ Verny. VKhUTEMAS gotovit’ ne stroitelei, a fantazerov” (The Soviet Jules Verne. VKhUTEMAS Produces not Builders but Those Who Fantasize), alluding to Krutikov and comparing him to the French fantasy writer, while chastising the school for training
"dreamers."  

Evidently Krutikov’s highly imaginative, indeed unrealistic, project for the future city, was regarded by the emerging Stalinist ideologues, who were strongly pragmatic and result orientated, as dangerous and threatening to the newly drawn Party line:

[A]t VKhUTEMAS – instead of training good, practical, young specialists of construction, they are occupied with fantasies. Amongst the most bold, free-and-easy, and insane urban projects there was shown a project of “The Flying City.” ... Certainly, life itself surpasses the most fantastic dreams. However, life is being built and it is evolving according to law and inventions of technology, not following the plot of a novel written by Jules Verne. ... [I]t is necessary to pay a serious attention to Romantic enterprises at VKhUTEMAS.

Attacking the school and its curriculum, Levochskii in his article foreshadowed the ominous changes looming on the horizon of the Soviet culture. The closing years of the second decade demonstrate an intensifying offensive against representatives of the avant-garde, in response to the more rigid and prescribed rules that were then systematically introduced as the official cultural policy. 

\[\text{\footnotesize 121 N. Levochskii, “Sovetskij Zhiul’ Verno. VKhUTEMAS gotovit’ ne stroitelei, a fantazerov” (The Soviet Jules Verne. VKhUTEMAS Produces not Builders but Those Who Fantasize), Postroika (Construction) 75 (July 3, 1928).}\]

\[\text{\footnotesize 122 Ibid. Quoted in Khan-Magomedov, Arkhitektura sovetskogo avangarda, op. cit., 312.}\]

\[\text{\footnotesize 123 Sensing the growing danger of being accused of promoting the unrealistic, and/or falling out of line with the official position, the Architectural Faculty engaged in the polemics and responded to the article published by Postroika. The first letter was written by the Rector of the school, Pavel Ivanovich Novitskii, who replied to Levochskii’s attack with a very defensive “Letter to the editor,” with the date August 6, 1928, that was later published in Sovremennaiia arkhitektura (Contemporary Architecture). Wishing to be diplomatic Novitskii admitted: “there is a lot I do not agree with in the teaching of the faculty, but the author does not comprehend that an artistic VUZ [higher education establishment] as opposed to a technical VUZ is precisely based on a certain “cutting off from real life” and life today demands the training of an architect of a new type, who is artist and engineer-builder simultaneously, of an organizer of a new way of life (byt), who is able to create new social relations, a planner and constructor of cities, an inventor and an}\]
was inundated with even more aggressive invectives towards architects who were representative of progressive and radical concepts. Arkadii Grigor’evich Mordvinov wrote an article, "Leonidovism and Its Harmfulness," which castigated the architect Ivan Il’ich Leonidov for uncritically accepting Western architectural models, that is, contaminating Soviet architecture with alien trends. Within this text there was a section

innovator” (original emphasis). Pavel Novitskii, “Restavratory i arkhektturnyi fakul’tet Vkhuteina” (Restorers and the Architecture Faculty at VKhUTEIN), Sovremennaiia arkhitektura no. 4 (1928), 9-10. The second letter, under the heading “My gotovim ne ‘Sovetskich Zhiul’ Vernov.’ Arkhektturnyi facul’tet na dolzhnoi vysote” (We Are not Training Jules Verne(s). The Architectural Faculty Represents a Proper High Quality) appeared in the magazine Postroika on August 12, 1928, thus one month after the original attack was unleashed. The teachers defended their students, and very much themselves, explaining: “Nobody does attempt to build today the city of the future. In the graduation exhibition were shown not ‘building projects [blueprints] of the future city’ but ‘projects of solutions for the future city.’... We consider that if among 100 students, 5 pupils fulfill their diploma works in accordance with organization of scientific-exploratory mission, this situation does not endanger the faculty being disconnected from life.” Quoted in Khan-Magomedov, Arkhiitektura sovetskogo avangarda, op. cit., 309, 312.

124 In 1929 the group VOPRA (Vsesoiuznoie ob”edenie proletarskikh arkhekttorov - All-Union Society of Proletarian Architects) was formed in opposition to existing avant-garde associations such as OSA (Ob”edenenie sovremennykh arkhekttorov - Society of Contemporary Architects) or ARU (Assotsiatsiia arkhekttorov urbanistov - Association of Architects-Urbanists). It had achieved a considerable influence over the development of the architectural profession. VOPRA, a militant student organization that enjoyed ever-increasing state support, agitated for sweeping changes in the fervent spirit of the Cultural Revolution and the First Five-Year Plan. The group called for a more rapid “proletarianization” of the architectural profession and demanded that architectural students of proletarian origin be admitted and advanced over students of bourgeois background. Though initially VOPRA’s architectural projects were decidedly modernist in appearance, later on, however, VOPRA architects developed a distinctly “Stalinist” style based on classical and other historical sources, as many former members of the avant-garde groups eventually did. See Hugh D. Hudson, Jr., “Terror in Soviet Architecture: The Murder of Mikhail Okhitovich,” Slavic Review 51, no. 3 (Fall 1992), 448-467; idem, Blueprints and Blood (Princeton: Princeton University Press, 1994), 110-135.

125 Arkadii Grigor’evich Mordvinov, “Leonidovshchina i ego vred” (Leonidovism and Its Harmfulness), Iskusstvo v massy (Art to the Masses) 12 (December 1930), 12-15. For English translation, see Andrei Gozak and Andrei Leonidov, Ivan Leonidov. The Complete Works, trans. Catherine Cooke, Lyudmila Burke, Felicity O’Dell and Vladimir Vnukov (London: Academy Editions, 1988), 96-97. For a discussion on this attack, see Khan-Magomedov, “‘Kampaniia protiv ‘leonidovshchiny’” (The ‘Leonidovism’ Campaign) in idem, Arkhiitektura sovetskogo avangarda, op. cit., 617-622. The epithet “Leonidovshchina” (Leonidovism) coined by Mordvinov was a very derogatory term, meaning a technically unrealizable fantasy that is generally wasting collective time, insulting the proletariat and sabotaging the national
devoted to Krutikov’s project. Evidently, two years after its defense at VKhUTEMAS / VKhUTEIN, Krutikov’s concepts were still provoking discussion, this time, however, amplifying the condemnation that started soon after his diploma presentation in 1928.\textsuperscript{126}

In his article, which was an abusive criticism of Leonidov’s work, Mordvinov recalled Krutikov’s project, without uttering the architect’s name (nonetheless taking the liberty of name-calling), and attacked the ideas presented by the young student as utopian, blaming at the same time the school and its professors for supporting such fantasies:

And the irresponsible suggestions of this [utopian] kind found a response amongst the petit bourgeois youth. The mania for inventions began, the houses in the form of balloons, dirigibles, etc.: one graduation work did indeed present a city in the air. Its author proceeded from the principle that by splitting the electron a method will be found for raising a building into the air with ease. He depicted buildings flying in the air, with cabins for the inhabitants. The earth was freed of houses and communal buildings – it became a place of work and tourism. Connections between air and earth were envisaged in the form of a contrivance that combined motor-car, aeroplane and submarine. After a trip under water, in the air and on the ground, one could switch into any hotel, which is also soaring around in the air, locking into one of the free cells intended for these contrivances. Such projects

economic and ideological effort. Mordvinov, a member of VOPRA, in his attack presented a long list of errors and deviations in architecture, all attributed to Leonidov, who was to occupy the role of the “devil” in architecture, as Trotskii did in politics. Mordvinov perceived Leonidov’s abstract approach to design as incomprehensible to the masses and taxing the technological capacity of the country’s building industry. He treated the architect’s style as incapable of embodying the ideals of proletarian architecture, and accused Leonidov for expressing increasingly Western aspirations rather than the revolutionary ideals of the new Soviet society. Leonidov (1902-1959), who in 1927 graduated from VKhUTEMAS as a “star” student of architecture (diploma project in the studio of Aleksandr Aleksandrovich Vesnin for the Lenin Institute of Librarianship), was from 1926 to 1929 highly acclaimed and lionized for his talent. By 1930, however, he was totally discredited. As a result of attacks he lost both his teaching position and his apartment and became ineligible to build anything at all. However he still continued to enter the endless competitions that he had no hope of winning. In later years he worked as a taxi driver and a painter of lampshades.\textsuperscript{126} According to Khan-Magomedov, Krutikov’s public diploma defense brought a huge audience and stirred excitement. Idem, “Proekt letaiushchego goroda,” \textit{op. cit.}, 31, 34.
are seriously examined at meetings of professors, and for this they award diplomas and titles.\textsuperscript{127}

Definitely, in 1930, the impatience with young students who followed their fantasies was growing even stronger, as well as with the school that supplied teachers who encouraged them, for in that year, VKhUTEMAS/VKhUTEIN was dissolved. What a stark contrast to Lenin’s encouragement of revolutionary youth in early 1920s to think utopian: “The revolutionary must know how to dream. In order to present young labouring people with the correct ideological position, it is necessary to teach youth how to dream and to organize it to fight for the realization of its dreams.”\textsuperscript{128}

During the time of Krutikov’s architectural training, between 1922, when he entered the school and 1928 when he graduated from VKhUTEMAS/VKhUTEIN, there was no consensus on the form and content of the new, transformed socialist city. There was no single voice that was privileged over any other. Krutikov’s project was one of many propositions offered for fostering a new urban space. However, by 1929 such

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{127} Mordvinov, “Leonidovshchina i ego vred,” \textit{op. cit.}, quoted in Gozak and Leonidov, \textit{Ivan Leonidov, op. cit.}, 97.
\item\textsuperscript{128} Quoted in Stites, \textit{Revolutionary Dreams, op. cit.}, 263, n.11. Already in 1902, Lenin, in his \textit{What Is to Be Done?} quotes a radical of the 1860s intelligentsia, Dmitrii Pisariev: “The rift between dreams and reality causes no harm if only the person dreaming believes seriously in his dream, if he attentively observes life, compares his observations with his castles in the air, and if generally speaking, he works conscientiously for the achievements of his fantasies. If there is some connection between dreams and life then all is well.” Ibid.
\end{enumerate}
\end{footnotesize}
allowance for multiple voices was gradually falling out of official favour to be abolished by 1932, and so was Krutikov’s imaginary project.\textsuperscript{129}

The transition between the 1920s and the 1930s in Soviet architecture involved both continuity and radical changes in cultural politics. Vladimir Paperny in his book *Kul’tura “Dva”* (Culture “Two”),\textsuperscript{130} has explored this tense interaction between permanence and shifts, represented by what he calls “Culture One” of the 1920s, and

\textsuperscript{129} Despite the severe criticism that Krutikov received with regards to his diploma project, or perhaps because of it, he managed to find an outlet, or a sort of an enclave, for his utopian visions after becoming an architect. Severely scorned and ostracized for his desire and ability to dream and to be fantastically imaginative, Krutikov channeled his utopian visions into a realm where whimsy was welcomed and expected. Throughout his remaining professional career the main focus, and indeed a forte of Krutikov’s architectural practice, was designing theatres. While shortly after graduating from VKhUTEMAS / VKhUTEIN, Krutikov participated in various competitions -- such as the Columbus Monument in Santo Domingo (1929), the Moscow’s Proletarskii district Palace of Culture (1929-1930); and the socialist city and automobile-building combine of Avtostroi, near Nizhny Novogrod (1930) -- during the 1930s he started to specialize in designing buildings for mass cultural activities, particularly theatre (for example, the Nemirovich-Danchenko Theatre -- designed together with Victor Popov -- of 1933-1939). It was through projecting of theatres, the space for fantasy to reign, and where the imaginary and outlandish is turned into make-believe and “real,” that Krutikov could see his concepts to reach the main stage and to soar. Indeed theatre remained Krutikov’s dominant focus of his later architectural practice. He also became an architectural journalist and published many articles related to theatre. See his series of articles: Krutikov, “Voprosy prostranstvennoi organizatsii kul’turnogo kombinta i novogo teatra,” (Questions Regarding Space Organization of the Cultural Combine and the New Theatre) *Stroitelnaiia promyshlennost*’ no.10 (1930), 794-795; and *Stroitelnaiia promyshlennost*’ no. 2-3 (1931). After the Second World War, Krutikov centred his work on the reconstruction of architectural monuments. For a visual material of Krutikov’s later projects, both individual and in collaboration with other architects, mainly associated with ARU, see Khan-Magomedov, *Arkitektura sovetskogo avangarda*, op. cit., 326, ill. 10-12 (the Palace of Soviets of 1931), 326, ill. 5-6 (the Palace of Culture of 1930), 329, ill. 6-8 (the Columbus Monument of 1929); idem, *Pioneers of Soviet Architecture*, op. cit., ill.: 874-76, 1023-28, 1100, 1237; Catherine Cooke and Igor Kazus’, *Soviet Architectural Competitions*, 1920s-1930s (London: Phaidon Press, 1992), 70-72 (the Palace of Soviets); Catherine Cooke, *Russian Avent-Garde. Theories of Art, Architecture and the City*, op. cit., 33, ill. d (the city of Avtostroi); Khazanova, *Kul’tura zhizni i arkitektura kluba, 1917-1941* (Cultural Life and Architecture of Clubs, 1917-1941) (Moskva: Izdatel’svo Zhiraf, 2000), 73 (drawing of the theatrical stage – evolution).

“Culture Two” of the 1930s. Paperny, in his provocative analysis of Soviet architecture, perceives a strong dichotomy between the utopian openness of planning and design in the realm of Soviet architecture during the second decade of the twentieth century, and the shift to authoritarian modes of thought during the third. According to Paperny’s theoretical construct, “Culture Two” characterizes the break in Soviet architecture that occurred in the late 1920s, and marks the transition from the revolutionary, cosmopolitan and dynamic architectural discourse of the 1920s, to the conservative, hermetic and static discourse of the 1930s. In light of Paperny’s division, it is no surprise that during the 1930s Krutikov’s project was discredited in Soviet professional publications. What remains to be still explored is the question: why did Krutikov, in his vision presented in 1928, utilize concepts and imagery that had begun to permeate the Soviet scene a decade earlier but were already challenged by the time he publicly released his diploma project?

To unpack Krutikov’s *Gorod budushchego* in its broad cultural context, I suggest

Paperny introduces a method that divides the cultural changes into two periods: the 1920s and the 1930s-1950s. He actually describes ideal types that transcend concrete historical periods. According to Paperny, the opposition between these two moments is not limited to the Soviet period. He applies this dichotomy to the entire Russian history, which is characterized by the rhythmic succession of the two types of cultures. There seems to be a well-established tradition of perceiving Russian culture through this dual comparison. In a semiotic reading of Russian cultural history, Iurii Mikhailovich Lotman and Boris Andreievich Uspenskii have stressed its binary elements: the absence in Eastern Orthodoxy of purgatory, the dualities of Heaven and Hell, Right or Left, black or white, orthodox or heretical, Western or Slavic which have made the dynamics of Russian growth not developmental but transformational and negational – “a process of turning [the old] inside out,” and the “radical exchange of ‘top’ and ‘bottom,’” rendering the past in a minus sign and depicting it as a dark frame to highlight and dramatize the brightness of the New World. Quoted in Iurii Lotman and Boris Uspenskii, “Binary Models in the Dynamics of Russian Culture,” in Alexander Nakhimovsky, Alice Stone-Nakhimovsky, eds., *Semiotics of Russian Cultural History* (Ithaca: Cornell University Press, 1985), 31-34, 52-53.
bringing into relief the “frontier factor” and its socio-political framework. Prior to that, however, I wish to investigate Ferriss’s concept of the future metropolis, the one that received such a positive response in the Soviet Union at a time when Krutikov’s design was harshly criticized.

There was an interesting link during the 1930s between architects in Moscow and Ferriss’s work that indicates the revolving, dramatic changes that were taking place at this time in Soviet urban planning. In 1934, Aleksei Viktorovich Shchusev and L. E. Zagorskii published a manual on the architectural organization of cities, *Arkhitekturnaia organizatsia goroda* (Architectural City Organization), in which they devoted much space to American urban projects. Their attention concentrated particularly on propositions offered by Ferriss in his *The Metropolis of Tomorrow* (Fig. 29). Ferriss’s ideas were perceived by these two authors as much more constructive than those of Le Corbusier in the *Ville contemporaine* (the plan for a Contemporary City for Three Million Inhabitants), of 1922. Shchusev and Zagorskii discussed in detail Ferriss’s designs, considering them as “far from uninteresting,” paying attention especially to the triangular configuration of city’s “centres,” demarcating science, art and business activities. 

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CHAPTER THREE

Ferriss’s Book

[In its most dramatic embodiments, politics surely always has the vocation of realizing a collective ideal, fulfilling or at least staging the great collective project. And this is precisely an allegorical matter.]

Fredric Jameson, “Is Space Political?”

Content, Layout and Medium

During the 1920s, Ferriss shared with Krutikov a desire to produce a model for a future city. This commonality extended also to the basic idea of proposing a set of images and accompanying them with written commentary. Ferriss’s contribution, stemming from his work as an architectural delineator, was a book, *The Metropolis of Tomorrow*, which he published in 1929 (Fig. 30). It was a collection of works that he had been amassing since 1925 and on which he had been working since 1915.1 Thus, as admitted by Krutikov and Ferriss alike, their respective visions of the future city were in both cases a result of a fifteen year long process. For Ferriss, it was also the crowning achievement to his professional ambitions. In a letter to his father, Franklin Ferriss, dated 1923, he admitted:

Between ourselves, I very little value my abilities as delineator. ... I must either prove myself a creator, dealing with structural masses, or admit that my career is negligible. ... If I had the time to give to it, I should be able to make an exhibition-full of original drawings of interest to all who are concerned with the present and future of New York [and] be able to predict and study these future

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forms in my drawings even more effectively than a practicing architect, who is necessarily occupied for a long time on each building he undertakes.  

Indeed Ferriss’s aspirations were fulfilled, and in 1925 he held his first exhibition of twenty-seven “Drawings of the Future City.” Some of these futuristic visions, were photographically enlarged to mural size and painted over by him, and were included a few months later in a large “Tercentenary Pictorial Pageant of New York” at the John Wanamaker department store in downtown Manhattan. Thus, considering Ferriss’s ambitions, the publication of the book four years later comes as no surprise and can be

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3 The show took place in April 1925 at the Anderson Galleries, then located at 59th Street and Park Avenue. The display was divided into three parts: “A study of the nature of the masses resulting from the present New York Zoning Law,” “Studies of buildings designed by various architects, illustrating contemporary developments under the Zoning Law,” and “Studies of the Future City,” thus foreshadowing the content of the book four years later. A number of the drawings shown at this exhibition were also later reproduced in *The Metropolis of Tomorrow*. For the review of this show see, Margaret Breuning, “A Vision of New York as Zoning Laws May Force It to Be a Modern Babylon,” *New York Evening Post* (April 18, 1925), section 5: 11.

4 This event was timed to coincide with the opening of a new building for the Wanamaker store at Ninth Street and Broadway. In October of 1925, the Great Rotunda of the old building was given over to the historical display of the “Titan City” that featured a 75-foot (circa 23 m) high painting by the Hungarian designer, Willy Pogany. Ferriss’s murals were part of a display in the new building that also included a “Grand Canyon” of miniature model skyscrapers of the future, done by Harvey Willey Corbett, who served as the director of the exhibition. Ferriss’s and Corbett’s collaboration resulted in a “pictorial prophecy of New York from 1926 to 2026,” a succession of drawings of inventive proposals for the future. In a letter to Ferriss of August 13, 1925, Corbett noted: “I think this is a most interesting opportunity to get some one to pay for the futuristic ideas we have discussed.” Quoted in Ferriss Leich, *Architectural Visions, op. cit.*, 133, n. 32. On the “Titan City” exhibition, see Ralph Flint, “Pageant of New York, the Titan City, in Tercentenary Pictorial Exhibition,” *Art News* 24 (October 31, 1925), 10; Leon V. Solon, “The Titan City Exhibition,” *The Architectural Record* 59 (January 1926), 92-94; Lewis Mumford, “The Sacred City,” *The New Republic* 45 (January 1926), 270-71; Carol Willis, “The Titan City. Forgotten Episodes in American Architecture,” *Skyline* (October 1982), 26-27; Robert A. M. Stern, Gregory Gilmartin, Thomas Mellins et al., *New York 1930. Architecture and Urbanism Between the Two World Wars* (New York: Rizzoli, 1987), 332-334.
regarded as the extension of Ferriss's desire to be seen not so much as a renderer but
rather as a "creator."

Ideas relating to the future city are conveyed by Ferriss over the 143 pages of *The
Metropolis of Tomorrow* through text and his own drawings in charcoal and pencil. There
are sixty images in total, although only thirteen of them were executed specifically for the
book (all of these were included in the section devoted to the imaginary city). In
contrast to Krutikov's concise textual commentary, Ferriss's explications are much more
extensive. Each section has a preamble, and every drawing is accompanied by the
author's observations. According to Rem Koolhaas, Ferriss's comments represent a
"verbal ... vagueness." Indeed, the florid style, with heavy use of capital letters, and his
attempts at poetry imbue Ferriss's narration with a declamatory and grandiloquent tone.

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5 The entire book is organized by Ferriss as a three-section treatise preceded by a foreword and followed by
an epilogue. In the foreword, which is preceded by a frontispiece image, prior to outlining his book, Ferriss goes to a
lengthy extent renouncing any desire for "Prophecy," or that he "had been vouchsafed [by] any Vision" while projecting the image of the new city. The first part, called "Cities of Today," examines tendencies in contemporary urban design. Here among
the twenty selected images, Ferriss presents a collection of his renderings of the eighteen built structures
that he executed for other architects and firms. The second section is entitled "Projected Trends." Here Ferriss introduces twenty-three drawings while
extrapolating prophecies of a future metropolis based on the current conditions of zoning controls, new
technologies, and continuing centralization. The dominant elements are Ferriss's variations on the theme of
the 1916 Zoning Law and its effects on architecture. In the final, third chapter entitled "An Imaginary Metropolis" Ferriss proffers a vision of an urban utopia
reformulated on the conditions outlined in the first two parts of his book and conveyed through fifteen
images representing the future city. The closing segment of the work, an epilogue, ends up with one image of a rather cryptic character and that
is called by Ferriss "a clue."

1994), 114.
The drawings assembled by Ferriss create an assortment of existing and imagined buildings, from those representing the present city, through current projects and plans, and culminating in his own envisioned future possibilities. When compared to Krutikov’s -- who mixed reproduced material and included works by other authors in various media and who enlarged the thematic scope of his work by juxtaposing architectural objects with, for example, means of transportation -- the decision by Ferriss to concentrate predominantly on images of architectural structures produces a much more unified and strongly homogenous effect. Furthermore, as the Soviet architect’s images gain efficacy from their collective nature, which gives rise to internal dialogues, the assembled architectural illustrations by the American architect, made without exception solely by Ferriss himself, have an individualistic quality, much like a monologue. It is important to stress that all of the images that Ferriss gathered in his book are exclusively his own drawings because drawing, as much as painting, emphasizes the uniqueness of the artist’s hand and becomes the guarantee of authenticity. While maintaining the value of this work as a commodity, at the same time it reinforces this individuality. When Ferriss rendered

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7 I am referring here to Mikhail Bakhtin’s notion of “dialogic (or dialogical) voice” as characterized or constituted by the interactive, responsive nature of dialogue rather than by single-mindedness of monologue. In 1929 Bakhtin published Problems of Dostoyevsky’s Poetics where he contrasts the dialogic, or polyphonic interplay of various characters’ voices in Dostoyevskii’s novels with the monological subordination of characters to the single viewpoint of the author in Tolstoy’s. For analysis of Bakhtin’s theory see Mikhail Mikhailovich Bakhtin, The Dialogic Imagination: Four Essays by M. M. Bakhtin, M. Holquist, ed., C. Emerson and M. Holquist trans. (Austin: University of Texas Press, 1981).

8 Interestingly, Ferriss made a critical comment in 1953 on the architecture in New York built just after 1929, particularly on “[t]he up rearing shafts of the Wall Street skyscrapers, each oblivious … to its
the architectural structures designed by other architects, he diligently gave credit to each
and every one of them, at times mentioning also the names of the engineers or the
building companies. This indexing-like formula, besides indicating high respect for
authorship when it comes to pointing out the accomplishments of his colleagues, also
suggests a keen sense of professionalism, of ownership and a veneration of a culture
centered again on the individual.⁹

Throughout *The Metropolis of Tomorrow*, there is a tension between the art of
creative, aesthetically appealing architectural rendering and the science and business of
architectural construction that includes a notion of technological expansion, functional
reasoning, and the maximization of profit. Although trained as an architect, Ferriss, in his
book, did not offer a blueprint drawing, nor did he submit a solidly outlined plan for the
neighbors, each seeking the ascendancy ... to the 'rugged individualism,' the *laissez faire*, the unbridled
competition of a period,” not perceiving the irony that this opinion applies very much to his own *oeuvre* of
the 1920s. These sentiments expressed by Ferriss after World War II, seem to correspond to the mood
caused by the economic crisis of the Great Depression, when a harsher perception of the American situation
took on a self-reflective tone in evaluating American achievements. Thus, there is an expression of longing
for a communal, and less haphazard urban environment, where a “relationship between individual building
and the community of buildings” together with “long-range planning” are equally respected. Hugh Ferriss,
*Power in Buildings: An Artist’s View of Contemporary Architecture* (Santa Monica: Hennessey and Ingalls,

⁹ Reminded about the older bourgeois concept of the “freedom of the city” which was developed during the
revitalization of city life in the high and late Middle Ages -- in which ideological perspective the city was
the place where people went to freed themselves from the constraints of village life, or more specifically,
those of serfdom and of the feudal order -- we may consider that an ideal of the “free city” was thus at one
with the initial strategies of legitimization of capitalism and of the market itself. In this context, the
individualism that the city and capitalism promised was closely related to the civilizing, beneficial effects
of commerce celebrated by the early ideologues of free enterprise. This earlier ideal of the city as a place of
individual freedom is therefore coincidental with the emergence of “individualism” as such and of the
bourgeois subject. This is the paradox of the capitalist city – a collective social form organized on the basis
of individual profit.
future city; rather he created artistic, "painterly" renderings and evocations of the imaginary. Although partially dealing with existing structures, the overall approach throughout the book reveals that Ferriss's imaginative qualities became more important than factual representation. His huge esteem for high art and his emphasis on the creative and expressive dimensions can be associated with his professional training.

Ferriss's architectural education stemmed from the Ecole des Beaux-Arts in Paris, whose ideas had been transplanted to and taught at Washington University in St. Louis, where Ferriss entered in 1906. After finishing school and receiving his license as an architect in 1911, Ferriss began his professional career as a commercial architectural renderer and delineator rather than as a designer. According to his daughter, Jean

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10 There is a rather strong affinity between Ferriss's renderings and the 19th century American landscape painting coming out of the Hudson River School as well as the luminist tradition, which I address below when dealing with the concept of frontier.

11 At the turn of the century the School of Engineering and Architecture at Washington University in St. Louis was one of the best and newest institutions west of the Mississippi. There, under Paris-trained instructors of design, a subject that formed the basis of the Beaux-Arts curriculum, Ferriss was exposed to the "broad, unchangeable principles of architecture illustrated by the monuments of past ages." In "Architecture: General Outline of Instruction," Washington University Record, November 1906-1907.

12 Ferriss's career was built on the ability to poetically convey the mass and volume of skyscrapers. He started his professional activity in 1911 as a junior draftsman in the St. Louis firm of Mariner and LaBeaume, and continued his career in the firm of Cass Gilbert (1912-1915) as an architectural renderer, later practicing independently until his retirement. With the outbreak of the war, he entered the service of the Committee on Public Information in Washington, D.C., which engaged him in publicizing the work of industries and organizations involved in the war effort. By the mid-1920s his commercial practice was well established. Ferriss subsequently opened his own studio in New York, where he specialized in architectural renderings and worked for such figures in American architecture as Bertram Goodhue, Gilbert, Corbett, and Raymond Hood; in fact, his clients included more than a hundred architectural firms in more than twenty-five cities. Ferriss was employed by architects or advertisers to prepare drawings of proposed or completed constructions. Although highly commercial and involving aspects of advertisement, his oeuvre consisted solely of pencil and charcoal drawings. From 1923 on, Ferriss worked as an independent architect for the Committee on the Regional Plan of New York and Its Environs. All this activity gained him professional
Ferriss Leich, early in his career her father "decided ... to draw, rather than to construct."¹³ For Ferriss architectural rendering was "a branch of pictorial art," and "an exercise in imagination," that aimed at "equating artistic reach to architectural grasp."¹⁴ Other architectural renderers regarded him as a draftsman who was interested in "presenting a total artistic vision."¹⁵ Ferriss himself insisted that an architect "must mean a man of both sense and sensibility – rational scientist and inspired artist rolled into one!"¹⁶

According to Ferriss, buildings "possess an individual existence,"¹⁷ and the role of the delineator is to be alert to the "emotional tone, the particular mood"¹⁸ of the built structures. Ferriss approached them as living persons, whose portrait he was drawing.

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¹³ Ferriss Leich, op. cit., 16.
¹⁵ The opinion of Ernest Burden expressed in 1976, in an interview with Jean Ferriss Leich.
wishing to outline the “psychological domains.” 19 By choosing this attitude he was convinced that architectural rendering “like the other arts, may attain its happiest freedom of movement.” 20 His aim was to emotionally express the buildings’ physical power and mass. Each individual image executed by his hand in predominantly nocturnal settings with huge contrast between light and shadow, suggests an artistic aura through which the artist is able to convey the power and beauty of the rendered subject. Due to his technique, resulting in “expressive chiaroscuro (mixing) poetry and power in a twentieth-century Sublime,” 21 Ferriss’s works are often compared to illustrations by Giovanni Battista Piranesi, the 18th century Italian master draftsman (also trained as an architect) known for his capricci, or architectural fantasies. Like Piranesi, who although active during the Neo-Classical period, in his renderings of Roman ruins and imaginary prisons embodied the Romantic drama of tonal contrast between light and shade, 22 Ferriss achieves similar effects in his depiction of existing structures (“The Shelton Hotel,” Fig. 31) and those showing projected vedute ideata (“Finance,” Fig. 32). However, as I argue below, Ferriss’s drawings are particularly informed by 19th century American imagery found in painting and photography and centered on depicting panoramic views of grandeur on the scale of natural wonders. An ideological underpinning (hailing the

19 Ibid.
20 Ibid.
course of empire), combined with formal devices such as the dark foreground strip and
the commonly used repoussoirs, much like those used by members of the Hudson River
School and the luminists, strongly resonates in The Metropolis of Tomorrow.23

Contemporary critics, however, often pointed to Ferriss's underscoring of monumentality
with concealment of details, together with his utilization of chiaroscuro: "He sees mass
and outline rather than fussy detail. He sees the play of light and shadow and feels,
perhaps more than any other artist in America, the sense of bigness, the vast strength and
size of America's modern architecture."24 The crowning jewel of "America's modern
architecture" during the 1920s was the skyscraper, and the skyscraper was indeed the
dominating theme in Ferriss's oeuvre.

Technology and the Metropolis of Tomorrow

The term "machine age" was coined in 1927 with an exhibition organized by the
Little Review in New York, in which Ferriss played a prominent role.25 The poster for the
Machine-Age Exposition announced that the "glass skyscraper designed by Hugh Ferriss

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22 The similarity was noted so frequently by reviewers over the years that the Architectural Forum flipped the comparison and referred to Piranesi as "the 18th century Hugh Ferriss," in ibid., 17, 132, n.8.
24 Undated clipping of The Metropolis of Tomorrow review, Ferriss Collection, Avery Library, Columbia University, New York, Box 10.
Indeed, Ferriss's drawing of the "Project for Glass Skyscraper" (Fig. 33) was the opening image for the catalogue. The audience, being prepared by the poster for a sensational encounter, was perhaps expecting a design in the vein of Ludwig Mies van der Rohe. The German architect in his *Project for Skyscraper in the Friedrichstraße* of 1922 (Fig. 34) suggested, for example, a structure of glass and steel that was supposed to cut into the city fabric of Berlin with the power and precision of a blade. Instead, the visitors to the exposition received Ferriss's architectural intervention in a form that did not seem to explore new technologies, but rather emphasized strong organic qualities and theatrical ambience. Ferriss's glass skyscraper springs upwards like a stalagmite in a cave, while its surrounding darkness is broken in a dramatic manner by concentrated beams of light. In *The Metropolis of Tomorrow*, Ferriss repeated this illustration twice, first in the section entitled "The Projected Trends," as "Verticals on Wide Avenues" (Fig. 35), and then in the part called "An Imaginary Metropolis," as "Philosophy" (Fig. 36). Indeed, throughout the book, he adapted this nocturnal and highly expressive -- though less technologically orientated -- approach.  

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27 To give justice, Mies van der Rohe’s projects of a glass skyscraper also reveals strong expressionist affiliations to Bruno Taut or Paul Scheerbart, and also conjures up organic references (for example, an iceberg with a complex reflexive surface). Nonetheless, Mies van der Rohe seems to be more concerned with technological means of his glass curtain-wall on a steel-framed building. See my discussion below.
Since technology was the theme of *Machine-Age Exposition*, of special interest was the exploration of machines in relation to various aspects of modern life.

Interestingly, when examples of contemporary applications of machine aesthetics were demonstrated, the dominant medium used to represent these works was photography. Jane Heap, the organizer of the show and the co-editor of *The Little Review*, wrote:

"There is a great new race of men in America: the Engineer. He has created a new mechanical world ... it is inevitable and important to the civilization of today that he make a union with the architect and the artists." The opening page to the catalogue contains a large, schematically drawn silhouette of a biplane, and Ferriss wrote the first part of the foreword under the title "Architecture of This Age."

The image of the airplane combined with the text devoted to modern architecture recalls the graphic and thematic devices used by Le Corbusier and Ginzburg in their publications. As it happened, *Vers une architecture* by the former of 1923 was translated and published in New York in 1927. At the same time, the inclusion of the airplane coincided with the

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29 Hence, in the catalogue there are photographs of architecture, such as the Bauhaus by Walter Gropius, and the Labour Palace by the Vesnin brothers, models, for example a costume for *Mechanical Theatre* by Aleksandra Aleksandrovnna Ekster, or machinery of all sizes and shapes, as McCully’s all-steel gyrator crushe. There were also photographs of paintings and sculpture that depicted the machine (*Torso* by Naum Gabo).

20 jh (Jean Heap), "Machine-Age Exposition," in Heap et al., *Machine-Age Exposition, op. cit.*, 36. This is a somewhat abridged version of her essay that appeared in *The Little Review* in the Spring of 1925 issue. The supplementary issue of *The Little Review* served as a catalogue for the exhibition, with the cover designed by Fernand Léger. *Machine-Age Exposition, The Little Review* XII, no.1, Supplement (May 1927).

aviation feat of Charles Lindbergh, who successfully crossed the Atlantic in a tiny plane, the *Spirit of St. Louis*, on May 20-21, 1927. Thus the pilot’s achievement happened at exactly the same time as the *Machine-Age Exposition*, between May 16 and May 28, creating a fortuitous context for the show. However, the silhouette of the airplane would seem to indicate the overall theme of the exhibition rather than Ferriss’s line of inquiry as demonstrated in his essay. In his text, Ferriss offered an overview of architectural styles leading to “Modern Art” in a general historical sweep over the centuries, with references to the Greek, Roman, Romanesque, Gothic, and Renaissance “architectural record” punctuating the first two paragraphs. In contrast to Krutikov, Ferriss’s purpose in displaying a history of architecture through a series of great works was made to present a genealogy culminating in the present.

The main point Ferriss wished to emphasize was that an effect of the Zoning Law in New York was a shift in aesthetics applied to architecture. Despite the fact that this exhibition was an important pioneering event in America that linked the machine with the arts and the new architecture of modernism, for Ferriss the effects of technology seemingly could be reduced solely to the Zoning Ordinance “which altered the forms of

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31 Ferriss, “Architecture of This Age,” *op. cit.*, 5.
buildings. This law was passed for certain utilitarian and quite impersonal reasons: to conserve property values, to check traffic congestion, to admit light and air to streets. But this law had a profound effect upon architectural design. Cubes became pyramids." In this text, though he sensed a future full of "possibilities," in contrast to his purpose strongly articulated two years later in The Metropolis of Tomorrow, in 1927 he still seemed to lack any sense of direction. He concluded: "It is possible that the very stream which hewed the architectural Grand Canyon is itself about to expire. It is possible that we must look elsewhere. It is possible that another stream is already beginning to flow." Surprisingly, the "possibility" of creating a stronger nexus between the machine and architecture, its construction, or its representation, which was the premise of the show, seemingly escaped Ferriss's interest, but was picked up by, for example, Louis Lozowick. Nonetheless, the appeal of the Machine-Age Exposition, and other shows with similar themes, attested to the spreading popularity of the idea of associating

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33 Ferriss, "Architecture of This Age," op. cit., 5.
34 Ibid., 6.
35 R. H. Macy, the owner of the department store in New York, upstaged Heap's show when, from May 2 to May 6 of 1927, he featured "airplanes, motors, accessories and instruments" in the Exposition of Art in Trade. The popularity of this display was geared to the promise of consumption, what Lewis Mumford had dismissed as "...installment buying, speculation in necessities of life, and the bourgeois comforts generally." In Lewis Mumford, "That Monster – The Machine: Lewis Mumford vs. Genevieve Taggard: The Bourgeois Girls Like Their Ham Sliced Thin," New Masses 3 (September 1927), 23. A year later, in 1928, Macy had a second huge presentation, the International Exposition of Art in Industry, perhaps under the stimulus of Heap's show, or maybe inspired by Lindbergh's achievement, or possibly just as the continuation of his commercial success from the previous season. This second show included five thousand exhibits. Malevich's painting The Knife-Grinder. Principle of Flickering (of c. 1913) purchased by Katherine Dreier at a 1922 exhibition in Berlin, was part of that display. There seems to be a twist to the vicissitudes of the work by the Russian artist, which traveled from Moscow (the heart of Soviet avant-garde
mechanization with modernity during the late 1920s.\textsuperscript{36} It also demonstrated the relationship between business and the arts, proving that machine age America was not only an aesthetic discourse among artists and critics, but also a confirmation of American consumerism. Around the same time that serious artists were discovering in the industrial landscape "new religious symbols, businessmen were learning about the power of advertising. To stave off the perils of overproduction, their advertising agencies turned to machine age imagery to stimulate consumption."\textsuperscript{37}

The illustrations offered by Ferriss in *The Metropolis of Tomorrow* can be perceived as a form of publicity for his own firm. Reproduced in the book, they spread and popularize Ferriss's distinctive technique of rendering architecture. In addition, the textual commentaries reveal an acute sense on the part of the architect to deliver commercially viable propositions. It is not surprising, then, that Ferriss's images were appropriated by several sectors of American business for use in advertising. Thus the American Institute of Steel Construction used Ferriss's visionary representations in its advertisement of 1930 (Fig. 37), while other corporations indirectly adopted Ferriss's pictorial vocabulary, as exemplified in an advertisement by Jose Arentz for Goodrich art, to the centre of the American consumer society, to be displayed within the space supplied by the merchant magnate. On Macy's show, see "World Art Exhibit Opened by Macy's," *New York Times* (May 15, 1928), 8.

\textsuperscript{36} For analysis on the impact of technology on modernity in America, from Ford's automobile assembly line in 1913, to the New York World's Fair, in 1939, see Terry Smith, *Making the Modern*, op. cit.
Silvertown Tires of 1931 (Fig. 38), and by General Electric’s sales pitch of 1931 (Fig. 39). The machine age mentality called for mass production, and tightly connected to that, mass consumption, and Ferriss’s fantastic imagery, for which he gained renown after *The Metropolis of Tomorrow* in 1929, supplied an apt repertoire. His images of grandiose prospects used in advertisements during the 1930s offered a futuristic vision while totally obscuring the grim reality of the Depression.

In the Soviet Union, there was a quite different context for engaging images in market circulation. When Krutikov appropriated images from journals and magazines, thus using already existing manufactured representations, he utilized them not to advertise the depicted buildings and objects, but rather treated them as “tools” for supporting his premise, which was the need for a new, socialist urban model.

Furthermore, the notion that Krutikov, through his own drawings, wished to solicit prospective clients to commission his work would be rather far-fetched. Although money-commodity relations were on the rise during the NEP period, this practice was harshly criticized, especially by students among whom there were a large number of radicals. By considering Krutikov’s position as aligned with this “opposition,” the argument I develop further when addressing the frontier context, would therefore have tempered his willingness to take part in the commercial activities fostered by NEP.

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Unlike Krutikov’s, Ferriss’s utopia has a modernist, not avant-garde, provenance. When Ferriss hails technology, it is not in the domain of exploration, for example, of photography as a tool of reproducibility and dissemination of images, but solely within the pragmatic realm of engineering and building construction. Although part of the machine age, Ferriss omits broad possibilities offered by new technology, concentrating instead on its application to further the structure of skyscrapers.

The Existing City

*The Metropolis of Tomorrow* is divided into three chapters. The first chapter, called “The Cities of Today,” is devoted to a discussion of existing American skyscrapers. There, the author celebrates the high, dominating structures that represent the urban hallmarks being built across the country. Beginning in his native St. Louis (Telephone Building), he moves to Chicago (Tribune Building), Detroit (The Greater Penobscot Building), Los Angeles (Municipal Tower), and ends in New York, the urban centre that overshadows all other cities with its number of built verticals, as embodied by the Chrysler Building, then under construction (Fig. 40). Clearly, through his selection of built structures Ferriss concentrated solely on American cities, particularly New York. By choosing site-specific architecture and often indicating buildings by their common names (as for example by depicting “The Radiator Building,” designed by Raymond M. Hood –

Fig. 41), Ferriss limited his attention to the American national environment and tradition.\textsuperscript{38} This is in striking contrast to Krutikov, who incorporated images of architecture that were international in scope.

All the sky-piercing structures rendered by Ferriss throughout his book served a commercial function. They were actually “cathedrals of commerce” proliferating over the urban landscape. The American cityscape was indeed shifting during this time, with the privately financed, corporate-owned skyscraper replacing lower public buildings as the preeminent symbol of the city’s civic pride. For the first time in New York history, for example, business buildings defined the cutting edge of architecture, setting standards and precedents for other building types, rather than simply adapting stylistic directions as they had done previously. As an earlier generation had surveyed the surface of the United States into a grid, the skyscraper projected that linearity into the air.

Already in the years preceding World War I, the skyscraper had inspired public imagination, gaining symbolic significance as landmarks and icons of progress. The towers of the Singer Building (1907), the Woolworth Building (1913), and the Metropolitan Life Building (1915), had literally pointed the way to the future - skyward.\textsuperscript{39} Ferriss, via his renderings in pencil, was among those architects who decided to channel

\textsuperscript{38} This concentration by Ferriss solely on national themes, seems to be in stark difference to the ushering in of “internationalism” that started in 1927 with the establishment of radio-telephone service between New York and London, and San Francisco and Manila, or by the already mentioned solo flight across Atlantic by Lindbergh.
his creative energy into depicting the already standing or imaginary skyscrapers, rather than to design them. His contemporary, John Marin, an architect and painter, was also conveying the burgeoning vitality of these new buildings, especially those going up in lower Manhattan. His renderings of skyscrapers, especially the Woolworth Building, constitute some of the most explosive visual depictions of the modern cityscape. In *Downtown New York* of 1926 (Fig. 42), Marin presented a soaring mass rendered in lines and planes that evoke the city’s angular architecture. Emphasizing the central, looming, high structure of skyscrapers in contrast with the adjoining smaller buildings, he gives the composition a celebratory character suggesting energy embodied in the city’s tall buildings. When describing the swiftly changing contemporary urban fabric, Marin applied military rhetoric, perceiving the city structures as engaged in a constant battle: “I see great forces at work, great movements; the large buildings and the small buildings; the warring of the great and the small; influences of one mass on another greater or smaller mass ... each subject in some degree to the other’s power.” In Ferriss’s renditions, the city was less belligerent, but nevertheless engaged in a dynamic stage of growth and economic power. It was a masonry surplus that expressed a free market explosion, with the skyscraper as its pinnacle.

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During the post-war decade, America became the world’s preeminent economy, business boomed and skylines erupted in ever-higher towers. As Harvey Wiley Corbett, commenting in 1928 on current American architecture, pondered the past:

After the war ...(the nation’s inheritance) was converted into buildings. ... America was ripe for architectural innovations. Her wealth, her lack of old buildings and her need for new ones, her abundance of steel – the new material allowing rapid building for specific purposes – her youth, unbound by traditions, and the ease with which she adapts herself to new methods and conditions – all these play a part in the new architecture that she is producing.\(^{41}\)

In the United States (and in New York in particular), where the skyscraper was regarded as a national idiom, the name of Ferriss, as a professional delineator and the leading architectural renderer of the decade, was linked to the utopian image of the urban milieu reaching vertically towards the sky. \textit{The Metropolis of Tomorrow} is at once a highly personal vision and an expression of the prosperity of the twenties with its emphasis on business.

The opening paragraphs of \textit{The Metropolis of Tomorrow} situate the reader/onlooker at the penthouse, from which she/he is able to gaze at the cityscape.

Ferriss writes:

Leaning, at dusk, against the dark rail, one will regard roofs, spread out below for miles and miles – blue and silent. ... Distant office buildings, their contours lost in the dusk ... Later they will darken window by window; at midnight, no longer disturbed by little people, they will resume ... their night-long communion.\(^{42}\)


In 1923, Ferriss had described his impression of the city as seen from a high vantage point, often from his own studio on the roof of a seventeen-storey building, and had captured this vista in staged photography (Fig. 33). This high vantage point he later adapted in “Bird’s-Eye View. The City at Dawn” (Fig. 44), the opening illustration to the first part of *The Metropolis of Tomorrow*, entitled “Cities of Today.” The trope of a rail as a threshold between the observer and the city below, is repeated many times in Ferriss’s book, and at times it becomes as “dark and wet as an ocean liner’s.” Although this recollection of the ocean liner brings to mind Le Corbusier’s images of steamships, there is a huge difference in the way Ferriss used it. Literally and metaphorically

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43 According to Carol Willis, Ferriss owned a studio in New York from 1923 till his death in 1962, which was a small structure on the top of the Architect’s Building at 101 Park Avenue, on the north-east corner of Fortieth Street. Willis, “Drawing Towards Metropolis,” op. cit., 152.


45 This comparison can also be made to August Perret’s conflation of towers with ocean liners as well to Ginzburg’s juxtaposition of architecture and steamships. Perret in his theoretical project *La Science et la vie* of 1925, for example, associated tall buildings with a harbour infrastructure, reproducing the drawing demonstrating a view of ocean liners and a skyscraper as encountered in Manhattan’s piers. I suspect, however, that Ferriss was more likely familiar with works by Le Corbusier. The English translation of Le Corbusier’s *Vers une architecture* (1923) appeared in 1927 as *Towards a New Architecture*, and his *Urbanisme* of 1925 was published in New York by Payson & Clark in 1929 as *The City of Tomorrow and Its Planning*. A likeness between proposals by Ferriss and Le Corbusier was noticed by various reviewers at that time. *The Metropolis of Tomorrow* and *The City of Tomorrow and Its Planning* were, for example, recommended as ideal Christmas gifts for architectural bibliophiles (*Saturday Review of Literature*, 1929, December 7, 542). Lewis Mumford in his review of books “The City of Tomorrow” for *The New Republic* in January 1930 (332-33) also compared these two books (together with Theodora Kimball Hubbard and Henry Vincent Hubbard’s, *Our Cities of Today and Tomorrow*). Other critics and architectural historians linked these two works as well; see, Geddes Smith, “Lovely Monsters,” *The Survey* (March 15, 1930), 727; Sheldon Cheney, *New World Architecture* (London, New York, Toronto: Longmans, Green, 1930), 81-82, 400; Claude Fayette Bragdon, *Frozen Fountain. Being Essays on Architecture and the Art of Design in Space* (Freeport, NY: Books for Libraries Press, 1970 [1932]), 34. On the other hand, Le Corbusier himself in *La Ville Radieuse* of 1933, included, without attribution, the four stages of the zoning “envelope” as rendered by Ferriss (first in 1922 and then included in *The Metropolis of Tomorrow*), to demonstrate the
speaking, the difference between the American and the Swiss-French author is as big as the ocean dividing them. For Le Corbusier, the liner stands for a rational mechanism that can inform good organization in architecture. In Ferriss’s case, the analogy of the railing creates a poetic transformation, turning the building and its observation terrace into a vessel able to navigate through the misty and dark urban scenery, transporting the viewer on a fantastic voyage, leaving the crowded streets below.

The diminutive human silhouettes are rendered by Ferriss as passive observers of the grandiose urban spectacle that he calls “some cyclopean drama of forms.” The “City at Night” (Fig. 45) shows in the foreground a person whose back is turned toward the viewer, who is lost in thought while pondering the dramatically illuminated urban labyrinth from the high point of the rooftop. Ferriss, with his propensity to evoke “conflicting spiritual attitudes” between French and American architects (133 of the English translation as *The Radiant City*).

Krutikov also used images of steamships and boats in the section where he analyzed the impact of means of transportation and speed on architecture. His inclusion of them was, however, more instrumental in emphasizing the need for a novel form of mobile architecture.

Ferriss, *The Metropolis of Tomorrow*, op. cit., 15. The scaling of the figure to the cityscape reinforces the majestic size of the urban form. Mostly alone, often with their back to the spectator the human figures depicted by Ferriss are caught, between us, the audience, and the grand spectacle that they are observing, or at times are part of it by just being present. At the same time, the figures seen from the rear invite the beholder to identify with them and draw the onlooker into the picture. These figures often seem contemplative. The solitary meditative figure is the literal trace of man’s presence in nature, and a primary motif of the 19th century iconography in the paintings and photographs of the period. This trope was a popular one among American painters such as Frederic Edwin Church, Albert Bierstadt, or Fitz Hugh Lane, while in Europe it was the “trademark” of Caspar David Friedrich.

The penetration of the skyscraper view into popular consciousness was complete by the late 1920s, when a view from a skyscraper became a recurring motif in magazine advertising. Roland Marchand observes: “The panorama view through the window was always expansive and usually from a considerable height.” As these “fantasies of domain” conveyed, the skyscraper “had become the artist’s shorthand description for the concept ‘modern’.” And this modernity underlined how the businessman’s gaze dominated the new
nocturnal drama, created a variation on the Romantic sublime, as had been masterfully conveyed a hundred years earlier by Caspar David Friedrich. However, while Friedrich depicted a solitary figure at the apex, confronting the beauty and chaos of nature, as in the *The Wanderer Above the Mists*, of c. 1818 (Fig. 46), Ferriss imbued his scenes with the concerns of his own age, when the inventions of man rather than the power of nature offered a focus for sublime contemplation. The sensation of awe and exaltation are still there, but the setting has changed. Instead of a mountaintop, we have a penthouse balcony in place of an alpine fog, we see an urban haze; and the expanded vista towards the horizon has been blocked by darkened buildings. However, the figure of a lonely onlooker stays the same. In his universe, Ferriss collapsed the city with nature, envisioning it as a new source of inspiration that was able to supply spectacular, modern stimulation.

man-made landscape. In European cities such high vantage points had been historically restricted to church and king, and in most cities the cathedral had long been the tallest building permitted. Roland Marchand, *Advertising the American Dream: Making Way for Modernity, 1920-1940* (Berkeley: University of California Press, 1985), 240, 242.

49 See Iain Boyd Whyte, “The Expressionist Sublime,” in Timothy O. Benson, et. al, *Expressionist Utopias: Paradise, Metropolis, Architectural Fantasy* (Berkeley, Los Angeles, London: University of California Press, 1994), 118-137. The field of the sublime was comprised of the majestic, the awe inspiring, and the literally overpowering: it combined excess and hyperbole to suggest realms beyond human articulation and comprehension. The sublime was constituted through the combined sensations of astonishment, terror, and awe that occur through the revelation of a power greater than the human. Those mixed sensations result from the rhetorical construction of grandeur – either huge or small – and the infinite. The final effect is not a negative experience of anxious confusion, however, because it is almost immediately accompanied by a process of appropriation of, and identification with, the infinite powers on display. In Ferriss’s cityscapes there are also traces of delight in limitless nature, as advanced by Joseph Addison in 1712 in his writing on the aesthetic of the infinite, as well as a sense of terror, as applied to sublime by Edmund Burke in 1757. For the discussion on sublime in American culture see David E. Nye, *American Technological Sublime*
With the device of an onlooker gazing downward, Ferriss also invited the audience to identify with this figure, and to join him or her in the pleasures associated with what Michel de Certeau recognized as “seeing the whole” by looking down. From this vantage point, the viewer is a master of surveillance. The logic hidden within this representation resembles that of Bentham’s panopticon, a device for transforming the city into a site controlled from above and for dividing its inhabitants into the majority who hurry along the ground and the few who survey them from above. The gaze from the summit manifests itself in both a symbolic and instrumental guise by assuming a perspective akin to the divine and to the technical. The panoramic prospect becomes a symbol of the desire for dominance. The optical reading from above is strongly personal and ideological at the same time, reminding the viewer once again of the 19th century American landscape painting, *The Grand Canyon of the Yellowstone* by Thomas Moran, executed in 1872 (Fig. 47), which features a commanding view similar to that utilized by Ferriss in his renderings. In this case, the painter pictured a few human figures standing on elevated ground, with whom the beholder identifies as he or she ponders both the

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51 M. Christine Boyer, while using Michel Foucault’s concepts, has pointed out that the rising planning mentality in America was based on a surveillance model. As the result of survey operations, the urban space was divided into separate disciplinary cellular areas. M. Christine Boyer, *Dreaming the Rational City. The Myth of American City Planning* (Cambridge, MA, London: MIT Press, 1983), 70-82. As I will demonstrate below, Ferriss’s city of the future follows this model and in effect is designed as a totality of a series of distinct entities or cells.
Edenic wonders and the emblems of national pride. Through this composition, the viewer measures the wilderness, a very American symbol of national success, and simultaneously designates nature as the source from which future benefits will flow — once more, a trope appropriated by Ferriss in his illustrations.

The alluring power of a voyeur, who is watching the city from a high point, is to some extent the *modus operandi* throughout the entire *Metropolis of Tomorrow*. This elevated location separates first the author and then the viewer from the mundane hustle-and-bustle happening on the street level. When compared with Krutikov’s project, this device used by Ferriss reveals striking differences between their two visions. Although Krutikov situated the dwellings even higher up than the assumed stance of Ferriss’s lonely gazer, he did not aim to separate or to sever the connection between the “bottom” and the “top.” Despite the fact that the Soviet architect removed the dwellings to a position above the earth’s surface, there is still a link with what happens below. Krutikov wished to offer a serene environment high above in space, especially for those who created the mundane noise of economic production. For Ferriss, on the other hand, the elevated position of the viewer functioned instead as a buffer zone that would to protect the individual from the daily commotion of a big city below. The viewer’s elevated position further underscored the awesome height of the skyscraper, as the sublime. However, as romantic and exciting as these high buildings were, they nevertheless
created real apprehension about the traffic congestion and lack of sunlight they were causing. Ferriss attempted to deal with these problems in the second chapter of his book.

**Negative and Positive Urban Tendencies**

The second part of *The Metropolis of Tomorrow* called “Projected Trends” reveals Ferriss’s assessment of what would become of the city if various architectural tendencies, already underway during the 1920s, should continue unchecked. Thus, Ferriss demonstrates the exaggerated effects of contemporary trends towards greater building heights and the corollary to that, growing traffic congestion. The predicted effects he feared would result in the unplanned, unregulated proliferation of vast towers with their rooftops joined by multileveled rows of ramps for automobiles and aerial corridors accessible to planes as shown in “Overhead Traffic-Ways” (Fig. 48). Although these images were drawn as warning signs and were supposed to caricature “things to come,” their lack of hard edge and the omission of critical toughness gave them a public visibility that acted to promote the very trends Ferriss apparently set out to mock. Jean Ferriss Leich noted that ironically the drawings that Ferriss intended to use to satirize current trends in architecture were then, and still continue to be, misread as evidence of support for the very tendencies he opposed. Indeed, Ferriss’s ominous predictions, expressed in the text accompanying the images, seemed to escape the viewers’ attention,
reinforcing the cliché that "one picture is worth a thousand words." As a result, Lewis Mumford ridiculed Ferriss for presenting modern architecture and predicting its future in a seductive, atmospheric and appeasing manner, because in his drawings, the buildings are shown as "softened, sometimes almost smudged; and the tone of the picture, if not the subject, gives one a sense of gentle loveliness." Therefore, Ferriss was less successful than Krutikov in his use of irony as a rhetorical device. The American architect utilized a soft textual commentary that could not contend with his seductive and theatrical renderings, while the Soviet architect reached for an easily recognizable satirical drawing whose meaning reverberated in his caption.

Despite the looming dangers of traffic congestion and over-population, Ferriss sensed that there was a silver lining among the contemporary proposals for the urban future. The setback skyscraper and the multi-block structure, sidewalks that elevated pedestrians above vehicular traffic, and the growing use of improved construction materials were all regarded by Ferriss as positive and promising tendencies. Among the

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52 Ferriss Leich, op. cit., 133 n. 35.
53 Ferriss writes "in some sketches, architectural values have been so completely neglected as to show the taller towers connected at their very pinnacles by a network of aerial traffic bridges which would infallibly cast their gloomy shadow permanently on the city beneath. ... One could drive across the façades of buildings, at the fifth, tenth, fifteenth or twentieth story. Automobiles below one, automobiles above one! A paradise, perhaps, for the automobile manufacturer! But for the office worker – less and less escape from the noise, the rush and the atmosphere of traffic" (64). The irony is that Ferriss’s depiction of this warning was adopted in 1931 by the General Electric Co., in its advertisement of a refrigerator. In there, the appliance was described as “(reflecting) the spirit of modern art, thought, and architecture,” that the included cityscape was supposed to embody (see Fig. 35).
new construction materials that Ferriss emphasizes are glass, concrete and steel. In particular, glass excites him, especially its advantages (transparency allowing light in), various applications (translucent bricks, windows, curtain walls), and its many shapes and multiple colours. The image called “Glass” (Fig. 49) shows high towers emanating light in the background. They surround a rooftop terrace depicted in the foreground. On the edge of its floor, facing the abyss, Ferriss presents a person standing in front of an easel. This artist is situated in the middle of the trajectory that diagonally cuts the composition. That is, he is located between the globe, in the lower right foreground, and the sphere of a full moon depicted hovering in the upper left corner on the blackened firmament. The artist gazes towards the moon and at colossal glass buildings radiating with light. He seems to ponder, before evoking on canvas, the encountered spectacle. It is the artist, the architectural delineator, whose role it is to mediate between earth and the cosmic mystery of the universe by being actively engaging in rendering the gleaming, monumental new

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The German word for the sublime, *das Erhabene*, denoting elevation, building up or edifying, fits well the atmosphere that Ferriss sought and achieved in all of his images. The urban views in *The Metropolis of Tomorrow* represent Ferriss's evocation of the sublime in his response to the bewilderment caused by the physical scale of the city, and possibly the incomprehension and fear of its exploding population.

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56 According to Merrill Schleier, Ferriss's translucent skyscraper “encompasses the logical with the spiritual,” in Merrill Schleier, *The Skyscraper in American Art, 1890-1931* (Ann Arbor, Michigan: UMI Research Press, 1986), 87-88. Barbara Novak notes: “Light is ... the alchemistic medium by which the landscape artist turns matter into spirit. ... In American art especially, light has often been used in conjunction with water to assist spiritual transmutation, either dissolving form ... or rendering it crystalline. In the former, light is more closely attached to what we generally call atmosphere, and has a diffusive, vaporous quality.... In the latter, light itself partakes of the hard shiny substance of glass.” in Novak, *Nature and Culture, op. cit.*, 41-42. Ferriss’s application of glass and crystalline arrangements to architecture links him also to the German Expressionist tradition that viewed glass and crystal as a symbol of spirituality and utopian perfection. The favoured symbol for new architecture proposed by Expressionists was the crystal, and their favoured model, the Gothic cathedral. The writings and projects of Paul Scheerbart’s (*Glasarchitektur - Glass Architecture of 1914*), Bruno Taut’s (*Alpine Architektur - Alpine Architecture of 1919*, and Glass Pavilion, Werkbund Exhibition in 1914), and Lyonel Feininger’s (*Kathedrale - Cathedral of 1919*) were particularly instrumental for bringing glass into the modernist vocabulary (Mies van der Rohe – Friedrichstraße skyscraper model of 1921, Walter Gropius – curtain walls of Bauhaus in Dessau in 1926, Peter Behrens, or Eric Mendelsohn). Paul Scheerbart who was influenced by theosophy expounded by Rudolf Steiner, advocated for example the extensive use of glass as the building material of the future. In his *Glasarchitektur*, he urged the construction of glass and steel buildings for a “new glass culture” that would completely transform mankind. He also proposed that “towns and other places should always be distinguished by towers. Every effort must be made to lend enchantment to towers by night. Under the rule of glass architecture, therefore, all towers must become towers of light.” Paul Scheerbart, *Glasarchitektur* (Berlin, 1914), ed. and translated by Dennis Sharp (New York and Washington, D. C.: Praeger, 1972), 52, 74. For discussion of glass in architecture, especially the use of the crystal motif in German Expressionist art, see Wolfgang Pehnt, *Expressionist Architecture* (New York: Praeger, 1973), 36; Keith Bell, “Glass in Architecture,” *The Structurist, 27/28* (1987-88), 7379; Rosemarie Haag Bletter, “The Interpretation of the Glass Dream - Expressionist Architecture and the History of the Crystal Metaphor,” *Journal of the Society of Architectural Historians* 40 (March 1981), 20-43; Rosemarie Haag Bletter, “Paul Scheerbart’s Architectural Fantasies,” *Journal of the Society of Architectural Historians* 34 (May 1975), 83-97; Antony Tischhauser, “Wenzel Hablik – Crystal Utopias,” *Architectural Association Quarterly* 12 (1980), 18-24.
Throughout his book Ferriss saturated his fantastic images with a feeling of the supernatural, bordering on what Mumford termed “religious awe and ecstasy.”\(^{57}\) Stage-like, theatrical, linear rays illuminate Ferriss’s buildings, spotlighting their loftiness, while his employment of dramatic *chiaroscuro* creates an air of wonderment and awe in front of nature. In the future, Ferriss believed, city dwellers might actually feel closer to nature. Rather than flee to suburbs, he wrote in 1925, “[t]he people of New York will practically live in the sky. There will be avenues of aerial gardens and sky golf courses. Instead of going to the country the people will go ‘up’ for country air. … There will be aerial hangars, and airplanes will be as common as flivvers.”\(^{58}\) Indeed, airplanes fill the skies throughout Ferriss’s renderings of the *Metropolis of Tomorrow*. A few years prior to publishing the book, he had envisioned a dirigible moored to a skyscraper.\(^{59}\) The image of a tall, monolithic building, shown in the *Titan Exhibition* of 1925, had been described by Ferriss as “a great tower to which dirigibles will be moored and down the sides of


\(^{58}\) Ferriss, “City Yearns to the Sky in Architect’s Vision: New York to Scorn Gravity,” *The New York Evening Post* (April 14, 1925). Ferriss’s usage of the term “country air” was charged with meaning associated with the values of open, clean, and often wild, natural space allowing for the cultivation of the old-gone virtues of the pioneer spirit. In 1905 a real-estate advertisement from Wilmington in Delaware used “frightening” tactics to encourage American families to move away from the old and crowded neighborhoods to new residences in the growing suburbs: “Get your children into the country. The cities murder children. The hot pavements, the dust, the noise, are fatal in many cases, and harmful always. The history of successful men is always the history of country boys.” Quoted by Kenneth T. Jackson, *Crabgrass Frontier. The Suburbanization of the United States* (New York: Oxford University Press, 1985), 138. For the popular adaptation of “country air” rhetoric and its variation “outdoor life” in the context of the “frontier” see my comments below.

\(^{59}\) This idea was tried later on with the Empire State Building serving as a mooring mast, however it was quickly abandoned when a disastrous landing proved the concept to be unrealistic.
which will run escalators for passengers." The epochal flight by Lindbergh across the
Atlantic Ocean, besides revitalizing public interest in aviation in the United States, also
suggested the expanding horizons of exploits in the air. In Ferriss’s prognosis, in contrast
to Krutikov’s vision, the city is totally earth-bound, while the newest technological
achievement, the airplane, is used as a means of common transportation.

Ferriss would further continue to explore the theme of glass and nature in his
envisioned city. “Night in the Science Zone” (Fig. 50), for example, represents a
mineralized skyscraper that resembles a huge crystallized stalagmite. Through this

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60 Quoted in Inaugurating the New Wanamaker Building and a Tercentenary Pictorial Pageant of New
61 The Ferriss’s image was soon adapted in a futuristic Hollywood musical comedy Just Imagine, where the
clandestine meetings of two lovers take place in the air, on the wings of individually operated airplanes.
Indeed, in this case, this concept of individually operated, single occupancy planes recalls even more than
Ferriss’s the idea of Krutikov’s “flying cabin.” Nevertheless, Ferriss’s imagined Business Center provided
the most direct inspiration for the city set of Just Imagine designed by Stephen Gosson, with air travel
among the pinnacles of enormously high freestanding skyscrapers. The movie was actually filmed in 1929,
and its sets make clear references to Ferriss’s compelling vision. See, Just Imagine, 1930, director David
Butler, New York: Museum of Modern Art - Film Collection; Dietrich Neumann, Film Architecture: Set
Design from Metropolis to Blade Runner (Munich, New York: Prestell, 1996), 112-115; Donald Albrecht,
Among the reviews of The Metropolis of Tomorrow, there was only one comment, made by a British critic,
in which the comparison was made between Ferriss’s book and Fritz Lang’s movie of 1927 (with the film
set designed by Erich Kettelhut, Otto Hunte and Karl Vollbrecht): “Mr. Ferriss … deals in imponderables,
and despite his imagination and his knowledge cannot escape from the horror that was first announced with
cruel emphasis in the film Metropolis, the City of the Future.” E. Maxwell Fry, ”Metropolis,” Journal of
the Royal Institute of British Architects 37 (April 4, 1931), 369-370. Lang’s expressionistic film included
shots of ominous, intensely lighted buildings that loomed threateningly above pedestrians. It was a
completely man-made landscape of overpasses, viaducts, and skyscrapers, the space of the city having
become a series of nightmarish interiors. According to Lang: “I first came to America briefly in 1924 and it
made a great impression on me…. I looked into the streets – the glaring lights and the tall buildings – and
there I conceived Metropolis.” Quoted in Peter Bogdanovich, Fritz Lang in America (New York: Praeger,
1967), 15.
62 Van Leeuwen points out to the analogy between this image of a “buildings like crystals” and a picture of
a crystal published in 1924 by a Dutch magazine Wendingen (Turnings), a publication representing the
construct, Ferriss reinforces his concept of perceiving the city fabric as an organic, natural formation with transparent characteristics that symbolize truth and clarity, and radiant properties that project an ideal image beyond the building’s boundaries. He writes:

BUILDINGS like crystals.
Walls of translucent glass.
Sheer glass blocks sheathing a steel grill.
No Gothic branch: no Acanthus leaf: no recollection of the plant world.
A mineral kingdom.
Gleaming stalagmites.
Forms as cold as ice.
Mathematics.
Night in the Science Zone.\(^6^3\)

The presence of orderly and scientific connotations in his drawings, combined with an avoidance of any decoration, reveal Ferriss’s desire to project a contemporary architecture that is as pure and “natural” as geological formations. The crystal metaphor allowed Ferriss to convey important connotations, namely the biblical association with clarity, order and harmony.\(^6^4\) All the emphasis Ferriss placed on the evocation of a sublime and natural environment when rendering and imagining the future metropolis, sprang, I argue, from a premise that urban space was perceived as an extension of the “frontier,” an affinity I explore below.

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\(^6^3\) Ferriss, \textit{The Metropolis of Tomorrow}, op. cit., 124.

\(^6^4\) Ferriss, \textit{The Skyward Trend of Thought}, op. cit., 141, Fig. 24.
Among the American urban tendencies that Ferriss elaborates extensively are principally the effects of the Zoning Law of 1916. According to Ferriss, zoning regulations offered a chance for order and good organization to be established in the cities, and prompted the architects to respond with the new silhouette of the skyscraper.

In 1922, Ferriss had introduced a visual rendition of high-rises as stipulated by the zoning ordinance (Fig. 4). At the same time, Corbett, in cooperation with Ferriss, had published guidelines for the stepped-back skyscrapers of the future. Indeed, it was Ferriss who provided the philosophical and pictorial ideas for the dramatic appearance of the new architecture. The 1916 Zoning Law, as Ferriss perceived it, had turned an architect into a sculptor who must “cut into the mass to admit light into the interior,” and by using his carving technique would “model the crude clay into the finished forms,” leading in effect to a building being “a sculptor’s work.”

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64 The symbol of crystal goes back to Saint John’s Vision of the New Jerusalem in Revelation. It also has a long history as a symbol of utopian and chiliastic faith in a perfectible society.
65 Ferriss’s perception of the Zoning Law as a device helping to resolve the state of urban chaos corresponds to the general promotion during the 1920s of a sensible and orderly approach. In 1921, for example, the economist and sociologist Thorstein Veblen in The Engineers and the Price System, was writing attacks on the disorderly, avaricious way in which he considered the country and the cities were being run and called for rational, organized and efficient directions by professional engineers. For Ferriss’s endorsement of the Zoning Law and his collaboration with Corbett, see Chapter One, 61 ff.
67 Ferriss, The Metropolis of Tomorrow, op. cit., 74, 82, 84. Ferriss’s treatment of architecture as a “crude form which [the architect] has to model” (74) and his perception of transformations of a building, that the architect is able to uncover “in response to some practical general condition”(72), suggest that Ferriss perceived architecture as a sculptural-like activity involving molding masses out of organic material. He also declared that the skyscrapers were a “Grand Canyon,” alluding to its colossal size as well as to the geological processes it undergoes – the erosion of a granite, organic solid. The applied notion of
pictorial study of what he called the “Evolution of the Set-Back Building” in four stages (Fig. 51). These renditions were yet another variation on the effects on zoning that Ferriss had inaugurated in 1922. It began with the most basic expression of mass with its heavy, pyramidal forms. The second step brings the mass to a slightly more refined shape, with light wells cut in and bulk more precisely articulated. The third drawing presents the modulation of the slanting pyramidal form by the introduction of a setback formula. The final, fourth stage refines the setbacks into an organized and monumental mass.

Following the Zoning Law, the setback envelope constituted, according to Ferriss, a triumphal architectural achievement with “a satisfying sense of vertical axis, [in which] one’s eye is led ... to a lofty consummation.”

“evolution” makes this link to organic, living or biological understanding of architecture ever so much stronger. The term “evolution” was, however, a highly charged notion in the American milieu during the time Ferriss was working on his drawings. Since its publication, Charles Darwin’s *Origin of Species* (1859) caused great debate over evolutionary biology, leading to a showdown between American religious “fundamentalism” and cultural “modernism.” Certain Protestant sects (especially the Baptist and Presbyterian) situated in rural southern and border states, rejected the theory of evolution. The power of reason appealing to people living in technologically advanced urban centres, seemed much less obvious to the rural population. The fundamentalist crusaders campaigned vigorously for laws banning all mention of Darwin’s theory in schools. They won a minor victory in 1925, when Tennessee passed a law forbidding instructors in the state’s schools and colleges to teach the theory of evolution. Therefore, Ferriss’s choice of words in naming the process of shaping the setback form as an “evolution,” might be perceived as his inclination towards the intellectuals gathered in urban centres, who felt the evolutionary theory was a scientific exposition of human progress. According to social Darwinism, competition and the “survival of the fittest” constituted the only way to advance. On the reception of Darwin’s theory see, John A. Garraty, *The American Nation. A History of the United States* (New York: Harper and Row, 1966); John Braeman, et. al, *Change and Continuity in Twentieth-Century America: the 1920s* (Ohio: State University Press, 1968).

68 Ferriss, *The Metropolis of Tomorrow*, op. cit., 78.
The upper levels of these setbacks allowed space for terraces, roof gardens, and penthouses.\(^69\) In effect the high tops of the skyscrapers were used as the prime real estate for the upper strata of society and provided for the rich a celestial realm that allowed them to leave behind the crass materiality of the street level.\(^70\) The terrestrial city, down below these rooftops, constituted for Ferriss a dark underworld, which he compared to Dante’s Hades.\(^71\) Overall, for Ferriss, the Zoning Ordinance did not place serious

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\(^69\) Carol Willis has pointed out, that rooftop restaurants and gardens had been popular features on the New York high-life scene already for some time during the 1920s. Willis, “Drawing Towards Metropolis,” *op. cit.*, 171. Luxury penthouse residences were indeed a development of the 1920s. Ferriss, however, was one of the first architects to promote the chic real estate on the tops of the skyscrapers. William H. Jordy used “the penthouse” as an argument while criticizing Ferriss for his lack of social consideration in regards to housing. See note 19 below.

\(^70\) Thus the vantage point in observing the crowd on the street level creates, what I would call a “dichotomy of perception.” Viewing of the crowded scenes from above includes a distance, and imbues this activity with an air of passivity mixed with aloofness. Contrary to seeing the crowd while standing at the street level which involves a visceral experience causing a sense of tension from the tightly-packed space. The brief poem, with the words typographically laid out in the shape of towering airy structure above the condensed base, in a witty way rendered the critical sentiments in regards to effects of skyscrapers on population density:

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The sky-scraper tall is a wonder to all, a thing to admire beyond question, but down below where pedestrians go it certainly adds to congestion.
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\(^71\) Ferriss, *The Metropolis of Tomorrow, op. cit.*, 18. This rhetoric was already well established in America for the description of congested cities and the effects of skyscrapers on street levels. The novelist Henry Blake Fuller depicted the Chicago of skyscrapers as an inferno (*The Cliff Dwellers* of 1893), and the
restrictions on artistic license or free enterprise, but instead offered the opportunity to
forge an ever-improved new architecture on a grand scale. From this point on, Ferriss
evolved a highly personal style of architectural rendering and a unique position both as
the proponent of the new skyscraper form and as the self-appointed visionary of the
future city.

The Envisioned City

The metropolis of tomorrow, according to Ferriss in his last chapter, "An
Imaginary Metropolis," would be composed of a "great mass [that] is surrounded by a
great spaciousness"\(^{72}\) (Fig. 52), with widely spaced buildings of colossal proportion, the
tallest of them reaching 1200 feet (365 metres), equivalent in bulk to six or eight city
blocks, like the one shown in the "Business Center" (Fig. 53).\(^ {73}\) The other two centres are
devoted to Art and Science respectively (Fig. 54, Fig. 55). Three large centres were to be
designed in a triangular formation at the heart of Ferriss's new city. Each centre would
dominate over one of the main areas devoted to human endeavour such as commerce, art,
science and technology. The visual representation of these complexes was aimed to

\(^{72}\) Ferriss, The Metropolis of Tomorrow, op. cit., 110.

\(^{73}\) Ferriss's design of a skyscraper resembling a cruciform shape recalls to some extent the towers proposed
by Perret, with the envisioned corrections by the latter. The French architect suggested the cruciform
configuration for his high residences to improve the American prototype "we shall have to build
convey order, rationality and romantic grandeur, all represented as veiled in a dreamy haze, such as that demonstrated in “Looking West from the Business Center” (Fig. 56), or “Vista in the Art Zone” (Fig. 57). Consequently each zone would be surrounded by lower buildings, which would radiate in a fan-like shape towards the outlying residential district of the city. The height of these surrounding structures would be in decreasing order. Since the urban plan would revolve around the three major zones devoted to Business, Art, and Science that towered over the cityscape, notions of “work” and “leisure” seemed to be preempted.

This arrangement recalls a messianic model envisioned by Henri de Saint-Simon in 1825 in which art, science and industry were intended to generate and secure the progress of the then emerging technical-industrial bourgeois world that comprised culture and capital, the city and the masses. Saint-Simon was mainly concerned with the causes and consequences of social and political upheaval in the age of the French Revolution. He was the first to observe that it was the economically based conflict of classes that led to the ruin of the feudal system of government, and of the ecclesiastical world-view. His originality lay in his emphasis on the modernizing forces of science, industry, and skyscrapers, but not like the Americans ... they will have to be cruciform in plan ... [on order that] light floods into all the apartments.” Cited by Jean-Louis Cohen, Scenes of the World to Come, op. cit., 119.

technological innovation.\textsuperscript{75} At the time that the French philosopher offered his proposition, this concept was regarded in Europe as a daring combination that mixed art and politics, an avant-garde notion \textit{par excellence}.\textsuperscript{76} However, when Ferriss reworked Saint-Simon's scheme one hundred years later in the United States, this century-old idea did not have the same progressive currency that it had when it was offered in Europe. Neither did it resonate with the same appeal as it had in the United States during the 19\textsuperscript{th} century.\textsuperscript{77} Even Mumford, in \textit{The Story of Utopias} of 1922, seemed to overlook Saint-Simon in his interpretation of the utopian writing throughout the centuries.\textsuperscript{78} Recognizing the place allocated by Ferriss to religion in his envisioned city, as the illustration \textquotedblleft Religion\textquotedblright\ attests (Fig. 58), it is possible to see how some ideas of Saint-Simon might have been attractive to the American architect. I am referring here to the fact that near the end of his life the French philosopher backed away from his exclusively technological

\textsuperscript{75} In such works as \textit{The Industrial System} and \textit{On Social Organization}, Saint-Simon argued that the intellectual, social, political and cultural unity that Europe once enjoyed had collapsed under an assault by Protestantism, Deism, empiricism, nationalism, and commercialism. According to him a new unity must be forged, and its basis must be ideological. The ideology that was to prompt this unity was science, which would replace the divisive world-views currently presented by religion. Science was to be applied in the practical form of industry, which included both manufacture and distribution and which amounted to technology. Priests and politicians, the old monarchs of Europe were to be supplanted by scientists and technicians.

\textsuperscript{76} Donald D. Egbert, \textquotedblleft The Idea of \textquoteleft Avant-Garde\textquoteright in Art and Politics,\textquoteright \textit{The American Historical Review} 73 (December 1967), 339-66.

\textsuperscript{77} Particularly spread by Saint-Simonians, the original ideas became widely identified with rather bizarre notions such as the search for a Female Messiah and the practice of \textquoteleft free love.\textquoteright

\textsuperscript{78} Actually, Mumford connected utopianism (as etymologically derived from ou-topia (meaning no-place) with totalitarianism, while equating eutopianism (eu-topia meaning good place) with communitarianism, regionalism, and an organic way of life. According to Meyer Schapiro Mumford in his eutopian vision of
vision, and in his *Le Nouveau Christianisme* of 1825, urged a religious as well as a technological panacea. For he came to believe that man had spiritual as well as material needs.  

Accordingly, there is room allocated by Ferriss for a “structure soaring to great altitudes,” that would house the “many and varied religious denominations,” and that would include a tower for the “executive offices of the various Faiths.” All together, this towering edifice was meant to exude Faith, Hope and Charity. Indeed in Ferriss’s city, allegories exerted a powerful effect.

Although Ferriss often alludes to architecture’s need to express modern materials and structural methods, in his drawings and comments, the role of technology is implicit rather than explicit. Ferriss’s inspiration for the future metropolis, although it included technology, was predominantly based in rational planning. Ferriss’s new city demonstrates a decisive geometric plan, which is primarily formal and symbolic, rather than functional. The formal properties of the metropolis imagined by Ferriss — its large civic centre, elongated axis, and broad avenues visually anchored by colossal towers, mixed with spreading blocks of lower rise structures between the zones — paraphrase the controlled classical compositions of the City Beautiful movement. Ferriss’s overall plan

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79 According to Saint-Simon, religion, in the form of brotherly love rather than as theological dogma, was to be given a place alongside science and technology. Remodeling his prior concept Saint-Simon, in place of the reign of scientists and technicians, envisioned a triumvirate of scientists and technicians, industrialists and managers, and artists, teachers and philosophers (but no clerics).

of a great formal axis, radial avenues and symmetrical vistas is reminiscent of Daniel Burnham’s “Plan of Chicago” of 1909, and which was popularized through the renderings of Jules Guérin (Fig. 59). Indeed, Ferriss in *The Metropolis of Tomorrow* follows Burnham’s motto, “Make no little plans,”\(^1\) in his grandiose design of the future city. Thus, like the plan designed by Burnham, Ferriss in his own project of the future metropolis also demonstrated a striving to arrange its fabric according to principles of symmetry, logic and beauty, repeating the pattern promoted by the City Beautiful trend. Furthermore, Ferriss’s drawings recall the panoramic illustrations by Guérin, particularly in their elimination of details that allowed the general appearance of the rendered view or specific structure to predominate. Ferriss, by this time recalling twenty-year old ideas yet again, invokes a sentimental rekindling of the concepts that prioritized aesthetic and pictorial values above social or functional ones.\(^2\)

Throughout the final section of his book, Ferriss offered his remedy for the ills plaguing existing urban space, which according to the author were “stupid and


\(^2\) Although written in 1904, during the time the City Beautiful dominated the urban planning scene, the words of a critic advising that the best time to view and to render the city is during the night, could have been taken as relating to works gathered by Ferriss in *The Metropolis of Tomorrow*: “[t]he glow in the sky and the countless lights gleaming in serried rows, and every string of golden beads standing for a street, mark the town clearly, with no conflict of expression, and with irresistible appeal to the imagination. Pinned thus against the loneliness and blackness of the night, the composition has a single ... true message of the town... [The picture’s] voice is unmistakable and beautiful. And as a work of art, the municipality has a right to be considered in this impressionist way. Sociologically, indeed, the details alone are important, but artistic details never make an artistic whole unless they harmonize, and if we propose by
miscellaneous rather than logical or serene” and lack “viewpoints, vista, axis, relation or plan.” The problems of congestion resulting from the dominant mode of transportation in America, the automobile, Ferriss resolved by creating “the traffic plane [to be] wide and calculated to carry a great number of vehicles on more than one level.” He furthermore divided these thoroughfares into local wheel traffic, express wheel traffic, subway lines, and separate elevated venues for pedestrians, as presented in the “Technology” centre (Fig. 60).

The two closing drawings in Ferriss’s book represent the hierarchies of the city as he envisioned them and also suggest the sources of the project’s symbolism and its origins. The last image of the section “An Imaginary Metropolis” introduces a “sketch plan” of the envisioned city (Fig. 61). This inclusion of a “general layout of the city plan” at the end of his book recalls a similar device used by Le Corbusier in *Urbanisme*, (published in New York, in 1929, as *The City of To-morrow and Its Planning*). The Swiss-French architect, on the last page of his book, reproduced an engraving of Louis XIV commanding construction of Les Invalides (Fig. 62). The caption under the image reads: “Homage to a great town planner. This despot conceived immense projects and realized them. Over all the country his noble works still fill us with...”

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modern civic art to rear the city beautiful, the picture is to be considered as a unit.” Charles Mulford Robinson, *Modern Civic Art* (New York, 1904), 39-40.

83 Ibid., 16-17.

admiration. He was capable of saying, ‘We wish it,’ or ‘Such is our pleasure.’”

This closing image is a testimony to Le Corbusier’s fascination with autocratic rule, the preference aligning nicely with his own visions of an élite capitalist city of control and administration. The map drawn by Ferriss likewise evokes highly controlled space and hierarchical structures revealing his zeal for order and centralization. Thus the appeal of Ferriss’s vision to the Soviet architectural planners during the early 1930s, when regulations, high command and total centralization were paramount under Stalin, appears less surprising.

However, Ferriss’s strong advocacy of centralization caused him very harsh criticism at home, which came from the proponents of the regional planning movement, specifically from Mumford. The concentrated urban form as envisioned in The Metropolis of Tomorrow was the major point of contention between Ferriss and

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Ibid., 138.

Le Corbusier, The City of Tomorrow and Its Planning (New York: Dover Publications, 1987 [1929]), following 301. It should be mentioned, however, that Le Corbusier had some reservations and felt embarrassed enough by this image, to place underneath its caption the rider that it was not to be understood as support for the French Fascist party, Action Française. For interpretation of Le Corbusier’s oeuvre, particularly in its political and ideological framework, see Marc Antliff, “La Cité française: George Valois, Le Corbusier, and Fascist Theories of Urbanism,” in Matthew Affron and Marc Antliff, eds., Fascist Visions. Art and Ideology in France and Italy (Princeton: Princeton University Press, 1997), 134-170; Mary McLeod, “‘Architecture or Revolution’: Taylorism, Technocracy, and Social Change,” Art Journal 43, no. 2 (Summer 1983), 132-147;

Ferriss of course would never include a royal figure in his image, following and perpetuating the myth that the American society as a democratic and egalitarian one holds high antipathy towards reproducing European autocratic system, as epitomized in the figure of Louis XIV on the print utilized by le Corbusier. In the United States, Louis XIV and his architects (who in their designs went beyond the walls of the old Paris into the open fields where the metropolis would one day grow, based their plan on a central axis, with straight and vast boulevards), were particularly appealing to the sensitivities of the members of the City
Mumford. These two figures became staunch ideological foes on the question of the centralized city. Mumford, a widely published critic on architecture and urban culture, as well as a member of the Regional Plan Association of America, the leading organization of American decentralists, is in constant disagreement with Ferriss who lent his support and his skills as the architectural delineator to the Regional Plan of New York and Its Environs. To Mumford, Ferriss’s text and pictures were the paragon of the “common megalopolitan dream,” a socially irresponsible fancy that the central city could grow in size and still remain habitable. He accused Ferriss of suffering from “elephantiasis of imagination,” arguing that realization of Ferriss’s vision would be a nightmare. As has already been mentioned, Mumford had targeted Ferriss in the mid-1920s, accusing him of creating misty illusions. These hazy, unfocused drawings were demonstrative, Mumford claimed, of Ferriss’s blurred vision of economics and social issues. As early as 1925, while reviewing the *Titan City Exhibition*, Mumford discredited the “religion of capitalism” that fostered such behemoth buildings and warned that “innumerable human lives will doubtless be sacrificed to Traffic, Commerce, Properly Regulated and Zoned Heights on a scale that will make Moloch seem an agent of charity.” Over the years Mumford was relentless in his attacks on skyscrapers as “a product of technology, credit

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Beautiful movement. It was they who tried to graft all civic ideals and ceremonial urbanities of the European city onto the fabric and form of the American city.


89 Ibid.
economy, human greed and social ineptitude.” Certainly, Ferriss’s metropolis, with its hierarchical organization of cellular space radiating from a circular civic centre which viewed from above or seen on the map reminded the viewer of an all-seeing eye of a divine nature, reinforced spiritual connotations. The colossal size of the city lends itself, however, to another possible interpretation, more in line with Mumford, in which the orbicular form reminds the eye of the giant monster, Cyclops -- a link that Ferriss, most likely, would strongly oppose.

In deeming Ferriss’s approach economically and socially unfeasible, Mumford actually revealed his own ideological bias. For him, the skyscraper as the dominant structure of the capitalist city epitomized “pyramids of ground rents,” lending themselves to being tools of exploitation. What Mumford detested most in The Metropolis of Tomorrow, was that “[s]o powerful is this vulgar dream that even the decent and otherwise enlightened technicians for the New York Committee on Regional Plan have fallen under it: the naive fantasies of the business man now come back to him with the prestige of city-planning ‘authority.’”

92 Mumford, ”Skyscrapers in the City of the Future,” The New Republic 62 (April 23, 1930), 275. There was actually an exchange of opinion between Mumford and Ferriss that The New Republic published over the period of few months in 1930. Each author strongly defended his own vantage point – Mumford promoted decentralization and communities input, while Ferriss hailed centralization and growth of cities.
Ferriss, however, developed an elaborate conceit to create the impression that the “authority” of his project was derived not so much from the drafting board of any architect -- due to the fact “that at the present moment there are none”\textsuperscript{94} -- but from the found object in the form of an old manuscript. The final page of The Metropolis of Tomorrow reveals its mysterious premise. It constitutes also the closing illustration of the book, being at the same time the singular drawing of the “Epilogue” (Fig. 63). In the commentary, Ferriss describes it as an “inscription” he had happened upon a few years prior to writing The Metropolis of Tomorrow. It includes a text and two square diagrams. The text reads: “THE CITY / COULD BE MADE IN THE IMAGE OF / MAN / WHO IS MADE IN THE IMAGE OF “\textsuperscript{95} The top diagram is located below the words “The City,” and contains a circle inscribing two interlocking triangles, creating a six point star. Three points of the star are labeled as: “Its Sciences, Its Arts, Its Business,” repeating the layout of the civic centre in the imagined metropolis (Fig. 61). The lower diagram is placed symmetrically just below the word “Man,” showing a similar outline of a circle and a star with written words at the three nodal points: “His Thoughts, His Feelings, His Senses.” Hence one can read the presented text in one continuous sequence as: “The city

\textsuperscript{94} Ferriss, The Metropolis of Tomorrow, op. cit., 142.
\textsuperscript{95} Ibid., 143.
- its sciences, its arts, its business, could be made in the image of man – his thoughts, his feelings, his senses, who is made in the image of man — the image of God. Ferriss' metropolis, in the imagined urban plan, follows the symmetrical and ordered new city, which the architect and the city planner would follow. Hence, first he arranges the geometric plan of the “threefold city” (Ferriss, The Metropolis of Tomorrow, op. cit., 142) according to Business, Arts, and Sciences zones (p.139). Then he repeats this trinity scheme for a second time in his first diagram of his Epilogue, indicating again the city and “Its Business, Its Arts, and Its Sciences” respectively (p.143). For the third time, Ferriss utilizes the tripartite system in the second diagram, which is referring this time to an image of Man and “His Senses, His Feelings, and Thought” respectively. Ferriss also indicated that architects would not achieve an evocative design of a city until they would consult with the scientist, the psychologist and the philosopher – thus again calling upon a triad of specialists). Barbara Novak has pointed out that the “Trinity of God, Man, and Nature was central to the nineteenth century universe,” and that, “Nature itself was illuminated by another Trinity: art, science, and religion.” See, Novak, Nature and Culture, op. cit., 47. The incorporation by Ferriss of the strict symmetry, order, triangle, pyramid and trifold usage of a tripartite division, may indicate his attraction to theosophy and the study of harmonic proportions, in which the triangle and pyramid were favored forms and carried symbolic meaning. The configuration of two superimposed stars inscribed in a circle, which Ferriss used three times (twice as the scheme for the layout of the city center, and once representing the “psychological structure” of a man), coincides with the drawing done by Claude Bragdon and used for the explanation of the fourth dimension in his Architecture and Democracy of 1918 (see Claude Bragdon, Architecture and Democracy, Freeport, New York: Books for Libraries Press, 1971 [1918], 115). As expounded in this text, two superimposed stars represent a universal canon of proportion, which is geometrical in nature and to which the natural world conforms. Bragdon was involved with the Theosophical Society in America and he translated and wrote the introduction to Piotr Demyanovich Ouspenskii’s Tertium Organum in 1920 (Tertium Organum, the Third Canon of Thought: A Key to the Enigmas of the World [1911], trans. Claude Bragdon and Nicholas Bassaraboff, New York: Knopf, 1922). Ferriss, according to his daughter, Jean Ferriss Leich, although not frequently, nonetheless attended meetings of the New York theosophical society (in Willis, “Drawing Towards Metropolis,” op. cit., 183, note 85). Ferriss also studied the theories of “dynamic symmetry” as expounded by Jay Hambidge, and was interested in the teachings of Grigorii I. Gurdjieff, which had inspired Ouspenskii. It was Ouspenskii who in his writing attributed to the artist clairvoyant sight. What the artist sees must be interpreted for those who have mere three-dimensional sight. It had been assumed that from the fourth dimension of space one’s sight would be fundamentally altered. Three-dimensional objects would become transparent. The fourth-dimension theory of transparency offers an interesting parallel with Ferriss' depiction of translucent material in his drawing entitled “Glass,” and crystal structures in the “Night in the Science Zone.” On Gurdjieff and Ouspenskii, see Jacob Needleman and George Baker, eds., Gurdjieff. Essays and Reflections on the Man and His Teaching (New York: Continuum, 1996). On the impact of Ouspensky and Gurdjieff in New York, see James Webb, The Harmonious Circle: The Lives and Works of G. I. Gurdjieff. P. D. Ouspensky, and Their Followers (New York: Putnam, 1980). For a discussion of ideas related to the concept of the fourth dimension, see Linda Dalrymple Henderson, “Mysticism, Romanticism, and the Fourth Dimension,” in Maurice Tuchman et al., The Spiritual in Art: Abstract Painting, 1890-1985 (New
The state of this page, especially its less than perfect condition as indicated by a torn off corner, is aimed to corroborate Ferriss’s suggestion about the manuscript’s “ancient origin.” This missing piece of paper is supposed to explain the incomplete sentence that the page bears. Though it is tempting to propose that the missing last word on the page should be “God,” the space between the word “of” and the edge of the page is too narrow for those three letters to fill the void and complete the statement.

Furthermore, looking closer at the layout of this page, without reading the text, one sees that the words that are present on the page are symmetrically lined and very even. Actually, the typographic arrangement of the words and of the diagrams is complete and in equilibrium. Order, symmetry, and balance prevail on the visual level. When one glances at the page without reading the text, nothing seems to be missing – except the torn off piece of paper. From the typographic point of view, and visually, the page is very harmonious and intact. If the word “God,” or indeed any other word, should appear on this page, it should be then – following the pattern of the layout – placed in the center of the bottom of the page, which offers an ample amount of space. Therefore, the torn off, or missing piece of the page, does not really distort the visual symmetry, but serves rather as a metaphor, which enriches this image with an allure of antiquated valor, of an aged

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Ferriss, *The Metropolis of Tomorrow*, op. cit., 142.

Similar interpretation has been suggested by Willis in “Drawing Towards Metropolis,” op. cit., 172.
incunabulum which was miraculously saved from some disaster. As Ferriss writes: "The manuscript was partly mutilated; it may be of quite ancient origin. Was it simply a curio? Or did it contain a clue?" At the same time, this removed piece of paper plays an ambiguous role. On one hand, it obfuscates the sentence’s meaning by presenting an unfinished syntax. On the other hand, it opens the possibility for various conclusions to be reached by the readers. As Ferriss stated in the commentary, the incomplete sentence offers to the readers and viewers whatever one "may be inclined to give."

Ferriss, by adopting this construct, squarely situates himself within the humanistic tradition, where the architect/designer is perceived as a mediator who is able to convey the divine cosmic order onto the earthly realm by placing man as the main referential point – but curiously Ferriss forgets to elaborate on many practical aspects of human life; as noted shelter, work and leisure are the most striking omissions. By creating a rigidly organized city oriented toward the triumvirate of commerce, business and art, Ferriss evidently neglected to accommodate housing, the basic needs of the majority of its citizens. On the other hand, Ferriss’s construct, based on playing with references to a divine power behind the projected city and to a tradition going back to "ancient origins" as his project’s source, reinforces his conservative stance with regard to the planning and envisioning of the future city. The urban form he presents follows a tripartite,

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99 Ferriss, *The Metropolis of Tomorrow, op. cit.*, 142.
100 Ibid.
symbolically charged, rigid pattern, with little if any room for intervention to modulate its divisive character. Moreover, the role that Ferriss prescribes for the architect is not as active agent in shaping the human environment, but rather as a service man, a conduit vessel for a “higher” power.

The inclusion of both the image of the map and a text claiming to reveal the authorship or the inspiration of the whole project in Ferriss’s *The Metropolis of Tomorrow*, has an old precedent in the book *Utopia* by Sir Thomas More, the paragon of imaginary writing. The frontispiece to More’s first edition of 1516 juxtaposes a map showing the island of Utopia with a sample of its alphabet (Fig. 64), both of which reveal a sense of reality mixed with poetic riddle. “The Utopian Alphabet” in More’s book is accompanied by a poem in Latin, which reads in English:

Utopus it was who redrew the map,
    And made me an island instead of a cape:
Alone among nations resplendent I stand,
    Making virtue as plain as the back of your hand –
Displaying to all without argumentation
    The shape of a true philosophical nation.
Profusely to all of my own store I give;
    What is shown me that’s better, I gladly receive.\(^{101}\)

The author\(^ {102}\) of these words also writes: “There is, indeed, a little scrap of verse, written in the Utopian tongue…. I’ve prefixed to it an alphabet of the Utopian language,

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and also added to the volume a few little marginal notes." Thus, the concept utilized in More's *Utopia* -- to present an additional page with written information that had been discovered by the author only after the manuscript was completed -- is repeated by Ferriss in his book with striking correspondence. Perhaps this reference to the representation of the beacon of utopia as "the best state of a commonwealth," that was to be found somewhere between the Old and the New Worlds, can be read as pendant to More's quest. Offering a similarly ambiguous specification regarding the exact location of the envisioned city, Ferriss nonetheless leaves no doubt that this better urban environment can be found only in the New World, that is in America.

**Critical Reception**

The pages of the contemporary American press bear witness to the broad attention that Ferriss's *The Metropolis of Tomorrow* received both in professional circles, as well as in the popular domain. The first reviews were published in December 1929, and the

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102 The author of these words was supposed to be one Peter Gilles, who also claims credit for the marginal glosses in *Utopia*. However, on the title page of the 1517 edition, they are attributed to Desiderius Erasmus. Indeed, More entrusted the publication of his work to his friend, the philosopher Erasmus, sending him the text and prefatory materials in September 1516. By November, Erasmus had enlisted Thierry Martin of Louvain to print it, and in December the first copies were distributed.
104 Ferriss collected some of these reviews in a scrapbook. He also typed up several pages of complimentary excerpts. All his material is kept in the Hugh Ferriss Collection, by the Avery Architectural and Fine Arts Library, at Columbia University in New York, Box 7. The material that Ferriss gathered over the years represents exclusively a positive critical reception of *The Metropolis of Tomorrow*. For a more critical reviews, see below.
majority of them appeared in the early 1930s. However, none of the commentators mentioned the stock market crash of October 24, 1929, as if the powerful evocation of the future city had little in common with the grim reality of the moment.

Among the reviewers who applauded the book, a large number admitted being overwhelmed by the grandiose scale of Ferriss’s images, but at the same time claimed to be completely convinced by his argument. "This book is a gorgeous feast... appealing as work of art magically stirring as a prophecy" claimed Albert Guerard, for whom the architect’s illustrations were "no mere renderings, but compositions of extraordinary charm and power." Still another writer assured that he “had yet to see a book in which the depth of genuine poetic feeling, philosophic grasp, and scientific practicality were mysteriously merged.” Ferriss’s conviction that the skyscraper still maintains its status as a symbol of economic advancement and of human aspiration was shared by those critics who admired his book as being “typical of the marvelous progress of American life.”

The second group of critics expressed some hesitancy because of the gigantism and compactness that Ferriss’s city augured. They agreed, however, with the author that further centralization was inevitable, and thus recognized his vision as an ambitious

solution to an unavoidable process looming on the horizon, again not realizing that the building boom was already halted by the Wall Street Crash. Thus, while R. F. Duffus admitted: “Monster cities and monster buildings are already here. They are being built by forces not yet under control. The task is to subdue them,” the others found solace in the fact that, following Ferriss’s prognosis, “[o]nce more, as in the age that produced the Gothic cathedrals, buildings are to uplift, ennoble, inspire. In the new Golden Age architecture is again to become predominantly an influence for the betterment of men.”

Some observers noticed the scarce occurrence of city dwellers in all of Ferriss’s renderings of the modern urban conglomerate. Claude Bragdon pointed out: “one may turn page after page of The Metropolis of Tomorrow without coming upon a single human figure: here is pictured a world from which humanity appears to have perished, done to death by the successful realization of its own egregious dream.” Actually, in his depiction of the city and its buildings, Ferriss does not totally avoid the representation of human protagonists. However, when the human figure is included in the picture, it is

107 Paul Volenti, “The Metropolis of Tomorrow by Hugh Ferriss.” Quoted from an undated clipping, Ferriss Collection, Avery Library. Box 7.
109 Unknown author, American City, (January 1930). Quoted from a clipping, Ferriss Collection, Avery Library. Box 7.
110 Claude Bragdon, Frozen Fountain, op. cit., 33. A few years later Bragdon would call Ferriss’s renderings “Piranesian prisons,” in which man is swallowed up by a machine that is infernal because it is irrational. Claude Bragdon, “Skyscrapers,” in idem, The Arch Lectures of 1940, (New York, 1942), 103-15. I suppose Bragdon’s last comments, on the irrationality of the infernal machine found in Ferriss’s work, as written in 1940, resonate with, and project anxieties caused by World War II and its harrowing use of machinery and technology.
totally dwarfed, serving the function of *staffage* to animate and reinforce the large scale
of the massive structures, as shown, for example, in the rendering of the Chanin Building
(Fig. 65). Indeed, Ferriss, in his own remark on people in the city, recognizes the
"squashing" effect of the metropolis on its residents. Describing the urban landscape,
which he aimed to explore, Ferriss wrote:

> [O]n a close scrutiny of the streets, certain minute, moving objects can be
> unmistakably distinguished. The city apparently contains, away down there –
> human beings! The discovery gives one pause. Between the colossal inanimate
> forms and those mote-like creatures darting in and out their foundations, there is
> such a contrast, such discrepancy in scale, that certain questions force their
> attention on the mind. What is the relation between these two? Are those tiny
> specks the actual intelligences of the situation, and this towered mass something
> which, as it were, those ants have marvelously excreted? 

Although Ferriss realized the dilemma caused by the growing incongruity
between city dwellers and built environment, critics like Mumford were quick to accuse
Ferriss of promoting "the monstrous structures, which ... lack both scale and any definite
relation to human purpose."

As expected, Mumford was the leading opponent among the group of writers who
most harshly scorned Ferriss and his book. Actually, all of the adamant critics of *The
Metropolis of Tomorrow* were associated with the regional planning movement, the

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111 The incorporation by Ferriss of human figures as a *staffage* throughout his architectural renderings
brings again yet another correspondence between his drawings and the 19th century American landscape
painting. See my interpretation below.


113 Mumford, “Skyscrapers in the City of the Future,” op. cit.
ideological adversary of the centralized city. Hence, Geddes Smith proclaimed: "Here is the book which is certainly beautiful and is probably vicious – beautiful because of the charm and imagination which Mr. Ferriss has put into his drawings of skyscrapers, vicious because to glorify the American skyscraper is to confirm the thoughtless in a perilous fallacy.""\textsuperscript{114} The unified resistance by Mumford and Smith to propositions offered in \textit{The Metropolis of Tomorrow}, as demonstrated in the aforementioned straightforward attacks in the press, stemmed from their opposition to Ferriss’s political stance.\textsuperscript{115}

Evidently, for Mumford and Smith, Ferriss’s neglect of the problems of housing caused a strong and negative response. After all, these two critics were energetically engaged in the improvement of New York’s housing. Furthermore, both represented the social work community of the city, and through their associates of the Regional Planning Association of America (RPAA), both were linked to Democratic presidential hopeful Alfred E. Smith, the governor of New York.\textsuperscript{116} All of these activities and associations constituted a wide chasm between Lewis Mumford, Geddes Smith and Ferriss, whose loyalties were instead with the Regional Plan of New York and Its Environs (RPNY) -- the opponent of the RPAA -- and who shared the organization’s ideas of urban centralization.

\textsuperscript{114} Geddes Smith, “Lovely Monsters,” \textit{op. cit.}  
\textsuperscript{115} See Introduction, 20, n. 32.  
As mentioned, at the time Ferriss’s book appeared in bookstores, Le Corbusier’s *Urbanisme* of 1925 (*The City of Tomorrow and Its Planning*) was published in New York. Sheldon Cheney, in his conclusion to *The New World Architecture*, issued in 1930, juxtaposed images by both architects, including Ferriss’s “Vista in the Business Zone” (Fig. 66), with Le Corbusier’s “A Contemporary City” (Fig. 67). Cheney wrote:

Let the vision be of a city beautiful, clean-walled, glowing with color, majestically sculptural, with the lift toward the skies; and let it be simple, convenient, sweet-running, airy, and light. ... And we may thank sincerely Hugh Ferriss and Le Corbusier and the others who are putting before us, in imaginative drawings, it may be idealistic, it may be mechanistic, suggestions of what the aspect of that City will be.\(^{117}\)

Cheney, while appreciating Ferriss’s and Le Corbusier’s visualization of the dream of a better city, at the same time appealed to the architects to “forget themselves, forget their traditional prerogatives of being aloof artists, forget their soft indulgences, and for a time serve us, normally, unostentatiously, in our machine-age living-pattern.”\(^{118}\)

It is possible, that the harsh reality brought about by the crumbling economy in the United States had as much impact on calls to be even-minded when planning cities and constructing architecture as did the need to follow the newly emerging age of the machine.\(^{119}\)

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\(^{117}\) Cheney, *The New World Architecture*, op. cit., 399-400. Similarities between Ferriss’s visions and Le Corbusier’s proposals were also noted by Claude Bragdon in *The Frozen Fountain*, op. cit., 34.

\(^{118}\) Ibid., 400.

\(^{119}\) It was during the Depression when Veblen’s ideas, which in the early 1920s called for rational organization under the auspices of engineers, were to be adopted (see note 171 above). Only then, the American technocrats proclaimed that engineers should be given almost dictatorial powers to manage the
How did Krutikov and Ferriss consider the urban form conceptually? Following the time-honoured distinction between the city defined as urbs, that is as a physical unit, and the city as civitas, or human association, it is tempting to broadly apply the meaning of these two concepts to Ferriss’s and Krutikov’s contrasting propositions. We may look at Krutikov’s work as an example of treating the city as civitas. He demonstrated that the value of architecture and new urban forms resided in their relationship to the community. His primary concern was exactly centered on supplying a variety of housing forms. The Soviet architect abandoned conventional city design and proposed the development of new forms of dwellings to forge a new sense of community, aimed at achieving the goal of a classless society. Whereas Ferriss, throughout his book, revealed a particular interest in the material, tectonic side of the metropolis, thus inclining more towards regarding the city as urbs. The American architect demonstrated a country, including urban planning, in an orderly, efficient and planned manner, and indeed some of those trends were implemented by the federal government. The book by Harold Loeb Life in a Technocracy: What it Might Be Like was published in 1933, with the proposition to treat the production and distribution of wealth as an engineering problem. One wonders to what effect the Five-Year-Plan system in the Soviet Union, which by that time started to show its effects upon industrial production, might had have had on the change of heart in America, particularly concerning central planning.

120 This is a rather old distinction, which goes back at least to the fifth century B.C. In the sixth century, Isidore of Seville made an observation: “A city [civitas] is a number of men joined by a social bond. It takes its name from the citizens who dwell in it. As an urbs, it is only a walled structure, but inhabitants, not building stones, are referred to as a city.” For this quote and the discussion of these concepts, see Richard L. Kagan, Urban Images of the Hispanic World, 1493-1793 (New Haven London: Yale University Press, 2000), 9-18.

121 Alan Trachtenberg makes a point that in America the practice of dividing urban space into private parcels for sale, for development or speculation, through the application of the grid led to a rule of profit, delineating the city as “real estate” rather than as communal space. Alan Trachtenberg, The Incorporation of America. Culture and Society in the Gilded Age (New York: Hill and Wang, 1982), 116.
conviction that by reshaping the physical urban environment, the city would better accommodate its primary functions that revolved around business, science and art. What was most evidently absent in his vision of the metropolis of tomorrow, however, was information about habitation and other aspects of community life.122

Despite their differences in approaching the city, however, Krutikov and Ferriss both took part in contemporary discussions aimed at resolving existing urban dilemmas. Both architects delivered equally imaginative prognostics that demonstrated intriguing parallels in their approaches, as well as highly divergent elements. The motivation was similar – improvement or, ideally, elimination of the current ills plaguing urban centers both in Soviet Russia and in America. The means to achieve the goal also paralleled one another – the restructuring of the dominant form (skyscraper), the reorganization of the metropolitan fabric, and the utilization of the newest technology. Although they shared these similarities and although both utilized the technique of fantasy, with scrutiny we can easily demonstrate that the works of these two architects are as far apart as their socio-political affinities.

122 William H. Jordy commented on this neglect: “The entire population of this imaginary metropolis seems to have lived a gloriously decadent penthouse existence replete with martinis and costume balls, as though the milieu of The Great Gatsby had been transported from East and West Egg to Manhattan. Social considerations, except as they affected the limousine set, were nil.” William H. Jordy, American Buildings and Their Architects, vol. 4: The Impact of European Modernism in the Mid-Twentieth Century (Garden City, NY: Anchor Books, 1976), 65. Critics contemporary to Ferriss, such as Mumford and Smith, also strongly hold this omission against him, see above.
However, during the 1920s, both sides of the political spectrum used "the city" as a symbol of progress and as a site for future renewal. Krutikov and Ferriss, with all their enthusiasm and available arsenal of concepts, explored this terrain. Urban form, high structures, technology and organization were harnessed by both as constant reminders of the ideological and economic systems they embodied. This "new urban space" was closely linked to a conception of a modern world in socialist and capitalist systems, however, while in the Soviet Union this promising novelty resided in new social relations, in America a better future was related to business acumen.

I argue that, besides promulgating the contemporary urban debates in Russia and America, respectively, these two projects were also very much informed by the intellectual and political concepts that during the 1920s revolved around the idea of a "frontier." Despite the fact that the Soviet architect conceived the elements of the future city as floating in the air, or rather because of this arrangement, I consider Krutikov’s vision to be strongly grounded in the ideology of the newly established communist state and its impetus towards spreading the Revolution beyond its borders. At the same time, Ferriss’s book resonates with sentiments and anxieties, expressed during the 1920s, about the lost frontier – a frontier whose existence, according to some critics, was a crucial element in shaping America’s democracy and her exceptionalism.123 The future city,

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123 Much has been written about the American frontier and in association with it the notion of the West. Among the many works on this subject, several are pertinent to my analysis: Frederick Jackson Turner,
according to the American architect, although the epitome of civilization, took on characteristics of an unspoiled nature with open spaces and immense mountains.

Consequently, the metropolis of tomorrow that was envisioned precisely as a contained wilderness that could be ordered and systematized (so as to eradicate the wild and chaotic side effects of urbanization such as congestion, crowding, and pollution), in effect became a novel ground for the American new frontier and its expansion.

Indeed, these two countries were both historically expanding their states by pushing beyond their borders. The Soviet Union inherited Russia’s Eastward expansionist problems, and the United States had shaped its own identity based on the notion of conquering the Western frontier. What interests me is this conjunction of Krutikov’s


124 In the United States the “frontier” was transient and temporal. The frontier movement in America was an invasion of a land assumed to be vacant (despite the fact that it was populated by the native peoples), and
and Ferriss's visions with "frontier" discourses that had currency within their corresponding milieus, and how these issues impacted their imagined gorod and metropolis of the future.

was understood as an advance against nature rather than against men. American historians assume that the frontier process began with the English settlement at Jamestown, Virginia, in 1607, and since it depended on the act of taking possession of new land, it went on until there was no more "frontier" available. The year 1890 is generally given as the date marking the close of the frontier, although actually it was gradual, covering the period from 1880 to 1910. While the United States expanded towards the West, Russia historically spread Eastward towards Siberia. Already in the 16th century, under Tsar Ivan IV's campaigns, the road to the East lay opened and unobstructed. Despite Siberia's forbidding environment and rugged terrain, this road proved to be appealing to the Russians, so much so that the vast region was traversed and occupied in a short period of time. By 1639, Russian settlers had already emerged on the shores of the Pacific. The geopolitical entity of the Russian empire was fully formed by the end of the 19th century, and the fact that a large portion of it was located in the Asian realm ensured that Russia's imperial identity would be deeply imbued with an awareness of its position in the East. On the problematics of the "frontier" in Russia and the Soviet Union see, Mark Bassin, "Asia," and Pierre R. Hart, "The West" in Nicholas Rzhevsky, ed., The Cambridge Companion to Modern Russian Culture (Cambridge University Press, 1998), 57-84, 85-102. Of course, the pioneer frontier was central to the United States society as myth, symbol and practical influence on social life in the 19th century and remains a powerful idea in the United States today. John Gould Fletcher made an attempt to compare the effects of the two frontier experiences, that of the Americans and that of the Russians, in idem, The Two Frontiers. A Study in Historical Psychology (New York: Coward McCann, 1930). Donald W. Treadgold analyzed Russia's Eastward expansion in an attempt to identify parallels with North America's Westward movement and demonstrated several similarities. Voluntary migrants were motivated by "the quest for land and freedom." The frontier experience resulted in an ethnic melting pot and, for those who migrated to Siberia, social and economic equality were substantially greater there than in their European homeland. See Treadgold, "Russian Expansion in the Light of Turner's Study of the American Frontier," Agricultural History 26, no.4 (1952), 147-152. A similar thesis is proposed by A. Lohenov-Rostovsky, "Russian Expansion in the Far East in the Light of the Turner Hypothesis," in Walker D. Wyman and Clifton B. Kroeber, eds., The Frontier in Perspective (Madison: The University of Wisconsin Press, 1957), 79-94. There is also Marshall Berman's figurative application of the "frontier" notion into his reading of Nikolai Chernyshevskii's novel What Is to Be Done? (written by this radical critic while he was in prison, published in 1863, and having a huge impact on Lenin). The street in St. Petersburg, on which the hero (who represents the class of "new people," the envisioned avant-garde to be), had transgressed the accepted social codes by everyday life politics, is interpreted by Berman as a "frontier" that is comparable to the mythical American frontier, the site of "natural man." Marshall Berman, All That Is Solid Melts into Air: The Experience of Modernity (New York: Penguin Books, 1988 [1982]).
CHAPTER FOUR

The Metropolis of Tomorrow as the “New Frontier”

The Frontier Hypothesis and the City

According to Richard Wade, American towns have often been perceived, as “the spearheads of the frontier.”¹ The linking of the American Westward expansion to the process of urbanization thus encouraged the idea of associating city-planning activities with the frontier tradition.² It has often been said that 20th century American city planning began with the Chicago World’s Fair.³ It was during this Exposition, that Frederic

¹ In order to persuade settlers to buy land in a locality, the locality needed first a viable city that could provide a convenient market for the farmer’s crops and a source of credit, supplies, and services. Therefore the American city was a kind of double speculation: the effort to lure a critical mass of capital and skills to a speculative urban centre in order to open up the surrounding territory for speculative sale as farmland. Richard C. Wade, The Urban Frontier: The Rise of Western Cities, 1790-1830 (Cambridge, MA: Harvard University Press, 1959), 1. As Sam Bass Warner, Jr. explained, in the United States the ideal of “land as civil liberty” and the autonomy of the land’s owner was linked to the freedom to speculate on both farm land and urban lots for future gain, see idem, The Urban Wilderness: A History of the American City (Berkeley: University of California Press, 1995), 16; and as Richard Hofstatder stated: “What developed in America was an agricultural society whose real attachment was not to the land but to the land value,” see idem, The Age of Reform (New York: Vintage, 1955), 41. Additional sources include David Allan Hamer, New Towns in the New World: Images and Perceptions of the Nineteenth Century Urban Frontier (New York: Columbia University Press, 1990); John Reps, Town Planning in Frontier America (Columbia and London: University of Missouri Press, 1980); John Reps, Cities of the American West: A History of Frontier Urban Planning (Princeton: Princeton University Press, 1979).


³ Seymour I. Toll, Zoned American (New York: Grossman Publishers, 1969), 118. As already mentioned (see Chapter One, note 6), the city of Chicago, the site of the Exposition in 1893, turned out to be of significance to the history of urban planning in the United States. Daniel Burnham, the Chicago architect,
Jackson Turner, presented a paper entitled “The Significance of the Frontier in American History,” at a meeting of the American Historical Association. For Turner, the end of an historic epoch had been reached when the 1890 superintendent of the census announced the frontier line no longer existed. “Up to our own day,” he wrote, “American history has been to a large degree the history of the colonization of the Great West. The existence of an area of free land, its continuous recession, and the advance of American settlement westward, explain American development.” Turner argued that the vast territory in the West, and its continuous disappearance under the Westward march of settlement, explained the development of the American nation. According to Turner, the frontier was

announced in 1910 that “[t]he inception of great planning of public buildings and grounds in the United States was in the World’s Fair in Chicago. ... Since then every considerable town in the country has gone into this study.” Daniel H. Burnham, “The City of the Future Under a Democratic Government,” of 1911, cited in John W. Reps, The Making of Urban America (Princeton: Princeton University Press, 1965), 497. As Burnham noticed, in general, Americans admired the gleaming white plaster ensemble of harmoniously grouped buildings, lagoons, and ordered spaces, all laid out on an axial plan, and were overall very impressed by the “beauty of its arrangement.” Indeed, the White City, as the site of the Chicago’s World’s Fair was called, began the City Beautiful movement in America. Its concern for the appearance of the city and for the urban entity as a monument of grand boulevards and artistically composed civic centres retained vitality long after American city-planning ideas had turned to the social aspects of urbanism. Yet, many of the modernist critics were convinced that the White City had a rather negative impact on the evolution of American architecture and city planning. Henry-Russell Hitchcock, in his 1929 Modern Architecture, called it “the white plague,” while Lewis Mumford was convinced that “[s]o low had American taste sunk in the generation after the World’s Fair that people habitually characterized as an advance what was actually a serious retrogression.” Henry-Russel Hitchcock, Modern Architecture: Romanticism and Reintegration (New York: Payson and Clarke, 1929), 110. Lewis Mumford, The Brown Decades: A Study of the Arts in America, 1865-1895 (New York: Harcourt, Brace, 1931), 64.


5 Ibid., 1.
responsible for shaping the American character.\textsuperscript{6} Turner further argued that the frontier had a far-reaching influence on the American mind. He described this mindset as coarse, but sharp and curious, a mind restless and full of nervous energy and equipped to deal with material things.\textsuperscript{7}

In stressing the disappearance of the frontier, Turner indicated that the nation's future could no longer be sought within the area of an expandable borderline or even in the country's farms and villages. Turner's sentiment of 1893 was echoed by Edward Bellamy, the American writer of utopian novels, who pronounced: "There can be no more worlds to be discovered, no fresh continents to offer virgin fields for new

\textsuperscript{6} According to Turner, on the frontier, along the raw edge of civilization, a man became free, and resourceful, and out of everyday struggle he became a new kind of man. It was an experience, which worked strongly toward nationalizing the country by generating demands for internal improvements, tariff protection for agricultural products growing in the frontier's wake, and railroad development. Most importantly, Turner was convinced that the frontier promoted democracy. Together with democracy the frontier fostered individualism. Turner suggested that the wilderness on the frontier cast its inhabitants into a primitive social organization, based not on government but on the family. The relationship created a frontier hatred of public controls. However, the individualism, which Turner admired for its respect of freedom, also had an abusive side. He suggested that when this individualism was involved in government it led to financial irresponsibility, and expressed itself in wild speculation. Overall, Turner's ideas were rather ethnocentric and nationalistic, and as Patricia Nelson Limerick points out, Turner's apparently unifying concept of the "frontier" had arbitrary limits that excluded more that they contained: "English-speaking white men were the stars of his story, Indians, Hispanic, French Canadians, and Asians were at best supporting actors and at worst invisible. Nearly as invisible were women, of all ethnicities. Turner was also primarily concerned with agrarian settlement and folk democracy in the ... Midwest. Deserts, mountains, mines, towns, cities, railroads, territorial government, and the institutions of commerce and finance never found much of a home in his [1893] model." See Nelson Limerick, \textit{The Legacy of Conquest: The Unbroken Past of the American West} (New York: Norton, 1987), 21.

\textsuperscript{7} Turner, "The Significance of the Frontier," \textit{op. cit.}, 37.
ventures."8 Evidently the close of the 19th century, and the closing of the frontier created a void for Americans, initiating a crisis of identity.9 The question is, what then was perceived as a fitting antidote? When Americans lost touch with the challenges of rural life and the frontier, they re-oriented the progress of their civilization along the lines of democracy and economic development, vested in various areas, such as nationalism and imperialism,10 or in terms of the city. The reorganization of the city, in fact, became a new frontier.

This was seconded by Adna F. Weber, who completed his doctoral dissertation on urban development at Columbia University, entitled The Growth of Cities in the

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10 Throughout the 1890s, themes of nationalism began to spring forward. They were expressed in fears of labour leaders and foreigners within the country, and were overlapped with American imperialistic ventures overseas in the Pacific Islands and Latin America. It was during the nineties when the United States invaded Hawaii (1893), and the American troops were sent to the Philippines (1898). This was followed by American markets and interests shifted to Cuba (1897), and Puerto Rico (1898). It was expected that economic expansion into world markets would restore American economic vitality and boost democracy against incipient social unrest. With self-righteous superiority and economic militarism, capitalist moralists were convinced that America had been called upon to spread a civilization of peace and prosperity to the understratum of society across the world. Thus, while economically in pursuit of new markets, America used the ideological gloss of a Christian duty to civilize and uplift the people of backward nations. Economic expansion and American ideological supremacy overseas were equivalent to civic improvements at home including that of the urban sphere. Indeed it was the development of a network of world markets that brought an end to the economic depressions of the 1890s and allowed for the implementation of urban improvement schemes in the years to follow. See, William Appleman Williams, The Contours of American History (Chicago: Quadrangle, 1966), 18-89; Charles Beard and Mary Beard, The American Spirit (New York: Collier, 1942), esp. chapter 10 "World Mission Under Arms," 550-578; Eldon Kenworthy, America/Américas: Myth in the Making of U.S. Policy Toward Latin America (University Park, PA: Pennsylvania State University Press, 1995).
Nineteenth Century, in 1899, when he stated that America is the land of "mushrooming
cities." The main domestic stage for playing out the American future had shifted to the
city. It was there that all the American restlessness and drive were to find new outlets.

Although Americans thought of themselves as a rural frontier people following
the Jeffersonian ethic of idealizing agrarian virtues, by 1893 it was thus generally
accepted that they had reached the end of Westward expansion, and now found
themselves facing a new, this time urban, wilderness. The rapidly spreading and growing
cities, with their industrialized conditions and exacerbated social tensions were often
regarded as wild but un-natural and inhumane places populated for the most part by
newly arrived immigrants. As long as the rural order was considered to be the source of

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11 Quoted in Gerald D. Nash, Creating the West: Historical Interpretations, 1890-1990 (Albuquerque: University of New Mexico Press, 1991), 160. In the three decades following the outbreak of the Civil War in 1861 statistics supported Weber's research. In 1860, 25 per cent of the population of 31 million lived in urban areas, by 1893 the population had more than doubled and 35 per cent resided in cities. The 1920 census will confirm Weber's observation of the major demographic trend since the American Revolution; a majority of American families had left the countryside and moved to the city, or, in the case of the immigrants, newcomers settled in the city. Of the 106 million people in 1920, 52 per cent resided in cities and towns of 2,500 or more. Thus, by the early 20th century, the United States had become an urban nation. That movement, from the hinterlands to the cities, accelerated during the 1920s. By 1930, 69 million people of the 123 million inhabitants in America resided in urban areas, compared to 54 million who lived in the countryside. Because the United States severely restricted immigration after 1921, and because the birth rate dropped sharply among middle-class families in the 1920s, the population growth rate during the decade of the twenties slowed to the smallest rate recorded since the nation began taking censuses in 1790. While national population growth rates slowed, the rate of urban population growth accelerated, especially in the America's largest cities. The five American cities whose populations exceeded 1 million people in 1920 – New York, Chicago, Philadelphia, Detroit, and Los Angeles – altogether increased their populations by 50 per cent during the 1920s. U. S. Bureau of the Census, Historical Statistics of the United States, Colonial Times to 1957 (Washington, D. C.: Government Printing Office), 1960.

12 For a discussion of Thomas Jefferson's views on the subject, see Henry Nash Smith, Virgin Land: The American West as Symbols and Myth (Cambridge, MA: Harvard University Press, 1950), 133-44; Morton
national vitality, spiritual renewal, and democratic control, the American city would often appear morbid and artificial, and as such it was approached with hostility and embarrassment. When Americans reached the end of Westward expansion and were finally forced to turn inward upon themselves, it was with bitterness and confusion that

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13 Morton and Lucia White in their *The Intellectual Versus the City, op cit.* written in 1962, presented an argument that American intellectuals have expressed a good deal more ambivalence and animosity toward the city than appreciation and hope. According to the authors there were intellectuals who differed widely in their response to the city, but shared the disenchantment that the city subverted values associated with the country’s agricultural past. The Whites presented an impressive list of anti-urban opinions from the end of the 18th century to the 1920s expressed by the American luminaries. They range from Thomas Jefferson to John Dewey and Frank Lloyd Wright. They analyze the many patterns of urban hostility that distinguished Ralph Waldo Emerson from Henry David Thoreau, and Henry James and Henry Adams from earlier thinkers, such as Herman Melville, Nathaniel Hawthorne, and Edgar Allan Poe. However, the attitude of intellectual’s to the city is rather complex, due to various factors and differences, such as personal, class, ethnic and regional. Furthermore, other urban historians argue that the intellectuals were rather alienated individuals who could hardly be seen as being representative of a larger society, who in many ways did not share their opinions. Thus, anti-urbanism demonstrated by the most vocal Americans has obscured the ambivalent attitudes of both liking and distrusting the city as well as affirmation of the city as represented by those who populated the cities. See Charles N. Glaab and A. Theodore Brown, *A History of Urban America* (New York: Macmillan, 1967), 53-54 and Jeffrey K. Hadden, Louis H. Masotti, and Calvin J. Larson, eds., *Metropolis in Crisis* (Ithaca: F.E. Peacock Publishers, 1967), 120-121.

However, since the second part of the 19th century, America witnessed a growing interest and slow positive evaluation of a city, amongst still popular manifestations of the old, traditional agrarian antagonism toward urban settlement, especially among the Populists. In the years following World War I, the “foreign” character of American cities, a perception caused by the large numbers of immigrants settled in urban centres, was considered one of the major liabilities in rural America, the region which was most aroused by the wave of nativist sentiments, the home of Ku Klux Klan, and the initial place of prohibition. The fusion between the traditional agrarian dislike of cities, nativism and the prohibition movement reached a high point in the 1920s at both the Democratic National Convention in 1924 and during the presidential campaign of 1928. In each case it was the presidential candidacy of Alfred E. Smith which triggered a crusade against the city, since Smith was connected with the political machine in New York City, was a descendant of urban Catholic immigrants, and a “wet” (meaning not enforcing prohibition). Francis E. Rourke, “Urbanism and American Democracy,” in Alexander B. Callow, Jr., ed., *American Urban History* (London, New York, Toronto: Oxford University Press, 1973), 426-440.
they observed their disfigured and inhumane cities. Because of the belief that urban society had been abruptly cut off from the harmonies of a natural order, it was held by many that cities could be rejuvenated by inserting the values and ethos of the rural past into the urban fabric.

By 1910 Turner, foresaw new frontiers --"frontiers of the mind" -- that might be encountered and subdued, just as the geographical frontier had been dealt with previously, all for the rejuvenation of American ideals. As Turner stressed the role played by the Westward march of the frontier in American history before 1890, he recognized that during the first decades of the 20th century, the American frontier shifted to large cities, which were to serve as transition zones to another kind of civilization. Being himself impressed by the rapid rise of urbanization in the United States by World War I, Turner turned his attention during the 1920s to the urban dimension of American history, acknowledging the importance of research in this area:

One whose activity has been more continuously in an urban environment would no doubt lay more stress than I have in my published essays on [this] importance. ... I am not sure but more, and perhaps independent attention should be given ... 

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15 Paradoxically, it was in a society that exalted the world of the city and the capitalist accumulation that Turner created his synthesis of agrarian virtue as opposed to urban corruption. Turner apparently continued the tradition handed down from Thoreau and the Transcendentalists (who saw nature as the only remedy for the brutality of industrial civilization), to Frank Lloyd Wright and others after him. In its descent it embraced the Jeffersonian concept of democracy, the Populism of the 19th century, later on the New Deal, and ultimately, the "new conservatism" of the 1960s and 1980s. See Daniel J. Elazar, *Cities of the Prairie. The Metropolitan Frontier and American Politics* (New York, London: Basic Books, 1970).
to the phenomena of great city development and the results and problems in many fields incident thereto.\textsuperscript{16}

In 1920, Turner’s Chicago essay on the significance of the frontier, along with his other studies, were anthologized under the title \textit{The Frontier in American History}. The awarding in 1925 of the Pulitzer Prize for history to Frederick Logan Paxson, for his writing on the American frontier, marked another stage in the continually growing acceptance of the frontier thesis.\textsuperscript{17} The question of the frontier’s disappearance at the end of the 19th century helped define the parameters of public policy debates and shaped the broader cultural milieu of that time. From the turn of the century to the end of the 1920s, many members of scholarly circles agreed with Turner’s observations.\textsuperscript{18} Even as Turner’s hypothesis started to come under attack in the late 1920s from historians who downplayed the centrality of the frontier’s role in American development, the importance of the

\textsuperscript{16} Frederic Jackson Turner, letter to Arthur M. Schlesinger, Sr., April 18, 1922, quoted in Wilbur R. Jacobs, \textit{The Historical World of Frederick Jackson Turner} (New Haven and London: Yale University Press, 1968), 154-5. In 1922, Turner had moved beyond a singular stress on the frontier, and was working on the project entitled “The Significance of the City in American History,” in which he emphasized the role of cities in Western development. This essay was, however, never completed. In Gerald N. Nash, \textit{Creating the West, op. cit.}, 164.

\textsuperscript{17} Paxson received the award for \textit{History of the American Frontier, 1793-1893} published in 1924, the theme he had explored already in 1910 in \textit{The Last American Frontier}. During the early 1920s the critics of Turner’s thesis were few. However the number of people voicing reservations to the concept of the “frontier” were steadily growing. Even Paxson, an avowed Turnarian, had with time become rather cautious. Paxson was perhaps the leading defender of Turner until 1935 (three years after Turner’s death), when he then abruptly changed his views and voiced doubts regarding the impact of the frontier on American history. On Paxson’s change of opinion, see Nash, \textit{Creating the West, op. cit.}, 13, 29-30.

\textsuperscript{18} Turner’s frontier hypothesis enjoyed broad acceptance especially between 1890 and 1920. In part, this was due to the fact that this generation was keenly aware of the momentous changes engendered by the transition from an agrarian to an industrial and urbanized society which took place in their own lifetime. Thus, it was understandable that they felt a great sense of loss for an agrarian past, and a feeling of
frontier and the significance of its closing remained standard elements of American thought.\textsuperscript{19} Since then, it has had an impact on envisioning the future of America.\textsuperscript{20}

Turner’s text, combined with the intellectual discourses in professional circles, instigated an upsurge of publications engaged with the frontier rhetoric. During the 1920s, this rhetoric was often applied to various cultural aspects of American life.\textsuperscript{21} The most characteristic use of the frontier metaphor in this period was the largely sentimental apprehension about an unfamiliar future. The strong sense of nostalgia demonstrated both by historians (like Turner) and non-historians alike was the result of this new historical situation.


\textsuperscript{20} The theme of the frontier seems to be a perennial metaphor in American culture as a lasting vestige, or a painful reminder of the past, depending upon one’s ideological orientation. Although, as Richard Slotkin reminds us, the “frontier myth” was developed by and for America, that was “a colonial offshoot of Europe, agrarian in economy, localistic in politics, tentative as to nationality, and relatively homogenous in ethnicity, language, and religion,” yet this myth has been most impressively set forth following the closing of the Wild West, “in and for an America that is a preeminent world power, urban-centered and fully industrialized, centralized in government, and heterodox in culture.” Richard Slotkin, \textit{The Fatal Environment: The Myth of the Frontier in the Age of Industrialization, 1800-1890} (New York: Atheneum, 1985), 15-16. Since the end of the New Deal, the “frontier” has become something of a cliché standing for improvement, promise, ingenuity and progress. Both sides of the political spectrum seem to cash in on its utilization. Thus, president Kennedy called for a “New Frontier” in 1960 (the country, he suggested, could reach new heights, achieve new greatness, and did not to have to settle for “Eisenhower moderation”). Republican Ronald Reagan, and Democrat Edward Kennedy, both drew on this idiom in their respective nominating conventions in 1980, and Reagan went on to laud the benefits of rugged pioneer individualism throughout his two terms. Paul A. Carter discusses the very different uses of the frontier concept by these two men in idem, \textit{Revolt Against Destiny: An Intellectual History of the United States} (New York: Columbia University Press, 1989), 18.

\textsuperscript{21} On the one hand, the popular magazines of the period were disseminating and marketing for popular consumption the “spirit” of the frontier and of the Old West. Cowboy stories and accounts of pioneer adventures abounded in publications such as \textit{Scribner’s}, \textit{Harper’s} or \textit{American Mercury}. On the other hand, the frontier theme was exploited also in academic circles. According to Ray Allen Billington and Warren I. Susman, during the 1920s, the notion of the frontier was particularly applied in the fields of religion and literature, as for example by Peter George Mode in \textit{The Frontier Spirit in American Christianity} (1923), Ralph L. Rusk’s in \textit{The Literature of the Middle Western Frontier} (1925), and by Lucy Lockwood Hazard in \textit{The Frontier in American Literature} (1927). Ray Allen Billington, \textit{America’s...
effort to retain what was considered to be the picturesque glamour and glory of the Old West. Some critics lamented the passing of the frontier and urged a search for new myths to replace it.  

Others condemned the “taming” of the West and sought the preservation of its attributes. Finally there were those writers who regarded Turner’s hypothesis as faulty and resented his stress on the frontier as a single causal force in molding American history. Extrapolating from this context -- that Turner’s ideas made an impact on American intellectual life during the 1920s, and upon examination of Ferriss’s project -- I argue that Ferriss’s vision throughout The Metropolis of Tomorrow was strongly informed by the frontier paradigm. Consequently by unpacking Ferriss’s appropriation of the frontier rhetoric, I aim to scrutinize the function it played within the cultural milieu of the 1920s.

From “City on a Hill” to “City as a Mountain”

The main premise of Ferriss’s publication was to suggest a futuristic image of the city as a response to existing and projected tendencies in urban America. His proposition, which was optimistic in outlook, was presented as a remedy to prevailing urban ills, a

22 Harold Waldo, “New Wests for Old,” Bookman LI (June 1920), 396-400.
23 Duncan Aikman, ed., The Taming of the Frontier (New York: Minton, Balch, 1925). The volume includes texts by ten authors who while “saluting to a passing spirit” applaud the native epic underscoring its virtues - extreme individualism, recklessness, courage, and even disdain for social ties and obligations.
solution to cure the problems brought on by rapid urban growth, indeed a motif shared by other authors like Le Corbusier, or earlier, Ebenezer Howard. The methodological somersault employed by Ferriss, of using current dilemmas related to the “vanished frontier” as a point of reference for projecting an improved future, actually had its precedent in publications that were outside of an architectural, or in fact, any other cultural scope. For example, *The New Frontier* was written by a banker, Guy Emerson, who approached the future by addressing “modern problems.” In this volume the author/businessman presented a bright outlook for America’s tomorrow that could only be achieved by re-creating new frontiers:

> And we still have our frontier. It is a frontier industrial, financial, commercial, political, social, educational, artistic, diplomatic, religious. ... If we do not “forget and abandon [the old frontier’s] strong lessons, its great hopes, its splendid dreams,” if we do not lose our grasp upon its vigor and common sense ... we shall find that we are measurably nearer the settlement of the new wilderness, that we are steadily pushing forward the fighting line of the New Frontier.

For Emerson, the qualities of the frontier were still shaping the nation’s development, and chief among those attributes was individualism, a trait perceived as needed to settle “the new wilderness.” Indeed, the qualities of woodland wilderness and

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heroic, unbridled, pioneer individualism served as an antidote to the technological
(impersonal) advances of the 1920s and the anxieties it triggered. Many Americans felt
uneasy as they experienced the transforming effects of population growth, economic
change, and urbanization. On the one hand, these developments were welcome steps in
the direction of progress, but on the other, they also raised fears about the passing of
frontier conditions, the loss of national vigor, and the eclipse of the individual in mass
society. 27 As a result, America's modernization sparked apprehension about the future
and a tendency to cling to a seemingly more virtuous past. Emerson, however, saw no
need to look backward or to temper frontier individualism in a closed frontier
environment. For him, the "physical frontiers" of America might be gone, but "the great
frontier of American character" was still alive and well, and the only concern was
keeping it unbridled and unhampered. According to Emerson, the frontier spirit will
endure because the physical frontier was easily replaced with the new frontiers of
business enterprise, calling up a vast expanse of new terrain. 28 This very point of view
was shared by Ferriss.

26 Ibid., 33-34.
In Ferriss’s city, business activities, which the architect envisioned as dominant, were allocated the largest area, that of the “Business Zone.” 29 As well, the hierarchy that he introduced throughout the book, and represented on the map of the city, prioritized business ahead of the arts and sciences. In the imagined city, business was supposed to oversee the government and its tripartite functions: legislative, judiciary and executive. By this arrangement, Ferriss not only announced a preferential position assigned to business in the future, but he also reinforced the existing laissez-faire system. What is neglected, however, is attention to residential areas and housing.

Emerson’s optimism and confidence concerning America’s future was picked up by President Herbert Hoover, who lauded the individualistic pioneer spirit that had been nurtured on the frontier. In 1922, in his book American Individualism, Hoover acknowledged that since the “vast plains of the West” had been settled, new social conditions appeared that secured the frontier existence: “There will always be a frontier to conquer so long as men think, plan, and dare. ... The days of the pioneer are not over.”30

I would argue that it is precisely the city, as designated by Ferriss, that functions as the new locus for playing out the tensions and possibilities offered traditionally by the

Western frontier. Historically, tensions were caused by a shifting border between the cultivated and the savage. In Ferriss’s proposition, it is the future city that is transformed into the new frontier by embodying the concept of a limit that must be continuously advanced. However, the future metropolis, that stretches “as far as the eye can reach” and punctuated by towering buildings, does not represent decentralization, but rather, it exemplifies the drive towards even further “centralization.” The skyscrapers, “very many of them,” as Ferriss asserts, punctuate the widely laid-out cityscape and contribute to this exercise of “concentration” by testing the limits of vertical expansion.

Throughout his book, Ferriss evokes the future metropolis as a site recalling nature’s wonders. He invites the audience to investigate the imaginary metropolis by joining him in turning “our binoculars” in the direction of high towers massively looming at the centre of the city, and to scan the distant landscape. By offering this activity,

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31 Ibid., 109.
32 Ibid., 59.
33 Ibid., 109.
34 Ibid., 59.
35 The first binocular instruments date back to around 1645, but the development of binoculars in their modern form seems to have begun only in the 1820s. See the article “Binocular Instrument,” The Encyclopedia Britannica, 11th ed., 29 vols. (Cambridge, England, 1910-11), vol. 3: 949-51. The binoculars, as the optical instrument that Ferriss incorporated into the exploration of the city, can be interpreted as a technological “extension” of a human body that amplifies its perceptions/sensations. They are there to heighten the productivity and efficacy of the viewer. Therefore, the observer is constructed as engaged in surveillance and a performative gaze while being equipped with a technological tool. From the 18th to the 20th centuries, science continually expanded the realm of the visible through measurement, representation, and revelation, using telescopes, microscopes, thermometers, X rays, photography, cinema,
Ferriss, actually asks the onlooker to join him on a modern-day adventure trip, and thus transforms the reader/viewer into an armchair tourist.\textsuperscript{36} Indeed, this sense of outdoor exploration is reinforced by Ferriss in revealing the impact created by the initial encounter with the future city. In the first paragraphs to “An Imaginary Metropolis” he writes that “[t]he first confirmed impression of the city is [that] of a wide plain, not lacking in vegetation, from which rise, at considerable intervals, towering mountain peaks.”\textsuperscript{37} Upon closer inspection what appears is the further recognition that “each peak, so to speak, is surrounded by foothills.”\textsuperscript{38} It is therefore apparent that the more the viewer

and digital modeling. Barbara Maria Stafford’s observations related to the diversity of visual culture in the 18\textsuperscript{th} century, seem just relevant to the 19\textsuperscript{th} and 20\textsuperscript{th} centuries: “The extension of vision permitted a new form of travel. Opaque depths were opened up, becoming transparent without the infliction of violence. The veil of the invisible was gently and noninvasively lifted. The eye could easily voyage through and beyond the densities of a plane, or silently journey beneath the stratified level.” See Barbara Maria Stafford, \textit{Body Criticism: Imagining the Unseen in Enlightenment Art and Medicine} (Cambridge, MA: MIT Press, 1991), 343. Binoculars can also be compared to other technological achievements centered on vision that gained popularity in America particularly since the end of the Civil War (1865), such as the photographic camera and later the movie camera, which both played a role in the revolving frontier story. Thus, Theodore Roosevelt, for example, was promoting a photographic camera as a substitute for a rifle in a frontier-less America. According to him: “The chief attractions [of the wilderness] lie in the physical hardihood for which the life calls, the sense for limitless freedom which it brings, and the remoteness of wild charm and beauty of primitive nature. All of this we can get exactly as much in hunting with the camera as in hunting with the rifle.” Theodore Roosevelt, introduction to A. G. Wallihan, \textit{Camera Shots at Big Game} (New York: Doubleday, Page, 1901), 5. Quoted in Peter J. Schmitt, \textit{Back to Nature. The Arcadian Myth in Urban America} (New York: Oxford University Press, 1969), 146. Regarding the association between the movie camera and the frontier, as it happened the fading of the frontier coincided with the first motion pictures and the evolution of the Western genre to a feature-length film by the 1910s. See Mary Lea Bandy, “The American Place. Landscape in the Early Western,” in John Elderfield, Peter Reed, Mary Chan, and Maria del Carmen González, eds., \textit{ModernStarts: People, Places, Things} (New York: The Museum of Modern Art, 1999), 280-289.

\textsuperscript{36} Travel provides the analogy for an evocation of a spatio-temporal continuity linked to a utopian dedication to “progress.”

\textsuperscript{37} Ferriss, \textit{The Metropolis of Tomorrow, op. cit.}, 109.

\textsuperscript{38} Ibid., 110.
looks around the urban centre, the more he/she is inserted in a man made environment that *is* like nature.\(^{39}\)

Via this strategy, Ferriss not only collapsed the dichotomy between the civilized space identified with the metropolis into the wild area usually associated with nature, but he designated the future city as the mythopoeic arena of the new frontier. As such, the metropolis of tomorrow would fill the void left by the vanished historical process of the Westward movement by taking on its historical function in the shaping of America’s uniqueness. It was, after all, the conquering of the wilderness that was perceived as a conditioning factor in the country’s mastering of its ingenuity, and the experience which stood on a symbolic level for moral renewal and spiritual refreshment. In other words, the city imagined by Ferriss was identified as organized nature, a wilderness reformed, in effect the site of a new frontier. As the 19\(^{th}\) century American painting converted frontier life into a national idiom of prosperity and promise, so Ferriss, by transforming the city into a site of the new frontier, re-invented and re-invested urban space with hope and abundance.

Ferriss’s observations about the city are a testament to his desire to saturate the urban space with a frontier identity. Through his arrangement of images and textual

\(^{39}\) Barbara Novak’s observations on the sublime in the 19\(^{th}\) century American landscape painting, seem to be a fitting appendage to Ferriss’s commentary: “For the vast expansive prairies, the immense extensions of space, the awesome mountains, the forbidding and majestic scale that characterized the varied landscape of
commentary, we trace his interpretation of "evolutionary progress" occurring between the man made environment and that of the wilderness. The second part of the book, the content of which deals with contemporary urban trends, opens with the image "The Lure of the City" (Fig. 68), which is reminiscent of the traditional division between the country and the city. The illustration represents, according to Ferriss, the romantic imagination of a "rural youth who is ever arising to his dream of 'the big city.'" 40 This young man, depicted as a diminutive figure in the foreground, faces a looming skyline above him and his modest hut, an awesome metropolis rendered in large scale and brightness. This yet unformulated mass of buildings emerges like an apparition that threatens to overwhelm the single dweller of an unassuming cabin. The polarity between the horizontal foreground covered by darkness and depicting a scarcely inhabited area, and the vertical spaces composed of a shiny wall of massive buildings, makes the constructed separation between these two realms seem insurmountable. However, the "wide plain" depicted on this illustration, as a rural area, an entity that is totally separate from the city in the background, would evolve in the next chapter, and consequently would be transformed into a constitutive part of the metropolis of tomorrow. Thus, in "An Imaginary Metropolis," when Ferriss announces his vision of the future city, this separation between

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40 Ferriss, The Metropolis of Tomorrow, op. cit., 59.

nature and urban area would cease to be prominent. Instead the identities of both, city and nature, would go through a metamorphosis leading to a more blurred and porous existence. In effect, according to Ferriss, the city and the wilderness in the future would become one.

However, despite the fact that the architecture of the new city is massively monumental, the nature that the metropolis of tomorrow embodies seems to be rather

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41 Manfredo Tafuri’s comment on naturalism and the city in the 18th century seems to apply as well to the effects of the transformation devised by Ferriss’s and his insertion of the picturesque into the city and into architecture. According to Tafuri: “What, on the ideological plane, does reducing the city to a natural phenomenon signify? On the one hand, such an enterprise involves a sublimation of physiocratic theories: the city is no longer seen as a structure that, by means of its own accumulatory mechanisms, determines and transforms the processes of the exploitation of the soil and agricultural production. Inasmuch as the reduction is a “natural” process, ahistorical because universal, the city is freed of any considerations of a structural nature. ... On the other hand, this naturalism has a function of its own, which is that of assuring to artistic activity an ideological role. ... And here it is significant that, ... the crisis of the old system of values was immediately hidden by recourse to new sublimations, rendered artificially objective by means of the call to the universality of Nature.” Manfredo Tafuri, Architecture and Utopia. Design and Capitalist Development, trans. Barbara Luigia La Penta (Cambridge, MA: MIT Press, 1976 [1973]), 7.

42 The ending of the frontier prompted many Americans to seek ways of retaining the influence of the wilderness in modern civilization. For example the Boy Scout movement, established in 1907, with its emphasis on “outdoor life” was one of the many propositions. Another response to the vanishing frontier was the rise of a popular interest in preserving portions of the American wilderness. The preservation trend had actually started a few decades earlier as the result of an American tendency to construct an identity in relation to the wilderness, and the realization that this wilderness was steadily eroding. Consequently, in 1864, despite the Civil War, Congress passed an act to protect the Yosemite Valley in the California Sierra Nevada, and in 1872 the North-West area of Wyoming was designated as Yellowstone National Park. The rapid growth of the preservation movement reached its climax after 1910. In 1916, the National Park Service Act declared the parks’ mission to both preserve nature and facilitate public recreation. Also landscape architects, such as Frederick Law Olmsted and Charles Eliot, suggested that in addition to city parks, patches of wild forest be preserved close to metropolitan areas. Theodore Roosevelt became another wilderness promoter. Through his writing (The Winning of the West of 1889 was reedited in 1924-26 containing texts such as “The Wilderness Hunter,” “The Pioneer Spirit and American Problems,” or “Wilderness Reserves: The Yellowstone Part”), Roosevelt advocated contact with the wilderness. Pioneering was an important antidote to dangers of over-civilization: “As our civilization grows older and more complex,” he claimed, “we need a greater and not less development of the fundamental frontier virtues.” Quoted in Roderick Frazier Nash, Wilderness and the American Mind (New Haven and London:
tamed. This domestication of wilderness, as Ferriss would assure us, is a result of the architect’s intervention. The new urban fabric follows the master plan of the draftsman, who not only designed the city’s parks, its waterways, and the “abundance of planting” on rooftops, but also dispersed them all in an orderly way over the city. Ferriss’s care in highlighting nature’s hallmarks throughout his urban scheme resonates with a plea by Calvin Coolidge in 1924:

[T]he physical vigor, moral strength, and clean simplicity of mind of the American people can be immeasurably furthered by the properly developed opportunities for the life in the open afforded by our forests, mountains, and waterways. Life in the open is a great character builder. From such life much of the American spirit of freedom springs. (my emphasis)

Ferriss, in his imagined city, supplied all these elements that “life in the open” can offer. Hence he projected greenery on high plateaus of roof terraces, and bodies of water that would be distributed from the central Civic Circle “throughout the smaller parks of the city.” Indeed, the phrase “open space” is an operative device often employed by

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43 While Ferriss city takes on the characteristic of nature, Krutikov city, and especially its dwellings, are transformed into a machine. The iacheika (cell) constitutes first the standardized element, this leads to the single block, then to housing project, and finally to the city. Architecture/means of transportation with clarity and coherence is imposing qualities of an assembly line onto the urban structure. In effect each singular element on the line dissolves in the assemblage.

44 President Calvin Coolidge lauded the benefits of life in the great outdoors when addressing the 309 delegates gathered in Washington D. C. during a National Conference on Outdoor Recreation in 1924. Quoted in Nash, The Nervous Generation, op. cit., 81. This meeting was instigated by Theodore Roosevelt, the son of the President, who following the idea that pioneering shaped the American character, and repeating the opinion that the old frontier disappeared, called for outdoor activities that would bring Americans into close contact with nature.

45 Ferriss, The Metropolis of Tomorrow, op. cit., 138.
Ferriss in characterizing the city of the future. Although the new metropolis is highly built and densely populated, there is still room for vast and unobstructed areas where “each great mass is surrounded by a great spaciousness [and] ample vistas.” This open, unobstructed, free space expands even further when oriented upward, following the direction pointed out by the tower-buildings which “rise to a height of a thousand feet from the ground.” This plethora of immense skyscrapers situated all over the metropolis, furnished ample means to satisfy an urge by an urban dweller to breath the “country air”, the symbol of clean atmosphere and of liberty. As previously mentioned, Ferriss indicated as early as 1925, that in the future a person living in the city would not have to leave the metropolis to enjoy the “country air,” but instead would just venture skyward onto the rooftops of the towering buildings.

This straight-up movement can be perceived as a novel type of excursion, in which the traveler would be catapulted vertically. As a result, the traditional trajectory of the railway journey would be shifted ninety degrees from the horizontal to one moving upward, from the zig-zag voyage across the land to an elevated projectile straight up towards new domains. The inhabitants of the city, by taking this skyward journey, while

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46 Ibid., 110.
48 Alan Trachtenberg has written that “[t]he American railroad seemed to create new spaces, new regions of comprehension and economic value, and finally to incorporate a prehistoric geological terrain into historical time.” Alan Trachtenberg, The Incorporation of America, Culture and Society in the Gilded Age (New York: Hill and Wang, 1982), 59. I would argue, that by the same token, the elevator that allowed skyscrapers to be constructed (first, the steam powered elevator, patented by Elisha Graves Otis, in 1861,
staying within the bounds of the metropolis, would nonetheless experience a sensation of
a tourist venturing into the countryside.\textsuperscript{49} Besides ample amounts of fresh air, this
uplifting jaunt -- figuratively and literally speaking -- would furthermore supply a
spectacular "panoramic perception."\textsuperscript{50} This novel expedition skyward, made possible by

\textsuperscript{49} Fredric Jameson writing on culture of late capitalism, particularly on the postmodern urban environment, makes poignant observations on new meaning of the vertical movements inside a commercial building. The elevator ride thus represents technological alienation and the point of disjunction between the body and architecture. In his analysis of the Westin Bonaventure Hotel in Los Angeles, while criticizing its disorientating interior, Jameson reflects on elevators and escalators. For Jameson, both devices not only replaced people's movement, but were turned into signs and emblems of movement proper. "Here the narrative stroll has been underscored, symbolized, reified and replaced by a transportation machine which becomes the allegorical signifier of that older promenade we are no longer allowed to conduct on our own: and this is a dialectical intensification of the autoreferentiality of all modern culture, which tends to turn upon itself and designate its own cultural production as its content." In Fredric Jameson, \textit{Postmodernism, or, The Cultural Logic of Late Capitalism} (Durham: Duke University Press, 1994), 42.

\textsuperscript{50} This term was coined by Wolfgang Schivelbusch in his \textit{The Railway Journey: The Industrialization of Time and Space in the Nineteenth Century} (Berkeley: University of California Press, 1986). Schivelbusch writes about the effects of railway locomotion on the mobile rider/observer. The 19\textsuperscript{th} century saw the expansion of travel and the rise of tourism for the middle classes. As a result, vision was put in motion with the rise of railway journeys. The replacement of a relatively slow coach by a speeding train shifted the rider's attention from the foreground to the middle and background of the landscape. The windowed and enclosed train put the world behind glass and effectively filtered out auditory, olfactory, and haptic sensations of the world beyond the window, forcing the reliance on sight as the only source of information. Following Schivelbusch's observations, I suggest, that the high-reaching skyscrapers, envisioned by Ferriss, built of glass and transparent material, would create for the people living in the skyscrapers of tomorrow similar effects to the participants of the railroad travel. The difference however would be that in the future the movement would be directed vertically via elevators zooming to the top floors. For the impact of the railroad on the American culture see Susan Danly, Leo Marx, eds., \textit{The Railroad in American Art: Representation of Technological Change} (Cambridge, MA: MIT Press, 1988); Albert Boime, "The Metallic Line of Least Resistance," in idem, \textit{The Magisterial Gaze: Manifest Destiny and American Landscape Painting, c. 1830-1865} (Washington and London: Smithsonian Institution Press, 1991), 123-137; Patricia Hills, "Picturing Progress in the Era of Westward Expansion," in William H. Truettner, ed. \textit{The West as America: Reinterpreting Images of the Frontier, 1820-1920} (Washington and London: Smithsonian Institution Press, 1991), 126-33; Novak, \textit{Nature and Culture, op. cit.}, 166-184.
the elevators operating in the skyscrapers,\textsuperscript{51} can be seen metaphorically as an extension and an “improvement” of the railroad, that was traditionally perceived as traversing the land and winding its way through the frontier territories. The towering skyscraper with all its technological apparatus (metal frame, elevator, new building materials), although a machine \textit{par excellence}, represents in the new city a transformed “machine in the garden,”\textsuperscript{52} an operative wonder akin to nature and high as a mountain.

The metaphor used by Ferriss, in which the urban conglomerate is identified with nature’s vast and open vistas, could serve a twofold function. First, it compensated for the “Lost Paradise,” the notion often applied to cities, and secondly, it created an image of a wilderness that via modernization is turned into serene and pleasing nature. In \textit{The Metropolis of Tomorrow}, there are nonetheless views of a landscape/cityscape that at times evoke a threatening and foreboding environment, which as such serve to emphasize the sublime character of the nature/city symbiosis. The sublime achieved by the majesty of scale and size was particularly exemplified by mountain scenery. The frontispiece,

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51 Scott Fitzgerald wrote a vignette of elevator travel in a story entitled “May Day” of 1920. In the story two intoxicated party-goers, who call each other “Mr. In” and “Mr. Out,” are getting into an elevator at the Biltmore Hotel (a high structure built in New York in 1913): “‘What floor, please?’ Said the elevator man. / ‘Any floor,’ said Mr. In. / ‘Top floor,’ said Mr. Out. / ‘This is the top floor,’ said the elevator man. / ‘Have another floor put on,’ said Mr. Out. / ‘Higher,’ said Mr. In. / ‘Heaven,’ said Mr. Out.” Though drunk, these protagonists, by demanding to go “higher,” to “heaven” indicate the strong desire and conviction to defy gravity, while filling the trip with spiritual energy (literally and metaphorically).

52 I am referring here to the concept used by Leo Marx. For him “the machine in the garden” exemplified the “assimilability” of the new technology, occupying the middle ground between wilderness zone and town. Leo Marx, \textit{The Machine in the Garden. Technology and the Pastoral Ideal in America} (New York: Oxford University Press, 2000 [1964]).
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with which Ferriss introduces his book, once again demonstrates this association. Thus, the image called “Buildings like Mountains” (Fig. 69), while being constructed on the principles of the sublime, is a further testimony to the architect’s central motif -- the superimposition of architecture with nature. The composition of this illustration recalls the many images of a majestic American landscape represented by painters and photographers during the 19th century. There is a particular correspondence between Ferriss’s image and the pictures that were taken by the photographers during the Western expeditions and explorations -- such as Tenaya Canyon, Valley of the Yosemite from Union Point (Fig. 70), a photograph by Eadweard Muybridge in 1872, or William Henry Jackson’s Toltec Gorge and Tunnel of c. 1887 (Fig. 71). The affinity of Ferriss’s rendering to Muybridge’s and Jackson’s photographs is especially strong in the arrangement of mountains and trees. The shared emphasis placed by each artist, not on the foliage but on the morphology of the rugged terrain underscores the importance of geology as a scientific discipline conveyed by the photographers and by Ferriss. The

evocation of a metamorphosis where architecture is turned into earth structures, demonstrated by Ferriss in this visual caption, is further reinforced by many other geological references he made throughout The Metropolis of Tomorrow, when describing particular buildings or the whole city.

This correspondence between Ferriss's imagery and the photographic documentation of the wilderness between the Mississippi River and California, which was part of the government-sponsored scientific research expeditions that helped to appropriate the uncharted territories, is yet another marker pointing to the frontier metaphor appropriated by Ferriss. In the same context, Ferriss's map of the future city, which symmetrically spread out from its circular centre, is reminiscent of the maps by the surveyors that typically "indicated a network of diagonals radiating outward from high stations."\textsuperscript{54}

The camera played an important role in the exploratory geological and topographical surveys into the American West. One of the most stunning photographic...
images executed during the American survey expeditions was taken in 1874 by William Henry Jackson, photographer to an expedition led by Ferdinand V. Hayden (Fig. 72). The picture shows two surveyors conducting triangulation operations on the summit of Silverton Mountain in Colorado. These two figures, who stand on a high vantage point with the theodolite, a surveying instrument for taking data to map the extensive, uncharted territory stretching in front of them, serve as a visual prefiguration of another surveyor, Ferriss himself (Fig. 43). In this staged photo, Ferriss, the architectural renderer, is presented on his studio terrace overlooking the urban canyon below. In this shot, while standing in front of an easel, he takes on the persona of a scientist by adopting an assertive stance and sporting a light coloured overcoat that evokes a laboratory jacket. Equipped with a pencil in his hand, Ferriss focuses on his task by adding last minute touches to the image of a high building he has just mapped out on the sheet of paper. He appears to enact or to paraphrase the scientific activities of the frontiersman who, with surveyor’s instruments, according to Albert Boime, “triumphantly carv[ed] an autonomous barony of the wilderness.” In effect, it is Ferriss who, after the frontier is gone, scrutinizes the wild site of the city, and re-organizes it into a type of new, orderly “wilderness,” thus “carving” an analogous dominance over, this time, urban space. The tools are different; however, the task and results are sustained.

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Ferriss actually used the composition with an easel twice in *The Metropolis of Tomorrow*, first in the drawing called “Bird’s-Eye View. The City at Dawn” (Fig. 44), which depicts a scene devoid of any human protagonist, and again in the illustration entitled “Glass” (Fig. 49), which shows a man working at his easel while looking at the colossal translucent structures. Ferriss’s staged photography, when added to this sequence as the third image, reveals again an “evolutionary” progression, a trope adopted throughout *The Metropolis of Tomorrow*. The first picture is the opening illustration to the initial part of the book, “Cities of Today,” and represents the existing urban canyon waiting to be corrected, but still missing the appropriate person to come to its rescue.

The next rendering is a part of the second chapter that deals with “Projected Trends.” Here we witness a person who was not identified by Ferriss in his commentary—a quite likely it represents a contemporary, yet not a specific architectural tenderer. The last image, that of Ferriss at his easel with tools in hands, can be understood as the epitome of an architect cum planner cum scientist cum seer in the process of a creative and totalizing deliverance. It would be, then, Ferriss himself, who is presented as the active agent in transforming the wild, chaotic city, into a novel and “disciplined wilderness.”

Furthermore, Ferriss in this arranged photograph reveals time and again the elevated stance he adopted throughout the entire book. This high vantage point embodies the so-called “magisterial gaze,” the strategy and attitude that signified 19th century American expansionism, coupled with the desire to master the land, a national will to
power, and a belief in Manifest Destiny - all of which apply to the frontier experience.

John O'Sullivan's pronouncement of 1845, which expressed the conviction that the Americans' "manifest destiny [is] to overspread the continent allotted [sic] by Providence for the free development of our yearly multiplying millions,"\textsuperscript{56} seems to be adopted by Ferriss in his design of the future city. However, Ferriss's conviction that urban space should be concentrated and grow larger to accommodate the "multiplying millions" of urban dwellers, while responding to a call to "overspread the continent," did not necessitate that the city be decentralized, but on the contrary, as already mentioned, to be massively intensified. Nonetheless, Ferriss, in his grand scale plan for the metropolis of tomorrow, completely neglected the housing component.

Ferriss's persistent use of the view from above also corresponds to the rhetorical device that Frederick Jackson Turner employed in Chicago in 1893. Addressing his listeners he invited them to climb the Cumberland Gap or the South Pass in the Rockies, and from there to look westward to view the United States "like a huge page in the history of society."\textsuperscript{57} In this way, Turner drew upon literary and pictorial traditions to


\textsuperscript{57} Turner, "The Significance of the Frontier," \textit{op. cit.}, 11, 12.
advance his thesis of an increasing Americanization that resulted from the westward
direction over the continent. In effect, the United States, its population and its institutions
were not imitations of the Old World, but had been radically altered by three hundred
years of pioneering during which the Virgin Land was conquered. Turner wrote: “In the
crucible of the frontier the immigrants were Americanized, liberated, and fused into a
mixed race, English in neither nationality nor characteristics.” In his final words, he
challenged those who would look to Europe for the roots of American civilization. These
strong nationalist overtones, demonstrated by Turner via the “magisterial gaze,” were
later adapted and amplified by Ferriss throughout The Metropolis of Tomorrow. If the
skyline implied the creation of an artificial nature, the Olympian gaze from atop a
skyscraper reminded the viewer that control over the national domain was bestowed on
Americans via Manifest Destiny.

The nationalist ideology was actually absorbed by Ferriss during his university
years. According to his later recollections, Ferriss and his colleagues quite early had
established an interest in imbuing American architecture not only with nationalist
character, but with a character linked to nature. As he claimed, “[w]e [the students]
believed in a more American dream. In the other arts indigenous growth had appeared in
the landscape: oaks like Walt Whitman, elms like Emerson. Why not native oaks and

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58 Ibid., 23.
elms in American architecture? For their cultivation, need we depend upon Paris?” As admitted by Ferriss, these ideas to concentrate his optics inward, on the domestic front, and to abandon Old World models (aspirations reminiscent of Turner’s pioneer), took shape early in his architectural career. Indeed, his attempts throughout *The Metropolis of Tomorrow* in charging his renderings with transcendental spirituality characteristic of Walt Whitman and Ralph Waldo Emerson can be perceived as a zenith of Ferriss’s Romantic inspirations and an homage to the co-creators of the frontier phraseology. Emerson’s optics, “I become a transparent eyeball; I am nothing; I see all; the currents of the Universal Being circulate through me; I am part and parcel of God,” although toned down and modified by Ferriss, are nonetheless recognizable throughout *The Metropolis of Tomorrow*. They appear in an adaptation of a celestial gaze from above, and all of them reveal the architect’s strong spiritual bent. Ferriss also appears to emulate

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59 Hugh Ferriss, *Power in Buildings. An Artist’s View of Contemporary Architecture* (Santa Monica: Hannesey and Ingalls, 1998), 7. Originally published in 1953 by Columbia University Press in New York. There are two points to be made here about Ferriss’s remarks in *Power in Buildings*. The first is that Ferriss’s comment revealing the desire to be independent of French culture, and Paris in particular, should be placed in its historical context. Although referring to the pre-World War I years, and suggesting the “wishful resistance” of the young and restless students to the then domination, in the American architecture, of the French Beaux-Arts academic tradition, Ferriss expressed this opinion in 1953, thus in the heat of the Cold War phraseology. Ferriss’s ambitions to be original, to be free from foreign cultural “contamination,” especially to be superior to the French cultural power-house, was pronounced at the very moment when the United States was aggressively pursuing its global dominance after World War II. Thus to claim independence from Paris, and reliance on homegrown artistic inspiration and ingenuity during the 1950s, was to join the officially established cultural and political propaganda in the United States. The second point is that Ferriss’s recollections of the past, made in the 1950s, still reference the frontier. Thus when Ferriss reminisces the 1920s, he is complaining that only “a few of the architects were truly pioneers.” Ibid., 8.
Emerson’s tendency to continuously associate himself with the Promethean pioneers bringing light and imposing order on the unruly land. According to Emerson:

Every spirit builds itself a house, and beyond its house a world, and beyond its world a heaven. Know then that the world exists for you. ... All that Adam had, all that Caesar could, you have and can do. Adam called his house, heaven and earth, Caesar called his house, Rome; you perhaps call yours, a cobbler’s trade; a hundred acres of ploughed land; or a scholar’s garret. Yet line for line and point for point your dominion is as great as theirs, though fine names. Build therefore your own world.\

Indeed, Ferriss seems quite literally to follow Emerson’s advice by “building,” although on paper, the new city for the New World (though obviously not concentrating much on “a house”). Finally, in The Metropolis of Tomorrow we can trace sentiments that are close to those expressed by Whitman: “We lose ourselves in the anticipation of what may be seen there in future times – the flourishing cities, the happy family homes, the stately edifices of public improvement, the sights and sounds of national prosperity.”

Living at a time of heightened awareness of the frontier’s absence, Ferriss believed that progress could invest the city with a novel myth of the wilderness. That in turn would serve as the equivalent of the frontier, the traditional symbolic site of American ingenuity. In envisioning the metropolis of tomorrow as a ground for the new frontier, he

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61 Ibid. Boime points out that although the poet attained mastery via esthetic and literary metaphor, his desire to subjugate and control nature coincided with the expansionist rhetoric of the 19th century national imagination.
collapsed nature with the man-built environment, and condensed together past, present, and future. By doing that, Ferriss came a full circle, with a twist nonetheless, by turning a “City upon a Hill”\textsuperscript{63} into a “City as a Mountain.”\textsuperscript{64}

There still remains a question – why did Ferriss saturate \textit{The Metropolis of Tomorrow} with the frontier rhetoric? What was its purpose? Ferriss reached for the frontier myth, and embodied it in his vision, because it was a “founding” American myth.


\textsuperscript{63} “Men shall say of succeeding plantations: the lord make it like that of New England: for wee must Consider that wee shall be as a City upon a Hill, the Eies of all people are upon Us.” John Winthrop, “A modell of Christian Clarity,” quoted in Luther S. Luedtke, \textit{Making America. The Society and Culture of the United States} (Chapel Hill and London: University of California Press, 1992), 394. Winthrop’s expression from a sermon in 1630 reveals the ramifications of Puritan covenant theology that are deeply rooted in the American history. Winthrop believed that he and his brethren were involved in a mission of cosmic significance. Should they succeed, their outpost in the wilderness would be an elevated urban enclave and a moral example to the entire world. See also Loren Baritz, \textit{City on a Hill. A History of Ideas and Myths in America} (New York, London and Sydney: John Wiley & Sons, 1964); Page Smith, \textit{As a City Upon a Hill. The Town in American History} (Cambridge, MA: MIT Press, 1973 [1966]).

\textsuperscript{64} What I suggest here is that Ferriss in his vision of the future city effectively bounces against and incorporates while paraphrasing the many formative myths related to American history. The direction of his circular movement can be traced to major ideas that occurred in the past. The early concept of America as the reincarnation of Jerusalem or as the incarnation of Augustine’s City of God, as interpreted by Winthrop, was in time transmitted from his vision to a generally accepted story that the American experiment was a construction against nature and against those who inhabited the land. This was a city rising from the desert, a light thrust into darkness, and in effect a repudiation of the wilderness which contemporary Puritan theologians identified with hell. Later on, in 1776, this metaphor was visually translated, on the Great Seal of the newly independent United States, into a pyramid – that is, built by humans a mountain \textit{par excellence} – in which the symbol of the \textit{Novus Ordo Seclorum} (new order of the ages) was surmounted at the apex by the radiant eye. Largely represented among the founding fathers were Free Masons, who would have understood those references, especially the eye that tops the pyramid, standing for the divine, all-seeing architect. By the 1840s the “sublime and friendly Destiny” was guiding America westward to “the country of the future” (Ralph Waldo Emerson). The wilderness, originally perceived as an enemy and calamity, seemed to shift to the \textit{condicio sine qua non} for shaping the uniquely American character. The frontier moving West, of which wilderness was an important element, represented in Turner’s phrase, a constitutive stage of the country’s unique development. When the frontier disappeared
According to Eldon Kenworthy, this type of allegory is often re-kindled and re-produced because it provides not optimal solutions but familiar ones. Ferriss, during the 1920s, while promoting his own professional skills and artistic imagination as an architectural renderer, took on the task of projecting a better future metropolis. To achieve his goal, he looked backward and adapted the powerful epic that metaphorically encompasses the development of the United States. For Ferriss, as for many Americans before him, the wilderness constituted the original American environment. He conflated past with future and nature with city, to boost ideas encoded with an ideological message that expressed nationalist grandeur, economic progress and political triumph. Prophesying the future, Ferriss nonetheless demonstrated an anachronistic nostalgia for the legendary pioneer spirit, combined with his quest for monumentality. His city was a nature purified by the rational mind of the architect, a perfectly disciplined order representing proportion, equilibrium, and harmony. Symmetry, rhythm and lightness were to uplift the individual from the sordidness of reality, and elevate him/her toward a higher domain, and from there one could entertain the panoramic view of control.

because the Westward movement had run its course, the frontier rhetoric helped to re-invent American history and its assumed greatness, and Ferriss, as I argue, took part in this appropriation.

CHAPTER FIVE

The “Frontier” Factor in Krutikov’s Gorod budushchego

[A]t last the moment has come to shake the damnable capitalist world, so that everything that has oppressed us through the centuries is hurled into the abyss of history. And on that new, magnificent, splendid and revolutionary earth we, the workers, born in miserable hovels, will leave those hovels in comradely ranks to enter our enchanted palaces to the strains of the great “Internationale.”

Sergei Mironovich Kirov, Speech at the First Congress of the Soviets (December 20, 1922)

The term “frontier” in the context of the Post-Revolutionary Russia involves two historical moments loaded with contrasting ideologies. The first situation occurred shortly after the October Revolution, when the transgression of the geographical, physical frontier between the Soviet Russia and Europe, and actually the rest of the world, was believed to be a condition sine qua non for spreading Communism globally. The second situation followed the decision in 1926 to build socialism, not on an international scale, as it was previously desired, but instead within the geographical borders of the Soviet Union. This policy consequently emphasized the division between the USSR and the rest of the world, and reinforced the notion of a physical frontier and ideological barriers separating that country from the “others.”

1 I argue that Krutikov’s project of the future city, although presented in 1928, was imbued with the euphoric ideas that characterized

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1 Isolationism was a hallmark of the First Five-Year Plan period of 1928-1932. From this time on, Soviet frontiers were largely closed to traffic, both human and goods, and the Soviet Union declared its intention of achieving “economic autarchy.” In the short term, this move had the beneficial, if accidental, effect of guarding the Soviets from the Great Depression. In the long term, however, it set the stage for retreat into suspicious and parochial isolation.
the early 1920s, especially those that championed the overcoming of existing national boundaries, ideas that were decidedly contrary to officially promoted policies in 1928.

The question that intrigues me is: how and why did Krutikov’s proposal, executed in 1928, resemble the ideological and visual idioms associated with the concept of “internationalism” that had been promoted particularly strongly at the beginning of the 1920s (which proposed the abolishment of existing frontiers, primarily by eradicating global economic and political inequalities), even though the very notion had, by the end of the decade, already become unpopular?

The Soviet Union, over the course the 1920s, as Paul Wood asserts, witnessed a continuing struggle over the balance of forces in the realm of economics, politics and culture, the atmosphere of which was intensified by the uncertainties of the international situation.² This was a time of dramatic shifts within internal party politics, which impacted the course of every sphere of life. There are three periods characterizing the Russian post-Revolutionary moment.³ First was the period of revolutionary upheaval prompted by World War I and its aftermath. It was marked domestically by War Communism and the struggle to secure the Revolution, and internationally by the founding in 1919 of the Third (or Communist) International (Comintern) to seize the

occasion and promote the global expansion of the Revolution. The second period occurred with the introduction of the New Economic Policy in March 1921, and was characterized by the relative stabilization of the mid-1920s. The third period coincided with the First Five-Year Plan of 1927-1932 and its cultural repercussions when the Stalinist-dominated Central Committee reversed the Leninist policy of relative freedom of the arts.

4 Moscow became a seat of the Third (or Communist) International, for the revolutionaries in the 20th century, when the Comintern was formed under Lenin on March 6th, 1919, to promote the spread of Communism through what he called a “permanent revolution.” As the leader of the Communist Party, Lenin called for workers of the world to unite to overthrow capitalism. The choice of Moscow for the gathering of the Comintern was a deliberate historical gesture, indicating that the victories of 1917-1920 (first by the antitsarist forces of the Revolution, and then by Bolsheviks in the Civil War) were the beginning in the future international spread of communism. The Third International met in Moscow in March 1919 and July 1920. Lenin, by inaugurating the Comintern responded to the tradition established by Karl Marx when he helped organize the International Working Men’s Association, or First International, an uneasy alliance of British trade union leaders and various continental Communist groups that lasted from 1864 to 1872. Although not a founding member, Marx rapidly rose to prominence in the organization. His disagreements with the anarchist Mikhail Aleksandrovich Bakunin, over issues of state organizations and extent of political upheaval contributed to the factionalism that characterized the First International until its dissolution. By 1889 Socialist parties had gained sufficient strength in a number of European nations to form, in Paris, a loose international association, the Second (or Socialist) International. Organized as a federation of national Socialist parties and trade unions it championed parliamentary democracy and affirmed Marx’s doctrine of class struggle and the inevitability of social revolution. It came to an end at the onset of World War I, when most Socialist leaders abandoned internationalism for the nationalist interests of the war. Lenin, who was active as a leader of the Left within the Second International reacting to a low number of participants at the end of the First World War, suggested the creation of a new organization, hence the Comintern. For the history of the Third International, see Kevin McDermott and Jeremy Agnew, The Comintern. A History of International Communism from Lenin to Stalin (London: Macmillan Press, 1996); Duncan Hallas, The Comintern (London: Bookmarks, 1985).

5 In 1928, a Central Committee resolution demanded social relevance from the arts. The Russian Association of Proletarian Writers (RAPP), formed in 1928, began its attacks on LEF and linked them to the campaign against Trotskyism (Lev Davidovich Trotsky had been expelled from the Party in December 1927, a year after being thrown off the Politburo).
War Communism and Internationalism (1918-1921)

The initial Bolshevik intention was not to build up a planned industrial economy in the national Russian state. Rather, it was to stimulate revolution in the already industrialized Western countries. Lenin repeatedly argued that "without such revolution we are lost," and furthermore "the final victory of socialism in a single country is of course impossible." Internationalism was perceived as a foundation of socialism, and as a necessary tool to overcome the capitalist economy on a world scale. Hence, the October Revolution of 1917 in Russia was perceived by the Bolsheviks not primarily as a Russian Revolution, but as a forerunner to a European or eventually a worldwide proletarian overthrow. Vladimir Vladimirovich Maiakovskii's *Flying Proletarian* attests to this conviction in 1925. This working-class overthrow of the old system was believed to create a situation out of which a new order of international socialism would arise.

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7 For many, the world revolution was an exhilarating, urgently needed, and widely expected event. It was also, as Lev Kopelev’s memoirs reveals, integrally connected with dreams of modernity and access to a wider world: “The world revolution was absolutely necessary so that justice would triumph, all those incarcerated in bourgeois prisons would be set free, those starving in India and China would be fed. ... But also that afterwards there would be no borders, no capitalists and no fascists at all. And so that Moscow, Kharkov and Kiev would become just as enormous, just as well built, as Berlin, Hamburg, New York, so that we would have skyscrapers, streets full of automobiles and bicycles, so that all the workers and peasants would go walking in fine cloths, wearing hats and watches. ... And so that airplanes and dirigibles would go flying everywhere.” Lev Kopelev, *The Education of a True Believer*, trans. Gary Kern (New York: Harper and Row, 1980), 90.
8 Lenin believed that when the international revolution would occur, its Russian component would retreat to the second rank, only then slowly building itself up on the basis of aid from the industrialized and developed countries. To this view, which was shared besides Lenin, by Trotsky and the Bolshevik Party as a whole, there was a completely contrary opinion expressed by Stalin, as early as 1918, tinted with
proletariat was understood by the Soviets as a class entity extending beyond Russia's borders and encompassing all workers of the world, bound together in fraternal solidarity. However, according to Marxist theory, the initial triumph of communism in Russia was premature in so far as the theory prescribed that the proletariat would rise first in the most advanced capitalist countries, not in the most backward. Moreover, it was believed that socialist society could be built only in prosperous conditions. Trotsky, among others, solved this theoretical problem by regarding the Bolshevik Revolution as a trigger which would detonate "the permanent revolution," a series of revolutions in the more advanced countries, and the victorious proletarians of the latter would then provide communist Russia with the economic aid that she needed.9

In October 1917, the Bolsheviks expected an immediate spread of their Revolution, in the first place to Germany, which was economically advanced, and whose armed forces were under great strain caused by participation in World War I. In the first


9 Lev Trotsky, Permanent Revolution, and Results and Prospects, trans. John G. Wright and Brian Pearce (New York: Merit, 1969 [1930 and 1921]). This expression, "permanent revolution," was first used by Marx in his Address to the Communist League (1850), but was later appropriated by Trotsky who between 1904 and 1906 developed it into a theory, which situated Russia potentially at the forefront of World Revolution. The argument rested on the concept that it was possible to have a socialist revolution in an economically backward country. Trotsky was convinced that in Russia the bourgeoisie was too weak to oppose the Tsarist autocracy in its own interests and predicted a direct revolutionary confrontation between the autocracy and the proletariat. While the proletariat might begin by demanding only liberal reforms, it could only retain power by making the Revolution "permanent" and immediately proceeding to implement socialist policies. To this last view Lenin adhered during the course of 1917. A second element in the
year of the Bolshevik regime, these hopes were still maintained. In the Revolution and during the Civil War, pronouncements of leadership in the global dissemination of Communism had indeed more immediate relevance. As Nigel Harris points out:

The Bolsheviks did not come to power to fulfill the task demanded by the survival of an independent Russian national society. They saw themselves as taking part in the emancipation of the world working class, not simply its Russian section. That task implied the dissolution, in the long run, of an independent Russian state, its merger in what the Comintern called in its first manifesto “an international workers’ republic,” not the creation of an independent industrialized state.¹⁰

To catalyze the world revolution, the Third International (Comintern) was established in Moscow in 1919.¹¹ The objective of the Comintern was to link and coordinate the efforts of all communist parties in their struggle to spread the Revolution.¹²

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¹⁰ Nigel Harris, “Mao and Marx,” *International Socialism* 89 (Spring 1981), 20. Quoted in Paul Wood, “Art and Politics in a Workers’ State,” *Art History*, 8 (March 1985), 105-124. Upon the publication of the first Soviet constitution (of the RSFSR) in the summer of 1918, when revolutionary expectations were at their height, Lenin saw a “World Socialist Republic” emerging out of the constitution of the first socialist state, and Nikolai Ivanovich Bukharin called the coming order an “International Republic of Soviets.” When the next constitution (of 1922) forming the USSR was issued, Stalin hailed it as a step to a “World Soviet Socialist Republic.”

¹¹ On March 4th, 1919 thirty-five delegates meeting in the Kremlin voted to constitute the Third or Communist International, soon to be known as the Comintern. Only five delegates from the Russian Communist Party represented it: Lenin, Trotsky, Bukharin, Georgii Vasil’evich Chicherin and Gregorii Evseyevich Zinoviev. The Comintern, as an association of revolutionary Marxist parties of the world rejecting reformism, was to replace the Socialist International of 1889. From the outset, its policies were dominated by the Bolsheviks, who imposed on it their own Leninist principles of organization through the *21 Conditions of Admission* (which included the subordination of the member parties to the authority of the Executive Committee of the Comintern). This meant in effect the subordination of the national sections and their policies to Soviet control.

¹² At the Second Congress of the Comintern, in the summer of 1920, when the Bolshevik leaders thought that Europe was on the verge of a proletarian revolution, they promoted an intransigent revolutionary strategy – they repudiated bourgeois democracy, and denounced both moderate and radical socialist leaders.
This further indicates that during the early 1920s, the concept of the international unity of a single class dominated over the ideas of either national or state unity. Proletkul't, for example, which was a strong proponent of the internationalist perspective, firmly maintained that proletarian culture was based on class foundations, not on the national footing of past cultures.¹³

Artists were the mediators between official ambitions and popular notions, and their ideas relating to the unified globe under the tutelage of the Comintern reveal an interesting common phenomenon, which was the designing of dynamic, often sky piercing structures. Artists who promoted an avant-garde vocabulary, as well as those who followed traditional figurative representation, all shared an enthusiasm associated with the spreading of Communism, the breaching of the limits of the old system, and the overcoming of existing geo-political borders. On the one hand there were the artists who incorporated concepts related to “internationalism” into the subject matter of their works, while on the other hand, the camaraderie among the avant-garde artists was supposed to be achieved through cosmopolitan relationships and exchanges. The consequence of this

¹³ Proletkul’t took concrete steps to extend the “cultural front” to the international level and at the Second Comintern Congress, in 1920, Russian Proletkul’t leaders convened a special meeting to organize an “International Bureau of Proletkul’t.” See Zenovia A. Sochor, Revolution and Culture: The Bogdanov-Lenin Controversy (Ithaca and London: Cornell University Press, 1988), 147-148.
last position was a reaching out to artistic groups and audiences in Berlin, Paris or New York.¹⁴

Krutikov in his project demonstrated both elements. One instance of breaching the confines of domestic issues is demonstrated by the range of the collaged material that he incorporated in his interpretation of buildings. Thus, in his analytical presentation, while scrutinizing the existing architecture as impacted by various means of transportation, he included examples found in many places outside of the Soviet Union. Therefore, when he pondered the concept of mobile architecture, he perceived its nascent stage in the form of zarubiezhnykh peredvizhnykh dach, or foreign travelling cottages. Thus, he considered the contemporary “Recreational Vehicles,” which were popular abroad as well in his own country, as zachatki podvizhnogo zhishlycha, or the beginning of an agile housing. His selection of works that supported his ideas was indeed international in scope — from German and British, through Italian to American.

The awareness and absorption of international activities was common in Russia during the 1920s. Then, the word “foreign” (zarubiezhnyi) almost always had positive connotations, and events that occurred abroad or achievements that occurred beyond the

¹⁴ As Milka Bliznakov points out, subscriptions to foreign technical and architectural periodicals were encouraged, and Soviet publications commonly reported on foreign technological developments. Soviet delegations were sent to leading industrial countries, and Western firms were invited to build major projects in the USSR. Milka Bliznakov, “The Realization of Utopia: Western Technology and Soviet Avant-Garde Architecture,” in William C. Brumfield, ed., Reshaping Russian Architecture. Western Technology, Utopian Dream (Cambridge, MA: Cambridge University Press, Washington, D. C.: Woodrow
border in the sphere of culture, science and economy were often regarded as a paradigm
to emulate.\footnote{Vladimir Paperny gives examples of this fascination with all things “foreign.” Hence, the document introducing the international time zone system in Russia in 1919 mentioned “unification with all the civilized world in the accounting of time.” The proclamation “On the Improvement of the Life of Scientists,” of 1922, proposed the liberty to travel abroad and to receive literature from other countries. The architectural journal \textit{Stroitel’stvo Moskvy} (Construction of Moscow) announced, in 1925, that “Overseas, in the North American United States, the radio-telephone and radio-telegraph are available to almost all citizens,” suggesting, that the Soviet citizens should have wide access to them as well. All quotes in, Vladimir Paperny, \textit{Kul’tura “Dva,”} trans. John Hill and Roann Barris, \textit{Architecture in the Age of Stalin. Culture Two} (Cambridge: University Press, 2002 [1996]), 45, 316, n. 5, 6, 7.} In 1926, the inaugural year of the journal \textit{Sovremennaia arkhitektura} (Contemporary Architecture), Ginzburg published an editorial in which he promised that the magazine would be inclusive of, and accessible to, “all like-minded colleagues not only in the USSR but in the whole world.”\footnote{Moisei Iakovlevich Ginzburg, “Novye metody arkhitekturogo myshlenia” (New methods of architectural thinking), \textit{Sovremennaia arkhitektura} no.1 (1926), 1-4.} In the second issue, the concept of an “international front of contemporary architecture” was declared even more clearly:

In spite of the differences and particularities of various countries and nations, this front [i.e. the international front of contemporary architecture] actually exists. The results of a revolutionary search by the avant-garde of the contemporary architecture of all countries are closely interrelated. They are hammering out a new international language of architecture, accessible and comprehensible, despite borders' posts and fences.\footnote{Moisei Iakovlevich Ginzburg, “Mezhdunarodnyi front sovremennoi arkhitektury” (International Front of Contemporary Architecture), \textit{Sovremennaia arkhitektura} no. 2 (1926), 41-46. To exemplify this international approach the text was punctuated with illustrations from Erich Mendelsohn’s \textit{Amerika}, photographs of two projects and buildings by Mies van der Rohe and Mendelsohn in Berlin, and plan of a villa in Paris by Le Corbusier and Jeanneret.}

Krutikov’s “international language of architecture,” although not necessarily “spoken in tongues” (literally, \textit{Sovremennaia arkhitektura} used some Russian-German
translation, while *Veshch’/Gegenstand/Objet*, as its title indicates incorporated Russian, German and French), nonetheless included images that indicate cosmopolitan sources.

This device of incorporating multiple voices representing the all-encompassing heterogeneous mix unifying the Communists had its well-established tradition, especially since the Comintern.\(^\text{18}\) All the slogans aiming to greet the members during the time of its congresses were henceforth commonly phrased in various languages.\(^\text{19}\)

The second component centered on the notion of internationalism is embodied in the form of the future city envisioned by Krutikov. The free-floating complexes of the houses and the flying cabin (used as a vehicle for transporting the inhabitants between the hovering dwellings and the places of work and leisure on land) were projected not only as conquering earth’s gravity, but moreover were launched into unspecified, we may assume, globally shared outer space. Certainly, the engine responsible for allowing them to be shot into the sky was the October Revolution, with its liberating results and unifying effects. Krutikov’s vision of the flying city can be better understood when situated vis-à-vis works executed during the early 1920s. To make this point, I will discuss three

\(^{18}\) Interestingly, the proceedings of the First Comintern Congress of 1919 in Moscow were conducted in German. This choice was probably motivated by two factors. Firstly, it was in recognition of the weight then attached to the left wing of the German socialist movement (particularly, the German “November” Revolution strengthened the Bolsheviks in their conviction that history was on their side), and secondly, Germany was the only major country not involved in the allied invasion of Russia during War Communism. John Willett, *The New Sobriety, 1917-1933: Art and Politics in the Weimar Period* (London: Thames and Hudson, 1978), 43.

\(^{19}\) The most often among represented languages were: Russian, German, French, English, Italian and Spanish.
projects done by Krutikov's older contemporaries, Vladimir Evgrafovich Tatlin, Dmitrii Stakhievich Moor and El Lissitzky, which had gained considerable visibility in the years that preceded Krutikov's diploma project. These artists represent the post-Revolutionary enthusiasm and commitment to an all-transforming International Socialism, as is apparent in the three works I have chosen to compare and contrast with Krutikov's work.

In 1919, the Department of Artistic Work of the People's Commissariat for Enlightenment commissioned Vladimir Evgrafovich Tatlin to design the *Pamiatnik III-emu Internatsionalu* (*Monument to the Third International*). In the following year, he unveiled a sensational model about six metres high for a spiral tower with a proposed construction height of about 400 metres (Fig. 73). Tatlin envisioned his Tower to be made out of modern technological materials, using advanced engineering techniques, creating a tower of iron and glass that was to be used as a site for mass/global communication. Its open, transparent structure contrasted sharply with the closed

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22 The model was built out of wooden laths containing at its centre a range of forms made from wooden frames and covered with paper. However, in his design Tatlin combined the achievements of engineering epitomized by the Eiffel Tower of 1889 with the formal vocabulary of the Cubo-Futurists to convey the dynamism of the new Soviet system. Scholars have traced artistic parallels of Tatlin's Tower to various sources. Thus, Troels Andersen to Eiffel's edifice as well as to Boccioni's *Development of a Bottle in Space* of 1912 in idem, *Vladimir Tatlin* (Stockholm: Moderna Museet, 1968); John Elderfield to Bruegel's
aspects of traditional monuments. The Monument to the Third International was seen as located in a “paved” space. “Into this asphalt air an iron spiral ... has been born,” announced Viktor Borisovich Shklovskii. Though never realized, Tatlin’s Tower, from the time of its design, gained respect, and this model was widely circulated during the 1920s. From its conception, the Tower became a symbol of the revolutionary leader’s dreams of a new society and of faith in the promise of industrial technology. Tatlin wished to incorporate cosmic symbolism in his project because, as he claimed “My monument is a symbol of the epoch. Unifying in it artistic and utilitarian forms, I created a kind of synthesis of art with life.”


23 According to Maiakovskii, it was also the first monument without a beard. The poet’s witty comment should be placed in its historical context. Tatlin’s design coincided with a time of Lenin’s Plan for Monumental Propaganda, when about 50-60 monuments to great figures in the history of socialism, revolution and culture (from Spartacus, through Brutus, Marat, Fourier, Saint-Simon, to Marx and Engels, to mention just a few among the European heroes), many with beards and moustaches, had been erected in Moscow.

24 Viktor Borisovich Shklovskii, “The Monument to the Third International,” Zhizn’ iskusstva (The Life of Art) 5, 8, 9 (January 1921), quoted in Larissa Alekseevna Zhadove, ed., Tatlin (London: Thames and Hudson, 1988), 342-343. Shklovskii in concluding his review stated “The monument is made of iron, glass and revolution.” This reference to ‘revolution,’ although alluding to the rotation of the tower’s gathering halls, might also refer to Revolution as the socio-political movement forging a new life. Thus, paraphrasing Le Corbusier’s dictum, for Shklovskii architecture is Revolution.

25 This maquette was first presented in Petrograd at the end of 1920 in the artist’s studio, and later that year re-erected in Moscow in the Hall of the Eight Congress of the Soviets, which was discussing Lenin’s Plan for Electrification of Russia. The simplified model of this monument was paraded through the streets of Moscow in 1920, 1921, and 1926, and later on a model of glass and iron was built in Petrograd.

26 Quoted in Lodder, Russian Constructivism, op. cit., 65.
The Tower was planned to be on an asymmetrical axis, parallel to that of the earth. Tatlin designed it out of two intertwining lattice iron spirals, within which were to be suspended four large transparent volumes— a cube, a pyramid, a cylinder and a hemisphere— intended to revolve like the revolutionary movement that was transforming Russia. As Kenneth Frampton observes, the Monument “anticipated the work” of distinct tendencies in Russian avant-garde architecture. Frampton then points to VKhUTEMAS/VKhUTEIN and to Ladovskii, to the teaching institution and its professor, who would continue the modern, innovative and ambitious projects initiated by Tatlin. Indeed, the volumes suspended inside the Tower, which were proposed to house legislation, administration, information, and cinematic projection, can be perceived as an inspirational prototype for the hovering dwellings designed by Krutikov, one of Ladovskii’s pupils. I am mentioning now the greatly influential Monument to the Third

27 The rooms were dedicated to the purposes of legislation, administration, information, and cinematic projection. Thus they were planned respectively to house lecture and congress facilities, executive activities and a news information centre, and to boast the latest in technological prowess including telegraph, telephone, radio, loud speaker, an open-air screen for nocturnal use and even a system of projecting texts onto the sky in cloudy weather.


29 Actually, besides Krutikov several other students in Ladovskii’s atelier implemented the principle of a city hovering above the earth for their graduation projects in 1928 and 1929. Viktor Kalmykov imagined at the equator a suspended city-ring, which he called “Saturn,” which would hover in the air with the aid of rigid constructions. The ring would remain in a fixed position with respect to the earth by revolving at the same speed as the globe. Isaak Yusefovich developed the theme of a floating USSR Hall of Congresses that could be moved and moored to towers set up in the cities where the congresses were being held. These towers were given the function of vertical access, but they were also both residential and public structures. In the projects of the Soviet architects of those years, the dirigible became a symbol for the global connection of world civilization. See, Viktor Kalmykov, “Goroda v vozduke,” (Cities in the Air), Arkhitektura CCCP 6 (1973), 58-60.
International because of its direct association with the concept of an international
socialism, a belief to which Krutikov still adhered in the face of changes.

At the time Tatlin designed his Tower, neither he nor anyone else among his
contemporaries had the slightest idea of how such a visionary piece of architecture could
actually be constructed. Nonetheless, Tatlin was confident that “modern technology fully
allows for the possibility of constructing such a building.”  

Krutikov demonstrated the
same optimism. When Krutikov presented his vision on the day of his diploma defense,
he was challenged about the technological reliability of the city built in the sky. One of
the members of the examining committee, Ivan Vasilevich Ryl’skii, who represented the
division of communal management, asked Krutikov a very pragmatic question about the
logistics of canalization and water supply for the city he designed. The examiner seemed
to be satisfied with Krutikov’s rather oblique, but highly enthusiastic answer. Krutikov,
similarly to Tatlin, expressed his strong conviction that “the progress of science and
technology very soon (uzhe v niedaliekom budushchem) will allow us to resolve this
issue.”

Tatlin’s plan for a monument aimed to commemorate not an individual but, I
would propose, a collective group and an idea – the Third International. The movement

30 Vladimir Evgrafovich Tatlin, “The Monument to the Third International,” Zhizn’ iskusstva (The Life of
Art) no. 315, (1919).
31 Quoted in Khan-Magomedov,“Proekt ‘letaushchego goroda,’”(Project of a “Flying City”), Dekorativnoe
issonstvo (Decorative Arts) no. 1 (1973), 30-35.
of its parts symbolized the Revolution, a collective undertaking, a movement of organizations and classes, mobilized to overthrow the capitalist system and its representative symbol of the bourgeois, self-possessed individual. As Paul Wood claims, Tatlin’s project demonstrated two objectives; on the one hand, it was intended as a monument to the Third International, a new organization as opposed to some individual, and on the other, it represented an attempt to escape the relative passivity of the role imposed by the traditional form of the ‘monument.’ Tatlin aimed to achieve in his Tower a synthesis of sculpture, painting and architecture, and he hoped that by “intervening in the lived environment rather than standing to one side of it, it was not to be merely a monument to the Third International but its working headquarters – the site of the world Revolution.”

Another critic, Nikolai Nikolaevich Punin, while revealing the symbolic aspects of Tatlin’s proposal, announced the relocation of human inhabitation into an ever-higher domain:

Just as the triangle, as an image of general equilibrium, is the best expression of the Renaissance, so the spiral is the most effective symbol of the modern spirit of the age. ...While the dynamic line of the bourgeois society, aiming at the possession of the land and the soil, was horizontal, the spiral, which rising from the earth, detaches itself from all animal, earthly, and oppressing interests, forms the purest expression of humanity set free by the Revolution. The bourgeois social order developed an animal life on earth, tilled the soil, and there erected shops,

33 Ibid. 269.
arcades and banks; the life of the new humanity rises ever higher and higher above ground.\textsuperscript{34}

As already demonstrated, Krutikov in his diploma proposal followed the conviction expressed by Punin, that “the life of the new humanity rises ... above ground,” and consequently relocated the residences of the future in outer space, above the constraints of the earthbound domain that had become associated with a bankrupt capitalist system. A similar device of a weightless city was also adapted by Dmitrii Stakhievich Moor in his poster dedicated again to the Comintern, and entitled \textit{Da zdravstvuiet III-ii Internatsional!} (Long Live the 3\textsuperscript{rd} International!), which he executed in 1921 (Fig. 74).

Moor, following this time a figurative tradition, created a striking image of a floating urban form.\textsuperscript{35} In the foreground of the composition, he depicted an upright figure of a blacksmith\textsuperscript{36} who stands in front of an anvil, holding a hammer in one hand, and

\textsuperscript{34} René Fülöp-Miller, \textit{The Mind and Face of Bolshevism} (London and New York: Putnam’s, 1927), 102. Although Fülöp-Miller does not mention Punin by name, he indicates that this passage was originally part of the extract published by Punin in \textit{Veshch’/Gegenstand/Objet} in 1922. For another translation of Punin’s entire text see Zhada, ed., \textit{Tatlin, op. cit.}, 344-7.

\textsuperscript{35} Moor belongs to those artists whose career prior to 1917 was linked with popular, yet socially engaged art. He had run an underground press and contributed satirical cartoons to a series of semi-legal journals in the period immediately following the 1905 Revolution. The identification with the Soviet government was the apex of a long journey out from the underground. For Moor’s career see, Stephen White, \textit{The Bolshevik Poster} (New Haven: Yale University Press, 1988).

\textsuperscript{36} Moor indeed adopts the newly established distinctive lexicon of Revolutionary imagery. Following the Revolution, there was a need to create a compelling visual language critical in the campaign to establish the working class as the heroic collectivity. In a country where about 85 per cent of the population lived in the countryside, the identity and characteristic of the “working class” remained unclear. Around 1918, the representation of “the worker” had acquired a definite form. He was almost invariably depicted as a \textit{kuznets} (blacksmith), holding his insignia, a hammer, wearing a leather apron and standing next to an anvil.
raising the other in a gesture of greeting. His head is turned up, his eyes are gazing with admiration towards the fortified walls of the Kremlin, shown in the upper part of the composition. This ancient part of Moscow, while evoking the heavenly space of celestial Jerusalem,\(^{37}\) hovers above him like the proverbial “pie in the sky,” or even a “flying saucer.” One can imagine, however, that the premise of this poster was to foster not an unattainable dream (such as the fantasized island of Laputa that Jonathan Swift satirized in *Gulliver’s Travels*, utilized by Krutikov in his project (Fig. 15), that bears a striking resemblance to Moor’s poster), but rather to indicate a solid-as-brick-and-mortar promise of a better future, expressed and envisioned here as a hovering citadel. Indeed, the blacksmith, through his gesture, not only greets the comrades of the world, but moreover through his body language and his upward gaze points towards the city above his head. The welcoming, extended to the members of the Comintern, and the implicitly expressed hope of the World Revolution had been uttered by Moor in the text framing the figure of the worker. The slogan, repeated in five languages, evokes not so much a new and

dominating lingua franca but rather a heterogeneous and all-inclusive rendition of a
“Communist Esperanto,” which was international in its content.\textsuperscript{38}

There is of course a very great difference between the city depicted by Moor in
his poster and the one Krutikov designed for his diploma project. Moor showed a very
recognizable and highly specific urban setting, the Moscow Kremlin, a part of the old
Russian tradition that was loaded with historical references as a seat of power, which he
elevated as a paragon of the past to its new heights under the Bolsheviks.\textsuperscript{39} Perhaps the
fact that the Comintern gathered in Moscow motivated Moor to indicate and localize its
meeting place. In Krutikov’s vision, however, the hovering city was not site specific.\textsuperscript{40} As
the drawing of its radiant but vaguely paraboloid urban shape demonstrates (Fig. 22), the
city was situated high above the earth’s surface. This is actually the only reference that
points out the city’s position vis-à-vis the globe. Suspended in the air, this fantastic

\textsuperscript{38} See note 18, above. For a first hand recollections on Esperanto and the fascination it caused, see Kopelev,  
The Education of a True Believer, op. cit., 96-124. However, the leader of Proletkul’t, Bogdanov, rejected
the use of Esperanto, which prevalence grew after the Revolution, considering it an “intellectual utopia.” Instead of Esperanto, he suggested to foster English as a common language that was supposed to gradually
cut across national boundaries.

\textsuperscript{39} The Kremlin was the traditional point of convergence for all processions from its mediaeval origins. Under the Tsars, it was the centre of Christian rituals, where man, earth, universe and God meet. It also seemed to symbolize the “heart” of the city from which radiated all streets, roads, energy and power. Lenin brought back to the Kremlin its glory as the site of absolute authority as a seat of government, when he moved the capital back from Petrograd to Moscow in 1918. Thus the power seemed to have returned at last to its original site in the heartland of Russia, after being abandoned for two centuries by Peter the Great.

\textsuperscript{40} Jacques Derrida observed: “[t]he very name of the USSR is the name of an etatic individual, an
individual and singular state that has given itself or claimed to give itself its own proper name without
reference to any singular place or any national past. At its foundation, a state has given itself a purely
artificial, technical, conceptual, general, conventional, and constitutional name, a common name in sum, a
‘communist’ name: in short, a purely political name. I know of no other example of a comparable
rendering of the residential quarters of the future metropolis evokes a celestial spectacle, with a luminous comet-like body announcing the dawn of a new era. Although ethereal, its presence solidly occupies a generic but implicitly international common space. What is explicit about these houses suspended in air in Krutikov's diploma projects, as well as in the floating Kremlin in Moor's poster, is the conviction that they could only be launched under the auspices of the Soviets, and achieved through the marching advances of Communism.

Cosmic allusions were also conveyed directly in another poster, rendered in an abstract language. Lissitzky, in *Klinom krasnym bei belykh* (Beat the Whites with the Red Wedge), which he created in 1920 not for the propaganda of the Comintern but instead as an agit-prop in the midst of War Communism, transformed the traumatic engagement yet again into the cosmic domain (Fig. 75). Utilizing the Suprematist vocabulary of Malevich, and incorporating his own architectural training, Lissitzky represented a military assault by the Red Army penetrating the vestiges of circled Whites (one could think of it as a Bolshevik version of a polarized battle between good and evil in *Star Wars*, in geometrically abstracted forms). The charge of the sharp red wedge,
symbolizing the dynamism of the Bolshevik military force, comes down from the left side of the composition, represented by a white and pristine pictorial field that renders the bright outer space occupied by the Red Army. Continuing the logic of his symbolic vocabulary, Lissitzky completed the depiction of the opponents to the Revolution as a round white blob. The enemy, which is conveyed as being feeble and shown as closing up in a circular formation to defend its position, is situated on the right side of the composition and is executed in a sinister black colour, suggesting a compromised realm occupied by the bourgeoisie.

What I am establishing here is that, in the early 1920s, attempts to transfer the lived and experienced domain into a higher level of representation had been presented metaphorically and envisioned literally in politics and in arts. “We can only be aware of space” – announced Malevich – “if we break away from the earth, if the fulcrum disappears.” 

Krutikov followed these revolutionary predecessors when he proposed a free-floating city bound not as much to a nation or a state but rather to the ideology of breaching geo-political boundaries. Over the course of the 1920s, however, the

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43 Currently, after the apparent demise of the socialist countries and receding appeal of Marxism, there are voices that call for modified Internationalism, yet again as a source of rescue and fulfillment. In this vein Jacques Derrida, for example, uttered his extraordinary vision of a ‘New International’ “without status, without title and without name … without party, without country, without national community (International before, across, and beyond any national determination), without co-citizenship, without common belonging to a class. The name of a new International is given here to what calls to the friendship of an alliance without institution among those who … continue to be inspired by at least one of the spirits
promotion of, and fascination with, “Internationalism” in the Soviet Union started to wane. The concept of breaching the divisions in spreading a common avant-garde/communist denominator that was once widely promulgated started to collide with a new official world outlook.\(^4^4\)

The New Economic Policy (1921-1928)

In the early 1920s, there was still a conviction that the Russian Revolution was to derive its support from a transition to socialism among the countries of Western Europe, whose powerful industrialized economies were to have assisted in the modernization of the Soviet Union.\(^4^5\) However, the world proletariat demonstrated a lack of desire to...
follow the Russian example in abolishing capitalism from the planet, or was crushed in its radical efforts. The hopes for an imminent world revolution were indeed shattered by the failure of the Hamburg uprising in the autumn of 1923, the last revolutionary attempt in Germany.

Gradually, the Bolsheviks resigned themselves to the possibility of a long wait for the realization of the world revolution. But it was not until the latter part of the 1920s that the theory of permanent revolution was finally discredited. There was another factor that was slowing down revolutionary changes – the New Economic Policy. In March of 1921, the government reintroduced some elements of capitalism, such as a free market, commercial accounting and profitability together with its inherent tensions, to improve

indispensable to imitate and “catch up with” the West as a means of self-defense against it. The West was admired and envied as a model, as well as feared and hated as the potential enemy. The first contact began under Ivan the Terrible in the 16th century, which revealed the disadvantages of Russia’s backwardness vis-à-vis the West; then it was the reign of Peter the Great and his success in building in Russia a power capable of confronting European countries on comparable terms; throughout the 19th century Russian political thought was polarized on acceptance or refusal of the West leading to the great divide between the Westerners and the Slavophiles. Lenin himself had drawn extensively on the experience and example of the West (Marxism and the European social democracy), and had spoken with contempt of Russia’s native backwardness.

46 In 1921 Lenin introduced the New Economic Policy (NEP) at the Tenth Party Congress, establishing at the same time a monolithic and tightly centralized organization within the Party. While liquidating rival political parties and groups such as Social Democrats, Social Revolutionaries, Kadets and Anarchists, he also eliminated factions and groups within the Party itself. While the introduction of NEP liberalized economic policies, the establishing of the centralized Party apparatus gave the Party leaders absolute control over political activity, which was a major step toward the termination of any form of pluralism. Once the absolute control of political life was in place, it was just a matter of time before this monopoly was extended to the economy and culture. See Edward Hallett Carr, The Bolshevik Revolution, 1917-1923, 3 vol. (New York: Macmillan, 1951-53); Adam Bruno Ulan, The Russian Political System (New York: Random House, 1974); Sheila Fitzpatrick, Alexander Rabinovitch and Richard Stites, Russia in the Era of NEP: Explorations in Soviet Society and Culture (Bloomington and Indianapolis: Indiana University Press, 1991).
the dragging economy. According to the radicals in the Party and to the left oriented intellectuals, NEP by its rearguard actions endangered the vision of socialism that was based on internationalism and the rigour of planning that characterized the period of War Communism. In the context of NEP, it was particularly paramount, and difficult at the same time, to distinguish Soviet labour from the alienated work of capitalism, the revolutionary commodity from the commodity fetish, and Soviet technology from the oppressive machines of the industrial revolution.\textsuperscript{47} In his project, Krutikov attempted to redefine these primary sites of a modern urban conflict, to resolve their harmful aspects and to develop their new potential following the Soviet blueprint, to effectively produce a favourable urban environment for an emancipated subject. In addressing these issues, Krutikov adopted an internationalist political stance close to the one dominant at the beginning of the 1920s.

According to Edward Hallett Carr, as early as between 1921 and 1924 the pragmatic policies of NEP “shifted the balance of emphasis from political programmes to the routine of everyday life, from iconoclastic theory to traditional practice, from

\textsuperscript{47} In this context, Rodchenko’s and Maiakovskii’s posters and advertisement for GUM (Gossudarstvennyi universal’nyi magazin – State Department Store on the Red Square in Moscow) were explicit and conscious decisions to promote the state sector at the time of a rising tide of capitalism. Maiakovskii declared that, during NEP, progressive forces had to mobilize the instruments of capitalism against itself. He thus called for the engaging of advertising, that ultimately capitalist form, to the interest of the collective. He wrote: “Under NEP it is necessary to employ all the weapons used by [our] enemies, including the advertisement, for the popularization of state, proletarian organizations, offices, and products. "Vladimir Maiakovskii, Agitatsiia i reklama,” quoted in Leah Dickerman, “Building the Collective,” in
revolution to organization, from visionary utopianism to hard-headed realism, from an internationalism that knew no frontiers to an astute calculation of the national interest of the USSR.**

"Socialism in one country" and the Introduction of the Five-Year-Plan

By 1925, NEP had achieved the results hoped for by its proponents, the restarting of the shattered economy. In 1926, the Fifteenth Conference of the Bolshevik Party\(^{49}\) debated the subject of "socialism in one country," and the general and specific measures that were needed to bring it into being. Already, around the time of Lenin's death, the right and centre grouped around Bukharin and Stalin, had adopted a nationalist perspective and was considering concentrating all its energy on domestic issues.\(^{50}\)

The decision to build socialism within the geographical borders of the Soviet Union was to have an indirect effect on architecture. For architecture, the decision of the Fifteenth Conference meant that the building of socialism was to begin in the USSR without further delay, so that it became necessary to conceive and build its material

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49 The conference took place between November 11 and December 31, 1926.
50 When Bolsheviks' hopes of the imminent revolution in Europe collapsed, the Comintern leaders proclaimed a "temporary stabilization of capitalism" and developed various forms of united front tactics. Beginning with the Fifth Congress in 1924, the Comintern revealed the internal factional struggles in the Soviet Communist Party: the elimination from it of Trotsky, Zinoviev, Bukharin, and their followers led to corresponding purges in the leadership and the national sections of the Comintern.
environment. But at the same time and contradictorily, the industrialization of the country was to receive absolute priority, relegating to the background the question of housing, social and cultural facilities, and consumer goods. The new workers’ paradise should be carefully isolated and protected by secure borders. Consequently, the Soviet government perceived its primary role as stabilizing itself for an indefinite period of “capitalist encirclement” and consequently to build “socialism in one country.”

With the entrenchment of a uniform communist ideology in the Soviet Union by the late 1920s, and the endorsement of the old notion that the country was naturally divided geographically into European and Asiatic sections by the Ural mountains, the notion of the frontier gained a paramount importance. However, the original significance of the frontier as a military zone where one faced an enemy, was then extended to the point of dissolving this zone into a perpetual arena, conceived in the non-geographical Marxist categories of a progressive worker’s state/nation pitted against a reactionary capitalist world.

To step-up the tempo of efforts to achieve and defend this now insular socialist state, a massive programme of industrialization was introduced with the Five-Year-Plan of 1928-1932. This was matched by a reassertion of the rhetoric of class struggle, which

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51 The State Planning Commission (GOSPLAN) had existed in the Soviet Union since 1921. When the decision was made on adopting a five year planning, there were difficulties encountered in collating and formulating the First Five-Year Plan’s document that was in a size of a book. As a result, it was presented
had been tempered during NEP. The term “Cultural Revolution” came into wide circulation, designating a confrontation between the proletariat and its enemies. War metaphors, such as references to the “cultural front,” “mobilization” and “work-brigades,” became omnipresent. Lunacharskii, who had overseen Narkompros since the Revolution, was now criticized for his “anti-revolutionary, opportunist conception of cultural revolution as a peaceful, classless raising of cultural standards – a conception which does not distinguish between bourgeois and proletarian elements of culture.”

Krutikov, in 1928, by proposing a city floating above the earth, promoted still, or perhaps again, the extension of the October Revolution to a cosmic scale, whose engine was Internationalism. The question is, why did Krutikov promote these notions, which had been promulgated by the Soviets a decade earlier, and that were in opposition to current trends? What was the rationale for rekindling Leninist rhetoric at a moment when Stalin had already set up the course of policies to build a “socialism in one country”?

to the Sixteenth Party Conference only in spring 1929, even though it covered the period October 1928 to December 1932.

52 Struggle against the old intelligentsia, bourgeois cultural values, elitism, privilege, and bureaucratic routine constituted the phenomenon, which the contemporaries labeled “Cultural Revolution.” The purpose of this Revolution was to establish Communist and proletarian hegemony, which in practical terms meant both asserting party control over cultural life and opening up the administrative and professional elite to a new cohort of young Communists and workers. See Sheila Fitzpatrick, ed., Cultural Revolution in Russia, 1928-1931 (New York: Columbia University Press, 1978).

53 Such rhetorical devices, according to Sheila Fitzpatrick, were more than symbols. In the situation of rationing, shortages, and the severe punishment of opposition and resistance that accompanied the Plan, they helped recreate wartime conditions. Sheila Fitzpatrick, The Russian Revolution (Oxford: Oxford University Press, 1994), 120.

Krutikov, in 1928, was indeed in a position that Piotr Piotrowski calls “between revolution and reaction.” His project of the future city demonstrates, I would argue, that Krutikov resolved this dilemma by aligning himself with rhetoric that was highly popular shortly after the October Revolution. However, this call for internationalism, mixed with an unrestrained burst of imagination over the course of the decade, was becoming highly contested and vehemently criticized -- thus the harsh reception Krutikov received in the professional press following his defense, branding his work as an “irresponsible suggestion of (a) utopian kind.” My contention is that Krutikov, by choosing to engage his work with the policies and visual vocabulary denoting the heroic revolutionary period in Russia, aligned himself squarely within the orbit of an opposition to the official political and artistic doctrine of the late 1920s.

Opposition

There was growing opposition within many sectors of the Soviet Union to the shifting ideologies and changing policies that occurred between the October Revolution and 1928. War Communism had saved the Revolution, but the militarization of society had damaged the revolution’s social base. NEP had saved the economy and offered a more stable framework of legality for everyday civilian life, but at the cost of increasing

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35 Piotr Piotrowski, Artysta miedzy rewolucja a reakcja. Studium z zakresu etycznej historii sztuki awangardy rosyjskiej (The Artist between Revolution and Reaction. Study on Ethical History of the
stratification and the occlusion of the whole vision of a socialist society based in the working class. The balance shifted from town to country and from proletarians, not just to peasants but to the “Nepmen.” This was the new entrepreneurial class of merchants and *nouveau riche*. Faced with a retreat from the aim of a planned socialist mode of production, and with the decline in the social power of the working class relative to the peasantry, Trotsky reintroduced the idea of “systematically broadening the scope of planning” with the ultimate goal of “absorbing and abolishing the market.”

In the arts, there was a consistent appeal at this time to the ideals of a “collective” way of life, which to be fulfilling needed to be “organized.” The new social formations, which replaced War Communism and which opened new space to social stratification and behaviour, were often associated with the bourgeois past (and its emphasis upon consumption, for example), and became more and more contested by some artists, such as Maiakovsky and Vertov, or groups like LEF. As Sergei Mikhailovich Tret’iakov wrote, LEF had been established “in the conditions of the New Economic Policy. … Lef

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56 Lev Trotsky, speech to the Twelfth Party Congress, April 20, 1923, quoted in Isaac Deutscher, The Prophet Unarmed: Trotsky, 1921-1929 (Oxford: Oxford University Press, 1959), 100. Trotsky’s proposition addressed the resolution of the so-called “scissors” crisis, which was the imbalance between industry and agriculture (the name was given following the way these tendencies were charted on a graph). Industrial prices were high due to the fact of the scarcity of manufactured goods, while the agricultural prices were low. According to Deutscher: “[P]lanning was essential to a socialist economy, it was a Marxist axiom with which the Bolsheviks were… familiar, and which they had always accepted in general terms.” Ibid., 41. See Michal Reiman, The Birth of Stalinism, op. cit.

57 For the discussion of these concepts, see Leah Dickerman, “Building the Collective,” op. cit.
Thus, as NEP appeared to accommodate itself more to the capitalist norms of production (freer market, limited but still private enterprise, etc.), there was a formation of a Left Opposition to NEP policies. As Sheila Fitzpatrick points out, a high proportion of actively involved Communist students were particular supporters of Trotsky’s opposition in 1923-1924. Later on, between 1926-1927, when the Opposition aimed principally to promote the workers’ resistance to the decline they were suffering under NEP, once again “the Opposition’s condemnation of NEP … probably did arouse a response among students, especially when it was coupled with recommendations for improving the material conditions of student life.” In this context, Krutikov, a student at VKhUTEMAS / VKhUTEIN, in his proposition for the “flying” city projected into the future, appears to oppose the constraint of 1928, by escaping from the reality of the present into ideals from the near past. We are reminded of Benjamin’s words “The utopian images which accompany the emergence of the new, at the same time, reach back to the primal past.” For Krutikov, this “primal past” for which he reached resembles the “original” moment of the early post-Revolutionary period, when the new order brought about by the Bolsheviks promised to deliver a collective and international proletarian

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58 Sergei Tret’iakov, “B’em trevogu” (We Raise the Alarm) *Novyi Lef* no. 2 (1927), 1-5.
community. His contribution was to accommodate this emerging society by offering a novel solution for housing complexes. However, by referring to political ideas that were already unpopular, Krutikov exposed himself to harsh criticism.

**Frontiers of Utopia**

Recognizing Krutikov's and Ferriss's projects as intertwined with frontier rhetoric, it is important, to consider their works through Louis Marin's theories, in which he analyses the limits or, as Marin calls them, the frontiers of utopia.\(^6^1\) Marin's comments on More's *Utopia* are actually a fitting description of Krutikov's and Ferriss's endeavour. He writes, that *Utopia* represents:

- on the one hand, a free play of imagination in its indefinite expansion measured only by the desire, itself infinite, of happiness in a space where the moving frontiers of its philosophical and political fictions would be traced; on the other hand, the exactly closed totality rigorously coded by all the constraints and obligations of the law binding and closing a place with insuperable frontiers that would guarantee its harmonious functioning.\(^6^2\)

Marin then situates the subject of *Utopia* in a gap, or, as he coined it, a neutral site. To make his point, Marin explicates that More's ideal place, an island called Utopia, is simultaneously a representation of both England and America. Moreover, the


performatif force of Utopia is derived precisely from the fact that this island is neither America nor England. In other words, Utopia is the name and the figure of their indefinite pause. In this context, we may ask what were the limits within which Krutikov and Ferriss operated? How did they push the frontiers that Marin reckons as intrinsic to utopian endeavours? What were the boundaries with which they delineated their imagined urban space?

Krutikov, who studied in Moscow, and Ferriss, who worked in New York, were both embedded in oppositional situations and places that limited their projects, stimulating them nevertheless to charge the internal confines that marked their respective ideas. Being active in contrasting environments, Krutikov and Ferriss projected their urban designs from sites associated with a New World. Or more precisely, each of them pronounced their concepts while being in the gap, or in between the new and the old realm. Russia rejected the old Imperial order and was in the process of formulating its novel Communist model, while the United States was shedding the remnants of European tradition to prove its status as the New World. Both architects also experienced in their respective milieus constant processes of reinvention that were riveted with confrontation

63 Thomas More’s Utopia of 1516, is a manifestation of this space between the old and the new. Written just a few years after the ‘discovering’ of America, it represented an island somewhere in between the old and the new continents. Utopia, was the merging place, a neutral place, an island between two kingdoms, and two halves of the world. Utopia as the name of a place designated a no-place, containing at the same time another referent, the “other” of any place. In this sense, according to Marin, Utopia is a neutral name,
and challenges during the 1920s – change of leadership and shifts in policies in the Soviet Union, and technological and economic progress mixed with revisions of old values in America.

Responding to these circumstances, Krutikov in his projects removed the proposed city from the closed world into the infinite universe, and Ferriss turned his metropolis into a site of conflated properties where the city collapses into nature. To achieve these effects, each endowed his invented urban form with all the attributes of the utopian genre. Using maneuvers consisting of formulas allowing the existing world to pertain to the one they invented, Krutikov and Ferriss each put forward their imagined cities as the perfect resolution to current problems. Hence, the gorod budushchego and the metropolis of tomorrow each corresponds to reality rather than diverges from it. Despite originating in present urban models, their visions aspired to create a spatial framework considered to be better adapted to the social, political and economic changes that had already occurred. The Soviet and the American utopian visions were precisely a response to the architect's own anxieties and stereotypes related to the contemporary city and means of transportation. Furthermore, both Krutikov and Ferriss in their projects mixed spatial with temporal elements. In effect, the allocated sites, although generalized, were that of an urban domain transported to the future. Krutikov pushed spatial

a name that connotes the limit, the gap between two continents or two frontiers. See Marin, Utopics, op. cit., 85-98, idem, “Frontiers of Utopia,” op. cit., 410 ff.
transformation even further in his vision by separating housing from the terrestrial realm and removing it to celestial latitudes. All the same, throughout their projects, Krutikov and Ferriss comparably delved into utopian concepts.

According to Marin, tropes such as “horizon,” “travel,” and “map” are of primary importance in the utopian paradigm. Through these figures the frontiers of utopia are established. Upon inspection, it becomes evident that in the Gorod budushcheego and in The Metropolis of Tomorrow, each of these tropes was utilized extensively. Krutikov, in his introduction, set his objectives to “expand horizons,” meaning both the extension of human knowledge, as well as the opening up of vision to the extremes of outer space. Moreover, regarding travel, Krutikov’s dwellings that were supposed to hover in the air, offered a repetitious journey between places of residence and sites of work and recreation. Actually this daily excursion was a crucial component of Krutikov’s vision. As Marin pointed out, all narrative is a travel narrative, and travel itself is the most typical form of the utopian process. In Krutikov’s metropolis, this voyage was done by every citizen equipped with individually operated, multifunctional cells, used to freely commute between communal shelters in space and earth. The emphasis, however, was on the joined, collective aspect of the overall journey towards Communism.

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Krutikov’s city was neither on earth nor totally in outer space. It was split and divided between housing launched into the air and work and leisure left bound to the ground. By exalting human shelter above the horizon, Krutikov pushes the limits, the physical borders of his gorod budushchego into new literal and metaphorical highs. At this elevated point, his city could gain a commanding position of an exemplary site able to breach national borders, and moreover, its citizens were removed far away, indeed liberated from any existing problems. It was the people who, by commuting back and forth between “heaven and earth,” achieved the utopian state. This travel – between the earth and a complex of dwellings hovering in open space – conjures up a journey to an island. This island, however, is not surrounded by water (like all terrestrial islands are, and of which Utopia is paradigmatic) but is enveloped by air in the stratosphere. But like all islands, Krutikov’s “Utopia” is a built up, artificially created, orderly organized closed, but in open space, isolated territory that requires perpetual voyages.

For Ferriss, travel was incorporated into the metamorphosed mountainous city as a self-contained element. By the means of elevators, people were advised to reach the upper levels to recharge their lungs with fresh air. Actually, Ferriss’s concept in his whole book was based on a journey, starting with stops in selected cities to view existing towering structures, and culminating with a map of the envisioned city, complemented by his guidance in navigating it. Albeit conspicuous, this map does not specify geographical
location. Instead Ferriss used it to reinforce a tripartite urban structure as the ideal solution.

Compared to Ferriss's map, which is eminently displayed albeit vaguely designed, Krutikov's map is even more evocative in character. His drawing of the paraboloid formation of dwellings suspended above concentrically arranged structures on land, has the quality of a schematically rendered map. To reference the position of the vertical and horizontal elements of the city, Krutikov only hinted their location on the globe and in the firmament through a general view of both. We may conclude, that Krutikov's city was an abstract place, a generic locus. The same, indeed, can be said about Ferriss's vaguely rendered map. Krutikov and Ferriss, though starting from totally different moments and situations, through adaptation of utopian rhetorics arrived at corresponding propositions. Each architect, in his projected city, invited the reader/onlooker to venture into an unknown place, a nowhere, a whereabouts fathomed only by the authors. Yet, while confronted, Krutikov's diploma project and Ferriss's book convey similarly intense convictions about the viability of the submitted projects. These parallels, springing from shared utopian language, should not lead, however, to the conflation of the realities of the systems Krutikov and Ferriss represented and in which they operated.
CONCLUSION

Things to Come

With cities it is as with dreams: everything imaginable can be dreamed, but even the most unexpected dream conceals desire or, its reverse, a fear. Cities, like dreams, are made of desires and fears, even if the thread of their discourse is secret, their rules are absurd, their perspective deceitful, and everything conceals something else.

*Italo Calvino, Invisible Cities*

Krutikov’s future city and Ferriss’s metropolis of tomorrow were such highly fantastic propositions that neither could ever have actually been constructed.

Furthermore, the unrealistic nature of these two designs, we may argue, undermined Krutikov’s and Ferriss’s professional credentials as practical, down to earth architects.

Instead, their visions placed them amongst the dreamers, artists whose ideas and representations breached pragmatism for the sake of unbridled poetic imagination, no matter how strenuous and logical their arguments may have been. Each architect harnessed his dream-like vision, which he made palpable throughout his representations of the future city, as I have argued, to promote agendas beyond the architectural realm.

Revoking exuberant urban space, Krutikov and Ferriss saturated their visions with ideologies that had already lost currency in their respective countries, as I have detailed in this paper. In the Soviet Union there was the erosion of the original post-revolutionary ambitions associated with Internationalism, and in the United States there was a crisis of national identity caused by the, so-called, “disappeared frontier.” Krutikov and Ferriss
responded to those challenges by projecting the city of the future, using a highly evocative, imaginary visual vocabulary.

Appreciating that the crux of their projects was the future, it is fitting to conclude my investigation of Krutikov’s diploma project and Ferriss’s book by delving into things that have indeed been delivered by “tomorrow.” What, for instance, happened to the ideas promoted by Krutikov and Ferriss during the 1930s? As I have explained, the year 1928 in the Soviet Union, and 1929 in the United States, were decisive moments that changed the course of internal politics in these two countries. Russia under Stalin geared up its policies to speed the process of achieving its goal, i.e. an ideal communist state within its borders, while hardening its doctrine and enforcing its policies. American anxiety over the “lost frontier” was given a new perspective in 1929 when the stock market crash sent the economy plummeting, undermining the stability of America’s golden dream. In these new and altered circumstances, which of the concepts that Krutikov and Ferriss addressed in their projects continued to prevail? How were they modified? Which ones were rejected and why?

Krutikov’s vision of the “flying city,” or more precisely his proposition to equip its citizens with flying machines, met rejection and harsh criticism from proponents of the official doctrine, because it was utopian. However, one artist continued exploring concepts that were close to Krutikov’s idée fixe. Between 1929 and 1931, Vladimir Evgrafovich Tatlin built an apparatus for flying, which he named Letatlin (Fig. 76) — a
verbal punning of his name and the Russian word *letat*’, meaning “to fly.” Tatlin called his new invention an air bicycle, because it was not motorized but propelled by man. Tatlin envisioned his glider to be an extension of ideas related to the material culture that he had been practicing for almost two decades. Although representing an oneiric background, or perhaps because of that, *Letatlin* can be perceived, to use Arvatov’s phrase, as “the materialized utopia,” and as a symbol of Tatlin’s unrelenting faith in the imaginary. The fact that Krutikov’s flying city remained only on paper, or that *Letatlin* never really flew, does not detract from the significance of these two projects as embodiments of a liberating desire and the literal expansion of a horizon, combining at the same time the artistic with declared utilitarian goals. However, when questioned in

1 According to Tatlin’s conception it was a glider type, winged apparatus without an engine -- a late homage to Leonardo da Vinci, and a response to the more recent experiments of Otto Lilienthal in 1896. Tatlin hoped that a person could fly using this invention with the help of his own muscles, the flexibility of the body and the oscillating movement of the wings of this apparatus. He thought it to be an everyday object of the future Communist way of life. Widespread use of *Letatlin* would thus result in a strong and physically well-developed society.

2 It is actually difficult to establish when Tatlin conceived his idea for the *Letatlin*. Lodder writes that according to one source, Tatlin had been working on it for ten years before 1933, and he is reported to have talked about it in Kiev in 1925. This would suggest that this idea emerged some time during the 1920s. This is confirmed by V. Khodasevich, who claims that Tatlin began to talk about this project in the mid-1920s. However, Zhadova points out that as far back as 1912 Khlebnikov wrote, “Tat[lin] flew off in his flyer.” Three versions of the *Letatlin* were built and they were exhibited at the Pushkin Museum of Fine Arts in Moscow in 1932. Tatlin continued to work on this project until his death in 1953. See, Christina Lodder, *Russian Constructivism* (New Haven and London: Yale University Press, 1983), 213-17; Larissa Alekseevna Zhadova, ed., *Tatlin* (London: Thames and Hudson, 1988), 147-51; John Milner, *Vladimir Tatlin and the Russian Avant-Garde* (New Haven and London: Yale University Press, 1983), 217-25.

3 Tatlin’s project, being highly romantic, was grounded in ideas of natural, organic movements and activities. The design was based on the forms of birds. He believed that the air bicycle would relieve the urban settlements of traffic and noise, and would decrease pollution from exhaust. When situated within the context of Tatlin’s earlier projects, especially the *Monument to the Third International*, the *Letatlin* begs
1932 by Kornelii Liutsianovich Zelinskii about the aesthetic status of Letatlin, Tatlin replied, “I don’t want this object to be approached in a purely utilitarian way.” Yet, later, when Zelinskii pressed him about the practical importance of his apparatus, he riposted with a question: “Doesn’t the proletariat need [a glider]?”

Although it was as fantastic as Krutikov’s hovering city, Tatlin’s flying object nevertheless found a large group of supporters, particularly amongst aviation aficionados, who were convinced of the usefulness of Letatlin. Indeed, during the 1930s, aviation and the concept of flight took on a paramount importance in the USSR. However, its

the question whether the artist was convinced that anyone could indeed fly in such a machine, or if that was rather an “artistic undertaking,” an exercise of imagination or a retreat of some sort.

4 Kornelii Liutsianovich Zelinskii, “Tatlin,” Vechernaia Moskva (Evening Moscow) 80 (April 6, 1932). Quoted in Zhadove, Tatlin, op. cit., 309. Zelinskii, a literary critic, at the beginning of the 1920s was one of the organizers of the literary group of Constructivists, and its leading and most radical theoretician. In 1930 he published an article “The End of Constructivism,” and became a pertinacious opponent of the tendency he earlier advocated, criticizing it as “bourgeois” and “imitating the West” (the same invectives used by Mordvinov in his attack on Leonidov and Krutikov). Zelinskii scrutinized Tatlin’s activity and his latest project from a technological and vulgar position, finding completely unacceptable the bionic method of form-creation. We then see, that while Tatlin’s design was rebuked by Zelinskii as organic, and too “low-tech,” Krutikov’s project encountered a likewise rejection by its critics for being however scientific and too “high-tech,” thus the opposite. Apparently it did not matter, high- or low-tech, flying introduced by Krutikov and Tatlin was rebuffed as utopian, because did not fit the official monumental programme.

5 Ibid. In the interview with Zelinskii, Tatlin stated: “The dream [of flying] is as old as Icarus. ... I too want to give back to man the feeling of flight.” Quoted in ibid. Tatlin’s recollection of the mythical figure of Icarus (and at the same token alluding to Icarus’s father, Daedalus, who was an architect/craftsman and inventor of wings on which he and his son were supposed to flee from captivity on Crete), underscored flying as the fantastic route of escape. Flying is, overall, as in the archetypal dream, a kinetic metaphor for liberation. Although Krutikov never referred to the Greek myth, his premise for a future city where its citizen are freely flying, can be also interpreted as symbolizing freedom, for example, from gravity that ties work and leisure to the earth’s surface. Leaving that behind, the liberated individual takes off high above the horizon to regenerate his energy by hovering in the air in communal dwellings. Manfredo Tafuri, calls this the “Icarus complex” meaning a dream of a purity entrusted to a waiting without hope. In Tafuri’s opinion the desperate “without hope” architect has no choice but to create architecture that “would have to levitate, to take off and fly, like ... the Letatlin [and] like the utopian projects of Krutikov.” Manfredo
preeminence was not based on the building of flying cabins, or of bicycles with wings venturing into internationally shared open space, but of a mighty flotilla of steel aircraft to defend the strongly defined borders of a nation. Such a concept is illustrated, for example, in a photomontage by Klutsis in 1933, which envisions Stalin saluting/showing the way to dozens of airplanes and dirigibles that fill the sky above the Kremlin (Fig. 77). What was then allowed to be in the air above the Soviet Union was there to attest to the Soviet mastery of the skies and the country’s correlative ability to defend its citizen.⁶ Aviation became a propaganda vehicle for Stalinist Russia, and as John McCannon points out, during the 1930s it functioned as the most prominent cultural symbol of the Soviet Union, second perhaps only to Stalin.⁷

The Stalinist campaign to stimulate public interest in aviation had its climax in the 1936-1938 period. These years also witnessed the design, construction and decoration of

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the Maiakovskaia subway station in Moscow. Its platform, built with stainless steel, forty meters under the surface of the city, prominently displayed a series of thirty-five mosaics by Aleksandr Aleksandrovich Deineka, all representing images of flight and aircraft, placed within the domes of a high ceiling. In the Moscow subway, built on Stalin’s order, the paradigm of Russian culture, with its interplay of oppositional characteristics, was fully utilized. In this case the low and the high, or the realm beneath the earth and the sphere high above it, were conflated in the space in which engineering achievements of the underground travel were imbued with technological prowess allowing the Soviets to conquer the sky. When commuters descended under the paved streets of Moscow, they were thus shown Russia’s mastery over the firmament prominently displayed above the subway platforms. The irony is that it was Maiakovskii’s name that had been used to elevate and charge the subterranean corridor

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9 The durability and highly reflective quality of steel were then associated with such attributes as svetlost’ (light) and svetloe (radiant). These concepts in turn represented the goals of the USSR. See Catherine Cooke, “Beauty as a Route to the ‘Radiant Future:’ Responses of Soviet Architecture,” *Journal of Design History* 10, no. 2 (March 1997), 137-60. Etymologically Stalin’s name was derived from a Russian word stal’ (steel). His Russicized adopted name is supposed to allude to his strength and power. Stalin’s original Georgian surname was Dzhugashvili. He kept his first name, Iosif, and Vissarionovich, his patronymic one.

10 For history of the station, its architecture and decoration, especially on the symbolism of Deineka’s mosaics, see Jane Friedman, “Soviet Mastery of the Skies at the Mayakovskii Metro Station,” op. cit.
with Stalinist rhetoric. During the 1930s, everyday-life reemerged, orchestrated as a massive spectacle of signs, of which the cult of the leader and of various socialist heroes (a re-evaluated Maiakovskii among them) was only one of many aspects of the meaning-making mania. This loud and celebratory ceremony now seems in severe contrast to the climate of fear and silence associated with the purges, which reached their height at the same time, between 1936 and 1938.

There was yet another development during the late 1920s and early 1930s that resonated with concepts comparable with those presented by Krutikov in his project, namely, his emphasis on residential structures and the form of urban settlements. Shortly after Krutikov completed his diploma project, new trends dominated the scene of Soviet urban planning. At the onset of the “Cultural Revolution,” between 1928-1931, some architects and planners began to produce designs that, although they followed the new

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11 I am referring here to the dichotomy that Lotman and Uspenskii have mapped-out within the Russian culture, and Vladimir Paperny has traced during the Soviet period. See, Chapter Two, note 128.

12 Maiakovskii, the author of the *Flying Proletarian*, a former futurist, a promoter of creative freedom and strong follower of Lenin and Revolution, who was intrigued and fascinated by Western culture, during the late 1920s became severely criticized by state-sponsored officials. As I already mentioned, at the end of the 1920s, the Stalinist regime began intensifying its control over the production, distribution, and reception of artistic culture. The avant-garde artists, Maiakovskii included, were then derided as formalists excessively concerned with the stylistic components of their work, and lacking concrete understanding and appropriate engagement with the evolving soviet “reality.” Maiakovskii committed suicide on April 14, 1930. In December 1935, five years after the poet’s suicide, Stalin himself inaugurated the reappraisal of Maiakovskii’s reputation with his statement: “Maiakovskii was and remains the most talented poet of our Soviet epoch. Indifference to his memory and his works – a crime.” Thus the artist, who could not adjust to the growing Stalinization, and committed suicide as an exit, was after his death rehabilitated by Stalin and used as a vehicle to convey a strongly nationalistic ideological message. See, Svetlana Boym, *Death in Quotation Marks: Cultural Myths of the Modern Poet* (Cambridge, MA: MIT Press 1991); Andrei
official policy of emphasizing community and including accelerated industrialization, were diverse and extremely utopian, comparable indeed to the imaginative project by Krutikov. Similar to Krutikov’s proposition of the future city, the discussions among Soviet specialists in 1928-1931 were extremely theoretical and abstract, focusing on questions related to the nature of the sotsgorod (socialist city). Some of the projected


14 The discussion related to the idea of sotsgorod that preoccupied economists, political activists, urban planners and architects focused on a conceptual model for the territorial redistribution and resettlement of the Soviet population. Among the plethora of new urban programmes at the end of the 1920s, two of them are usually described as “urbanization” and “de-urbanization,” although a more adequate characterization of these tendencies would be that the first concentrated on a compact method of settlement, while the latter used a linear approach. The main theorist of urbanist conceptions was economist Leonid Moiseevich Sabsovich. His hypothesis of 1930 was based on the assumption that because the economic and social transition to Communism would be completed within fifteen years, the settlement appropriate to this New World would have to be ready by then. The settlement should not exceed 40,000 inhabitants, everyday-life was supposed to be almost totally collectivized through the construction of commune houses (doma-komuny), factory kitchens (fabriki-kukhni), accommodations for children, and other communal arrangements. The leading “de-urbanist” was the sociologist Mikhail Aleksandrovich Okhitovich. The de-urbanists proposed the elimination of everything resembling a city, large or small. Individual “living cells” were to be erected along main highways, factories were to be placed next to natural resources, territories were to be equivalent due to the even distribution of electric power throughout the entire country, and transportation from residences to work was to be provided by cars and buses “as in America.” Among those who projected the dispersal of cities along continuous linear communities adjacent to transportation and power corridors were Ivan Il’ich Leonidov and Nikolai Aleksandrovich Miliutin. Miliutin’s plan for a perfect industrial new city was based on Taylor’s assembly-line industrial method. Hence he named his urban system a “functional assembly line.” What is interesting about these ideas on decentralization, is the fact that although they seemed to cancel out the traditional vocation of the city -- to stand as the locus and
arrangements even recalled ideas put forward by Krutikov. The communal houses of the “urbanists” or the fast, flexible, and individually operated transportation promoted by the “de-urbanists” are all reminiscent of Krutikov’s own tenets. The promulgation of the heated urban discourse was, however, abruptly halted, and the main participants of this discussion were vehemently attacked in June 1931. The tone of accusation and the invectives uttered then were comparable to those used against Krutikov. Utopian thinking was no longer allowed in the Soviet Union. The imaginary “utopian” plans of architecture and urban forms of the 1920s petered out in the early 1930s, to be officially condemned in 1936 as “formalist.”\(^{15}\) Lazar’ Moiseevich Kaganovich announced at the 1931 Plenum of the Party Central Committee that all existing towns were already then socialist, since the socialist Revolution had taken them over.\(^{16}\) Consequently, the utopian ideas and searches of *sotsgorod*, or the socialist city, were deemed to be obsolete and redundant. In the early 1930s, the interest and social base of the avant-garde gave way to the more

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\(^{16}\) Kaganovich warned that the Party would consider any effort to dispute the Party’s position as sabotage and would treat it adequately: “The Party will determinedly resist both the right opportunists who try to drag us backward and to disrupt our reconstruction, and the ‘left’ phrase-makers who fail to take into account the concrete conditions of the present period, and as a matter of fact, are helping the right wing.”
populist concerns of the expanding and increasingly authoritarian bureaucracy. The state apparatus was beginning to swell with the influx of new cadres, primarily of worker and peasant origins, whose visions of the material terms of socialism were radically different from the ascetic vision of the avant-garde and closer to the materialism of the pre-Revolutionary period, with its emphasis on consumption and the pleasures of bourgeois domestic life. At the same time, with the overwhelming number of peasants streaming into cities each day, lured by new jobs opened up by industrialization, expediency dictated an urban solution, and consequently decisive and drastic measures were taken. The multiplicity of voices was shut down, divagations were forbidden and the demolition of Moscow began to create space for monumental reconstruction. It was in 1934, we remember, that Ferriss's immense projects of the future metropolis were considered by architects and urban planners in Moscow as a "valuable novelty" (tsennoie novoie) -- in spite of being "a product of thought and creativity [coming from] an architect in a

Obviously, the hard line was set then in motion. Quoted in Lazar Moiseievich Kaganovich, *Socialist Reconstruction of Moscow and Other Cities in the USSR* (London: International Publishers, 1931), 125. Around the same time appeared the dramatic contradictions of Soviet social life that emerged under Stalinism. Thus the housing was accommodating the commissar’s plush penthouse to the worker’s compact dormitory room. These contradictions not easily explained in terms of the transition from bourgeois to socialist living patterns, were characteristic elements of the conflicts and ambiguities of the Stalinist period. For a discussion of the social and material aspirations during the Stalinist period, see Sheila Fitzpatrick, "Stalin and the Making of a New Elite, 1928-1939," *Slavic Review* 3 (1979), 377-402; Lynne Viola, *The Best Sons of the Fatherland: Workers in the Vanguard of Soviet Collectivization* (New York: Oxford University Press, 1987); Vera Dunham, *In Stalin’s Time* (Cambridge: Cambridge University Press, 1976).
capitalist country." The appetite was for re-working and re-modeling the new grandiose style. In effect the USSR, as a whole, became a huge construction site.

While Moscow was undergoing an eradication/re-building craze at the onset of the 1930s, New York’s response to the economic collapse brought about by Black Thursday in 1929 resulted in a slow down of construction, with just a few exceptions.

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18 Aleksei Viktorovich Shchusev and L. E. Zagorskii, *Arkhitekturnaia organizatsia goroda* (Architectural City Organization) (Moskva: Gosstroizdat, 1934). 18 (see Fig. 25).

19 Around the same time in the United States, in 1931, when the general paralysis of the early Depression set in, and when the majority of city planning commissions were completely inactive, Charles Beard of Columbia University, a well known historian and political scientist of the day, called for a Federal Council to make a “Five-Year Plan for America.” The federal government was supposed to buy up marginal lands, build highways and electrical transmission lines, authorize “corporate farming” and massive low-cost housing, and employ “an army of two or three million men to tear down and build cities descent to live in and delightful to the eye, summoning to its aid the best architectural talent in the country … But the plan is not utopian: it involves the extension of practices already in effect, and brains and materials are available.” Charles Beard, “A Five-Year Plan for America,” *American City* 45 (1931), 108.

20 I am alluding here to a propaganda magazine *CCCP na stroike* (*USSR in Construction/ USSR im Baul URSS en Construction*), that was a part of a new aggressive policy launched by the state. Conceived in the atmosphere of the First Five-Year Plan as an upbeat chronicle of Soviet accomplishments, its main objective was to promote a favourable image of the Soviet Union abroad. It was published monthly between 1930 and mid-1940s. (It resumed again for one year, in 1949, in three languages – Russian, English, and French, and in March 1950 was re-invented as *Soviet Union.*) The magazine was intended primarily for foreign distribution, although it was also disseminated within the Soviet Union, where its role was to bolster excitement and reinforce support for state policies and practices internally. Initially it appeared in four separate editions – German, English, French, and Russian; later a fifth edition in Spanish was added. *USSR in Construction* epitomized the new state’s approach to issues related to internationalism. Although published in various languages to reach an international audience its formula missed the objectives of the magazines published in many languages during the 1920s, whose aim was to engage in exchange and dialogue. Instead, *CCCP na stroike* was relegated to function as a loud mouthpiece, a one-way projectile of propaganda. The ideals of the International seemed to be forgotten.

21 Among the most prominent examples of works conducted in New York during the Depression were three structures. First was the completion, in 1930, of the Chrysler Building, the swansong of the “roaring twenties,” a project that had started in 1928. The other two structures, whose foundations started after the crash, were the Empire State Building (begun at the end of 1929, and finished in 1931), and the Rockefeller Center, for which construction lasted between 1931 and 1940.
During the Depression, the complex called Rockefeller Center (Fig. 78) was the most spectacular in scale. In its colossal size, monumental mass and domineering height, the Center and its skyscrapers embodied the vision projected by Ferriss in *The Metropolis of Tomorrow*. Similar to the towers projected by Ferriss, Rockefeller Center offered dramatic vistas from its roof terraces. Moreover, Radio City’s intervention into Manhattan was comparable to the impact that Ferriss’s envisioned such centres would have on their surroundings – dwarfing them to the point of irrelevance. This similarity did not escape the critics. For some, it was the realization of a nightmare that Ferriss’s vision exemplified; for others it was regarded as a fulfillment of the glorious future prophesied by Ferriss. In his attack on the Rockefeller Center, Mumford, the ardent promoter of decentralization, used Ferriss as a foil to scrutinize the whole undertaking and its architecture, admitting at the same time to the popularity and appeal of Ferriss’s

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22 Initially, it was supposed to house the Metropolitan Opera; however due to the impact of the financial crash, John D. Rockefeller, Jr. with his board of advisers dropped the high art institution, and concentrated instead on popular entertainment and commerce while adopting the city-within-a-city concept. The high art of opera became supplanted by radio broadcasting and musical productions, because, as Nelson Rockefeller announced: “The answer was Radio. Opera was the great old art, radio the new – the latest thing in this contemporary world of ours, the newest miracle of the scientific age.” Quoted in Jules Abels, *The Rockefeller Billions* (New York: Macmillan, 1965), 313. This new approach caused harsh criticism. Writing in 1932, Frederick Lewis Allen accused Rockefeller Center of desiring to be a place of mass amusement rather than an authentic cultural centre, while other critics denounced the project as a purely speculative venture devoid of any real social motivation. Frederick Lewis Allen, “Radio City – Culture Center?” *Harper’s Magazine* 170 (April 1932), 534-545.

23 According to the architect Raymond Hood, it was exactly the spectacular effect of the landscape project involving, besides its system of gardens on various levels, the top gardens of this so-called “New Babylon”, that attracted the public and offered possibilities for higher profits. Manfredo Tafuri, “The Disenchanted Mountain: The Skyscraper and the City,” in Giorgio Ciucci, Francesco Dal Co, Mario Manieri-Elia, and
renderings. Recommending that the complex be viewed at night, when its “monstrosity”
is fully revealed, he wrote: “Under artificial lighting, in a slight haze, the group of
buildings looks like one of Hugh Ferriss’ visions of the City of the Future.” 24 Then,
commenting that an ash heap, if properly illuminated, could also be impressive at night,
Mumford added: “Again life has imitated art, for these drawings of Ferriss, with their
emphasis on mass, combining bulk and power with the soft romantic edge one can
achieve only in charcoal, were the pinnacle which the Big Boys steadily sought to
reach.” 25 Although Ferriss’s contribution to Rockefeller Center was limited to
architectural rendering -- he depicted the first and the final stages of the overall design 26--
there is, as Mumford noticed, an uncanny resemblance, or even a fulfillment of Ferriss’s
ideas of the ideal, centralized city projected in The Metropolis of Tomorrow. The
constructed, massive city-within-the-city of Rockefeller Center seemed to exemplify
Ferriss’s ideals on paper.

Composed of twenty-one buildings and taking up three city blocks, the Center
indeed became a condensed city within the existing urban fabric of New York. The intent
of its architects and promoters promised to foster a sense of community, openness, beauty
and convenience. It resulted primarily in solid returns on the investment as the largest

Manfredo Tafuri, The American City: From the Civil War to the New Deal, trans. Barbara Luigi La Penta
24 Lewis Mumford, “Mr. Rockefeller’s Center,” The New Yorker (December 23, 1933), 29-30.
25 Ibid.
privately sponsored real estate venture ever undertaken in New York, and became a
virtual monument to the power and glory of capitalism. In addition to real estate
investment, and to the emerging mass culture in the United States (in the form of
musicals and movies shown at Radio City Music Hall), the development of Rockefeller
Center created an opportunity to strengthen connections with international business. At a
time when in the Soviet Union the state took a decisively isolationist course, and when
the belief in the International revolutionary movement lost ground, it was Rockefeller
Center that came to represent an alternative meaning to the concept of internationalism
by mapping out a new orientation toward corporate globalization. While Ferriss in his
inventive metropolis of the future evoked an unspecified location that was nonetheless
imbued with only domestic points of references, the realpolitik of the 1930s motivated
Rockefeller to extend his field beyond national borders.

26 The Associated Architects, who worked on the project, besides Ferriss, hired also John Wenrich in the
capacity of an architectural renderer.
27 In the original conception and prior to the new national alignment brought about by World War II, the
Center contained four “international buildings”: British, French, Italian and German. Those sites were
supposed to draw capital from the respective countries and provide space for the American corporate
business in European markets.
28 The 1920s in the United States is usually represented as a time of cultural and economic isolationism,
growing nationalism and political reaction – in part due to the defeat, by an isolationist Congress, of
president Wilson’s plan for the United States’ involvement in the League of Nations, and to the subsequent
election of successive Republican administrations. Ferriss in his work seemed to follow this orientation.
The internal collapse of the economy forced entrepreneurs such as Rockefeller to seek during the 1930s
new opportunities abroad. At the same time, for many Americans, Rockefeller with his grand undertaking
during the Depression, embodied hope in the capacity of enterprising Capitalism to overcome the crisis. In
a radio broadcast, when work on the Center had just started, Rockefeller was “exalted for “his challenge to
the depression, his gallant defiance of the dark spirit of hard times, his expression of faith in the future of
America.” Quoted in Raymond B. Fosdick, John D. Rockefeller, Jr. A Portrait (New York: Harpers and
There is yet another fascinating correspondence between Ferriss's new city that, as I have argued, represented a novel adaptation of frontier rhetoric, and the "theme for Rockefeller Center." In both instances the frontier was recalled as an intrinsically American (i.e. of the United States), highly nationalistic identity, indicating the country's unique history and its destiny. In Rockefeller Center, this theme was represented by a highly elaborated, documented and subsequently depicted decorative scheme. The Rockefellers engaged Hartley Burr Alexander, a professor of philosophy at the University of Southern California, to develop the programme for the Center's decoration.

Alexander's first suggestion was called "Homo Faber, Man the Builder," and his ruminative essay explaining the main concept included scenarios for a host of murals and sculptures throughout the complex. Alexander also submitted a complementary proposition, for which the leading motif of a "working man" had been changed to

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30 Appreciating the competitive nature of capitalism and communism, and the drawn battleground for the USA and the USSR during the 1930s, Alexander wrote: "if a whole population, such as Rockefeller City will possess, can be lifted into a finer life in their working hours, then the economic democracy of America will have begun its answer to the Bolshevist challenge." Hartley Burr Alexander, "Rockefeller City – Thematic Synopsis," May 1932, Rockefeller Family Archives, quoted in Alan Balfour, Rockefeller Center, op. cit., 137.
“Frontiers of Time.”31 The second theme aimed to situate the Center as a conglomerate aptly responding to unprecedented challenges by becoming the symbol of a new civilization. Overall the interpretation of the dynamics of the city and their conflation with the business magnates behind the colossal edifice, and the unrelenting conviction in a laissez-faire economy -- even during the Depression -- sounds like an addendum to Ferriss’s metropolis:

The theme should grow out of the structure and uses of the city itself and to this are two angles: (1) as an architectural monument the [Rockefeller] City is unique, and as an architectural interpretation of the civilization will inevitably challenge comparison with the great monuments of other civilizations; (2) as a social enterprise of the greatest importance for the future of the culture, not only of North America but in the world.

“Frontiers of Time” is a theme phrase which is appropriate for an enterprise indicating that here is the beginning of a new conception in the culture of America. Undoubtedly the age is ripe for such a conception. The geographical, the space frontiers of our Globe have virtually come to a close in our own day, but for the future of mankind, in the measures of time, greater frontiers are opening.32

The last proposition, after modifications by the Rockefellers and their advisors, was accepted in its final version as “New Frontiers and the March of Civilization”:

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31 Was this “Homofabor” (sic), as Alexander called him, fraught with too ambiguous a meaning and too prone to be interpreted as a “working man,” and consequently alluding by a default to the Soviet ideology and its doctrinal elevation of a proletarian? Alexander, by suggesting the second version, testified to the ambivalence and the caution of his approach, especially when calling up ideas even remotely related to Marxist ideology and its rendition by the Soviets. The vicissitudes of Diego Rivera’s mural -- called Man at the Crossroads Looking with Uncertainty but with Hope and High Vision to the Choosing of a Course Heading to a New and Better Future -- in the building housing the Radio Corporation of America (RCA), caused by the inclusion of Lenin’s portrait, proved, among many things, the limits of the Rockefellers’ liberalism and their contemporaneous world-view, which Alexander was most likely sensing.
This theme is intended to interpret our American civilization of the moment, its manifestations, its meanings, its promises. We are considering specifically the pictorial representation in Rockefeller City or where we have arrived and what we are going through as a people, physically, mentally, and spiritually ... as well as what we are about to go through. The past will be brought in naturally and briefly as background, but the points of special interest will be developed from our life today.\textsuperscript{33}

This “life of today,” during the 1930s, indeed revealed the common themes that entered Soviet and American visual production, saturated, however, with oppositional meaning. The two final examples demonstrate this correspondence, manifesting at the same time the persistence and metamorphosis of utopian idioms in both countries. The eastern entry leading to the Radio Corporation of America (RCA) building at Rockefeller Center is designed as a royal portal embellished with a relief (yet another take on the already old metaphor of perceiving the skyscraper as a cathedral of commerce?). Above the central doorway there is a figure in polychromatic stone, called \textit{Genius, Which Interprets to the Human Race the Laws and Cycles of the Cosmic Forces of the Universe, Making the Cycles of Sight and Sound}\textsuperscript{34} (Fig. 79). On its sides, flanking the main


\textsuperscript{34} The history of Lee Lawrie’s main sculpture, that was initially called \textit{Wisdom: A Voice from the Clouds}, is another case in point of consistent shifts and relentless reworking that the overall decorative programme was undergoing. Moreover, indecisiveness and constant alteration of the inscription that was part of the relief, while revealing the highly spiritual vein imbued into the whole complex, proves also the high importance allocated to visual representation and its symbolism. The prevailing spiritual references, citation of Scriptures, and repetition of Christian values, all attempted to infuse the Rockefeller Center with a divine aura, indicating at the same stroke the power and piety of its main patron. Thus again, in the Center, we find tropes similar to Ferriss’s, used to convey transcendental idioms beyond the crude materialism of the industrial city.
"tympanum," are sculpted personifications of Light and Sound. The masonry figure of this genius/wisdom emerges from behind the clouds, which he separates with his left hand, while in his right hand he holds a compass, for conducting measurements, on the glass screen below, that mark the cycles of light and sound. This Art Deco rendition of the mythical master-builder in Rockefeller Center, although appropriating William Blake's image of God-Creator, reminds us of Dolgorukov's poster (Fig. 8), with the worker-technician depicted as engaged in a similar task of precise and creative action. However, while the "American" demiurge still hovers in the celestial realm, the "Soviet" one, not losing any of his monumentality, is situated firmly on earth. Both figures vividly manifest utopian currents in the USSR and the USA that were traversing, figuratively speaking, on a vertical axis between spiritual and material domains.

There is, however, another side to utopia -- its dystopian counterpart. In 1930, Rodchenko created a photomontage, *Voina budushchego* (War of the Future) (Fig. 80), in which the dreams of constructing a new life are replaced by fearful projections of newer

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35 The inscription between the arms of a compass is taken from Isaiah 33:6: “Wisdom and Knowledge shall be the stability of thy Times.”


37 Similar remark that underscores these two different modes of operation was made by Erich Mendelsohn. The German architect, upon visiting both countries, commented on ambitions among the architects in Soviet Russia and in the US: "The Russian [architect], technologically speaking still primitive, seeks salvation in the exaggeration of a form of intelligence alien to him, whereas the technologically highly developed American [architect] seeks his in the intensification of a spirituality that is alien to him." Quoted in William J. R. Curtis, *Modern Architecture Since 1900* (London: Phaidon Press, 1996 [1982]), 226.
means of annihilation. On a dark background, Rodchenko placed photographs of New York’s skyscrapers under attack, with the Chanin Building prominently displayed. While two dirigibles hovering above the scene strike the city with what looks like laser beams, two barrels of a canon situated below are aiming upwards at the buildings. Thick clouds of smoke float above the streets. Amidst this destruction, two human figures in gas masks and safety uniforms emerge in stiff, frontal position as ascending from the hell below.38 Indeed, an uncanny premonition of the aerial attacks on the city in September 2001, and particularly on its towering structures. Rodchenko’s vision, executed one year after Ferriss finished his own rendition of the Chanin Building (Fig. 65), can also serve as a grim addendum to, or a morose paraphrase of, Ferriss’s drawing of theatrically staged tower. While Ferriss in The Metropolis of Tomorrow depicted the Chanin Building as being dramatically highlighted with the smudged light of reflectors beaming upward towards its top, the Soviet artist totally reversed the direction of precisely concentrated

38 Rodchenko made this photomontage for the title page of the magazine Za rubizhom (Abroad). Below this image there was a text: “Smotritie! Vo slavu svoei diktatury Deterding i Rokfeller [sic] “spasaiut” kul’turu” (Look! Celebrating their dictatorship, Deterding and Rockefeller “defend” culture). Evidently, Rodchenko regarded the dealings of these two oil magnates as a trigger and a catalyst for war in the name of protecting “culture” from barbaric, uncivilized forces perceived by them in Bolshevism. Furthermore, Rodchenko represented the strategies of these two capitalists as leading to a destruction of the civilization and culture both businessmen claimed to defend. Sir Henry Deterding, a strong anti-Bolshevik and Anglo-Dutch oil businessman (co-founder of a Royal Dutch-Shell Oil Company in Holland and in Great Britain), together with John D. Rockefeller, a leading baron in the U. S. oil industry and a stringent anti-Communist, were apparently both financing Hitler and the Nazis, who they perceived as protectors from the Soviet Union and the Bolshevik ideology.
streams of light, which function in his representation not to showcase but to destroy.\textsuperscript{39}

The "things that came" with the 1930s, caused political, social and economic tension, impacting the course of utopian projection that states, institutions and individuals had adhered to. In this process, utopia revealed its Janus-face potential. It was only in the short nine years of the third decade that the frontiers would be redrawn, borders would be attacked, and building projects would focus on digging deep trenches.

Considering the current situation, when built cities disintegrate and instead city-images gain currency through digital or virtual form, and when the urban utopian fantasy is quarantined within the boundaries of the theme park and tourist destination (i. e., Disneyland or Skansen museum) -- in other words, when utopia has been turned into a commercial venture -- there is, in my opinion, an urgency to call upon the moment when city space was still regarded as needing and deserving utopian ideals. The visions of the perfect city by Krutikov and Ferriss offer this intro-retro-spection. These two projects are

\textsuperscript{39}For the fascinating history and interpretation of a searchlight, see Paul Virilio, \textit{War and Cinema. The Logistics of Perception}, trans. Patrick Camiller (London, New York: Verso, 1989 [1984]), especially chapter seven: "A Travelling Shot over Eighty Years," 68-89. Virilio points to the growing importance that the play of light assumed after the First World War, particularly in film. Virilio writes: "after 1914, the air arm's violent cinematic disruption of the space continuum, together with the lightning advances of military technology, ... have literally exploded the old homogeneity of vision and replaced it with the heterogeneity of perceptual fields" (20). While Rodchenko employed the explosive characteristics of the laser light in his depiction of a nightmare, Ferriss's utilization of reflector streams of light in his rendering is comparable to the Hollywood's promotion of the "American dream," as exemplified in the emblem of Twentieth Century Fox where the light flashes projected on the company's logo in effect illuminate in dramatic manner the producer of celluloid fantasies.
fascinating not because they offer a prescription for today’s problems, but rather because they present intriguing insight into how they were constructed -- as very determined attempts to rescue the declining city while rekindling ideas of lost and/or mythical causes. Although Krutikov and Ferriss failed badly in what they suggested -- eccentric, impractical cities, verging towards scientific phantasm or an antiquated gargantuan organism -- both architects nonetheless succeeded in dreaming big, albeit alternative visions. However, in appreciating the architects’ great imagination, the strength of their convictions, and the dilemmas each of them faced, we should recognize how utopian thinking is vulnerable, or perhaps prone to become a dystopian reality.

40 Here lies the ambivalence of human actions that are oriented towards changes of the present in the name of the future. It was Marx who warned that in moments of crisis when we are engaged “in creating something that has never yet existed,” we are in danger of conjuring up the spirits of the past. We then appropriate “names, battle cries and costumes in order to present the new scene of world history” in a “time-honoured disguise,” and a “borrowed language.” Karl Marx “The Eighteenth Brumaire of Louis Bonaparte,” in David McLellan, ed., Karl Marx: Selected Writings (Oxford: Oxford University Press, 1977), 300.
APPENDIX
Georgii Tikhonovich Krutikov’s text of his diploma project¹

G. Krutikov

Premise of the project “City of the Future” [gorod budushchego]
Illustrations and diagrams represented on sixteen panels.
Panel 1 – 3: Architectural theory of a mobile form
Panel 4 – 5: Form evolution of mobile structures
Panel 6: Water – land – air apparatuses
Panel 7: The beginnings of mobile housing
Panel 8: Living conditions in mobile structures
Panel 9: The portability of mobile structures
Panel 10: Progress of power engineering
Panel 11: Physical culture and man of the future
Panel 12: Building evolution
Panel 13: Expansion of a horizon
Panel 14 – 15: Conquest of a new space
Panel 16: Dreams, fantasies, first attempts, caricature, achievements

Panel 1:
OPTICAL DEFORMATION OF A MOBILE FORM
Two moments of perceiving a mobile form:
   a) when a trajectory and a mobile form are perceived separately,
   b) when a trajectory blends with a mobile form; that gives a new form and
      creates a kind of new body with some other qualities not only of a perceptual
      order, but also of a physical one

1. Lightening under the “microscope of time” /in 1/100 000 fraction of a second /
   Visible structure of lightening. Course “b” transferred into a course “a.”
   Course “a” transferred into course “b.”

¹ My translation of Krutikov’s text closely follows the original. I aimed to render its laconic character. I
have also attempted to proceed literally in conveying Krutikov’s style (that is specific and awkward), rather
than to paraphrase the author’s writing. Krutikov often used sentences that are not grammatically correct
(the are constructed of one word or they are missing a verb, for example), or they are presented as a
continuous but rather loosely evolving line of thoughts. Throughout this text, I have kept its original
emphasis and punctuation, as well as its use of lower case letters and the forward slash. The last device
Krutikov used quite liberally. On some occasions I have inserted the original Russian term, or restated
Krutikov’s phrase, hoping that it would make a precise point of reference in the former, and would create
greater clarity in the latter case. These interventions I indicated by placing them inside square brackets.
3. The same effect is achieved when the latter [contrary occurrence] has been applied to
the movement of stars.
4. The effects of moving illuminated points – an illuminated merry-go-round in one of
the amusement parks in Berlin.
5, 6. Various positions of an automobile – while it is parked and while it is moving.

Panel 2:
COMPOSITION OF MOBILE CONSTRUCTIONS
/Its differentiation from a composition of immobile buildings. /
1. Statics / vertical structure / and dynamics / horizontal structure / skyscraper and
dirigible.
2. From a steamship into skyscrapers.
3. Oppositional moments of statics and dynamics / a canvas of a railway with an
imaginary train, as well as semaphore signals /.
4. Composition of an immobile building / a plan of St. Peter’s Basilica in Rome /.
Section of a compositional point of axes to underscore the direction of a movement.
This point is situated inside of the building.
5. Another example of a section of compositional axes in an immobile building.
6. Composition of a mobile construction / plan of a contemporary steamship /. The only
longitudinal axis of this structure is directed towards movement that is located outside
of this structure.

Panel 3:
FORM-MAKING [formaobrazovanie] OF A DYNAMIC ELEMENT
1. Moment of inertia / compositional axis.
2, 3. Forms in nature / adopted in technical devices. The fundamental mass is located
inside a head of a movement [in the frontal part of a moving object] / a fish /.
4. Movement of a human being. The fundamental mass is again located inside a head of
a movement. The torso is transported all the time towards a front. The movement
culminates in one point – a nose.
6. Psychological test. Two forms of the same size during a movement are perceived as
having a different size, depending on where they are situated on the axis of the
movement. The person who perceives them is assessing the size of these forms as
located in a head of the movement [in the frontal part of a moving object].

Panel 4:
FORM EVOLUTION OF AN AUTOMOBILE AND A TRAIN
Panel 5:
FORM EVOLUTION OF A SHIP, A DIRIGIBLE, AND AN AIRPLANE

Panel 6:
WATER – LAND – AIR APPARATUSES
Aspirations to unify existing mobile abilities available on land, in water and in air to create a universal apparatus in regards to planet Earth.

Panel 7:
THE BEGINNINGS OF A MOBILE HOUSING
Foreign travelling cottages [recreational vehicles] as examples of a nascent mobile housing.

Panel 8:
LIVING CONDITIONS IN MOBILE CONTEMPORARY STRUCTURES

Panel 9:
The Portability of Mobile Structures
/ light weight of the material and construction /

Panel 10:
PROGRESS OF POWER ENGINEERING
/ aspirations in the domain of technology of mobile structures to diminish the dimensions of an engine and the overall parts that service them, to increase the amount of living space. Ideally the engine should not take a lot of space. /
1, 2. Spatial oppositions: in the first instance a large volume is being occupied by an engine, the second case demonstrates a total absence of an engine.
3. Radio control.
4. The music over a radio.
5. Setting in motion of a factory through a hand stroke.

General note: the power engineering is (currently) on the verge of a revolution, which is bound to deliver discoveries that would allow utilization of atomic energy.

Panel 11:
PHYSICAL CULTURE AND MAN [cheloviek] OF THE FUTURE

Panel 12:
EVOLUTION OF CONSTRUCTIONS
from a cave to a house in the air /
1. Human aspiration to rise above the Earth.
2. Skyscraper crisis / due to the fact that the skyscraper takes over huge amounts of space on the ground with its foundations, and because it contains insignificant sections on top, there is a need to escape this waste by dividing the skyscraper into elements that would be separately hung in space.
3. A house freely hovering in space / section and axonometric drawings of interior space R 100 / Dirigible aspires to be utilized in capacities similar to a sanatorium supplying a mountain air.
4. In its early stages mobile dwelling can also utilize (and improve) the principles of a railway suspended in air.

Panel 13:
MAN’S ASPIRATION TO EXPAND [HIS/HER] OWN HORIZON [range of interest, krugozor] / to expand [his/her] own vision about the Earth and about the universe / A universal mobile cell / represented in operation / it is bound to deliver the opportunity to view the Earth [from above], to fly in the air, and to submerge into marine depth.

Panel 14:
CONQUEST OF A NEW SPACE
And new points of view.
1. The Earth viewed from above.
2. Open outer space.
3. A house in the air.
4. The stratosphere / demonstrated a project of an airplane by M. Val’ie [Max Valier] that is able to reach speed of 2000 meters per second.
5. A rocket for interplanetary space.

Panel 15:
[CONQUEST OF A NEW SPACE]
1. Interplanetary space.
2. Space of a universe.
3. A rocket into interplanetary space.
4. A rocket, like a festive spectacle / through the evolution of rocket communication [transportation] there is a possibility for architecture of the future to learn from formal aspects of rocket’s trajectory /.
Panel 16:
DREAMS, FANTASIES, FIRST ATTEMPTS, CARICATURE, ACHIEVEMENTS
1. Disasters of mechanical transportation represented in a caricature from the past.
2. Contemporary image of automobile traffic.
3. Economical “disadvantages” of a railway when that is compared to a horse. A locomotive is depicted as a monster devouring an incalculable capital.
4, 5. A caricature mocking an idea of suspending a cable cart in the air, and an image demonstrating the latter.
6. A stroll in a carriage not driven by a horse. An illustration that was regarded humorous in the last century.
7. Similar stroll taken place currently.

G. Krutikov
“City of the Future” -- evolution of principles in the planning of cities; research in the field of general questions regarding architecture – a diploma project, year 1928.


The explanation of drawings, illustrations and plans of the project.
1. Expansion of the architect’s horizon in accordance with a number of scientific disciplines that usually fall out from [his/her] field of vision / mathematics and geometry of the fourth measured continuum, movement technology, knowledge about space in nature – astronomy and atomic theory, biology, psychology and reflexology /.
2. Raising a question regarding planning in three-dimensional space.
3. Introduction of a dynamic element into architecture.
5. Raising a question regarding architecture of outer space [bol’shikh prostranstv].
6. Raising a question regarding relativity of architectural principles.

Panel 1:
A FLYING DWELLING CELL [zhilaia iacheika]
Photo:
1. Housing cell during flight / in perspective.
2. Housing collective with honeycomb-shaped roofed galleries [loggias] / the
insertion of sites of mobile housing cells /

Diagrams:
1. Mobile housing cell as a part of a fixed [to the ground] dwelling / communal house / Its particularities
2. Contemporary mobile dwelling
3. Introduction to architecture at the moment of movement / of the 4th co-ordination /. Architectural quality of that moment

Panel 2:

DWELLING ORGANIZATION

Photo:
1. Working communes / in perspective / The first version.
2. Sections and a plan / represented are the moments of engagement and disengagement of a mobile cell.

Diagrams:
1. Dwelling organization / the verticals with apartments of individual use are incorporated into a public [communal] ring.
2. Their utilization in city planning. A l t i m e s of the housing atmosphere /3rd co-ordination of space /

Panel 3:

[DWELLING ORGANIZATION]

Photo:
1. The second version / photo from above /.
A "hotel-type" housing. Its lower part consists of continuous units in a honeycomb shape for short-term parking of the [mobile] cells. In the middle part – the organization is similar to the one demonstrated in version number three.
On the top there are rooms for communal use.
2. The third version
Appears to be achieved as the result of the concentration of spatially divided elements of the first version [of housing]. All the verticals are assembled into one, large cylindrical form, a ring gathered into a sphere, that includes rooms of communal use.

Note: The reasons for raising houses above the Earth, as well as the technological possibilities of this lift are examined separately.

Diagrams:
1. Skyscraper crisis.
New points of view.
2. Contemporary modes of suspension: a) aerial railway, b) dirigible, mechanical power applied vertically.

3. Expansion of one’s horizon: a) in relation to space, b) intellectually. Principle of housing according to an expanded horizon. Architecture of outer space.

Panel 4:
CITY ORGANIZATION
Photo:

1. Perspective of a city. City in two planes: vertical (plane) – (contains) a residential area, horizontal (plane located) on the surface of the earth – (contains) an industrial area.

   Note: For the purpose of sharpening the mind, there is assumed a necessary stage – an ideal way to vertically arrange a free suspension in the air. As it happens, modern technology is already involved in resolving this problem. Transitional phases are examined separately.

2. Plan and section of a city.

   Represented in the lower corner are diagrams explaining the formation of city form.

Diagrams:

1. Earth position, position of other planets and of interplanetary space. / The small schemes on the side explain many features of the position of the Earth: in its social, technical and formal order.

2. A principle of a m o b i l e p l a n n i n g.

   Architecture and space.
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Fig. 3: George B. Ford, *New York City Zone Law Diagrams* (detail), 1916. In Harvey W. Corbett, "High Buildings on Narrow Streets," *The American Architect* CXIX, no. 2369 (June 8, 1921), 605, Fig.1.
Fig. 5: Georgii Tikhonovich Krutikov, *The Premise of the Project “City of the Future.”* 1928. Panel 1: Optical Deformation of a Mobile Form; Panel 2: Composition of Mobile Buildings. Collage, paper, india ink, and photographs on cardboard, 47.8 x 143 cm. A. V. Shchusev State Research Museum of Architecture, Moscow, R I a 11200/1-4. In *The Great Utopia: The Russian and Soviet Avant-Garde, 1915-1932* (New York: Solomon R. Guggenheim Museum, 1992), Plate 691.
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Fig. 7: Aleksandr Mikhailovich Rodchenko, Maquette for illustration to *Pro eto* (About This), a poem by Vladimir Maiakovskii, 1923. Cut-and-pasted printed papers, gelatin-silver photographs, ink, and gouache on cardboard, 35.3 x 24.4 cm. In Magdalena Dabrowski, Leah Dickerman, Peter Galassi, *Aleksandr Rodchenko* (New York: The Museum of Modern Art, 1998), Plate 69.
Fig. 11: Postcard, Moskva budushcheGO (Moscow of the Future), 1913. In Catherine Cooke, Russian Avant-Garde: Theories of Art, Architecture and the City (London: Academy Editions, 1995), back cover.
Liquid hydrogen

Liquid oxygen

Free liquid evaporating at very low temperatures

Liquid hydrocarbon

\textbf{Fig. 20: Konstantin Edvardovich Tsiolkovskii, spacecraft design dated to 1903, 1914 and 1915. In Frederick C. Durant III and George S. James, First Steps Toward Space (Washington D. C.: Smithsonian Institution Press, 1974), 271, Fig. 4.}
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Fig. 43: Staged photograph of Hugh Ferriss on his studio parapet, not dated. In Hugh Ferriss, *The Metropolis of Tomorrow* (Princeton: Princeton Architectural Press, 1986 [1929]), 152, Fig. 3.
Fig. 44: Hugh Ferriss, “Bird’s-Eye View. The City at Dawn,” c. 1923. Charcoal crayon.
Fig. 46: Caspar David Friedrich. *The Wanderer Above the Mists*, c. 1817-1818. Oil on canvas, 74.8 x 94.8 cm. Kunsthalle, Hamburg. In Hugh Honour and John Fleming, *The Visual Arts: A History* (Upper Saddle River, NJ: Prentice Hall), 664, Fig. 15-19.
Fig. 59: Jules Guérin for Daniel H. Burnham and Edward H. Bennett, View west of the proposed Civic Center Plaza, Chicago, 1908, plate 132 from the *Plan of Chicago*, 1909. Pencil and watercolour on paper, 76 x 105 cm. On permanent loan to The Art Institute of Chicago from the City of Chicago. In John Zukowsky, ed., *Chicago Architecture, 1872-1922. Birth of a Metropolis* (Munich: Prestel-Verlag, 1987), Fig. 73, 407.
THE CITY

COULD BE MADE IN THE IMAGE OF

MAN

WHO IS MADE IN THE IMAGE OF

true some day. Let the vision be of a city beautiful, clean-walled, glowing with color, majestically sculptural, with a lift toward the skies; and let it be simple, convenient, sweet-running, airy, and light. Our children's children may see it, so fast do thoughts travel these days. And we may

Fig. 74: Dmitrii Stakhievich Moor, *Da zdravstvuiet III-ii Internatsional!* (Long Live the 3rd International!), 1921. Litograph, 106 x 68.6 cm, Saltykov-Shchedrin State Public Library in St. Petersburg, inv. 166263. In Mikhail Guerman, *Art of October Revolution* (Leningrad: Aurora Art Publishers, 1979), Fig. 70.
Fig. 77: Gustav Gustavovich Klutsis, front page photomontage for the newspaper Pravda (Truth) n.227 (5753), (August 18, 1933). Cut-and-pasted gelatin silver prints, coloured paper, newsprint, gouache and pencil on paper. 59.5 x 41.9 cm. In Margarita Tupitsyn, Gustav Klutsis and Valentina Kulagina: Photography and Montage After Constructivism (New York: Center of Photography, 2004), 204, Fig. 149.
Fig. 79: Lee Lawrie, *Genius, Which Interprets to the Human Race the Laws and Cycles of the Cosmic Forces of the Universe, Making the Cycles of Sight and Sound*, 1933. Polychromed masonry and glass. RCA building, Rockefeller Center, New York. Photograph by Aleksandra Idzior.