Kenny Cupers, Igor Demchenko

Projective Geographies Between East and West

In his 1947 book *U.R.S.S.: Haute Asie, Iran*, the French geographer Pierre George surveyed Soviet mass housing construction and regional planning with admiration. George was certainly not the only leftist academic in France at this time who looked east in search of solutions to French problems. One particularly acute challenge was housing. France had come out of the Second World War with an extreme housing shortage, and the chaotic suburbanization of the interwar decades – in the form of small allotments of often self-built cottages without infrastructure or public services – was the antithesis of the orderly industrial and housing schemes that George had witnessed being built in the Soviet Union during his visits in the early 1930s.

With its gargantuan projects of heavy industrialization and its pervasive planning apparatus, the Soviet Union seems to have been engaged in an exceptional experiment, testing whether the geography of the union’s vast landmass could be remade in the image of a well-oiled production machine. Here, the discipline of geography was no longer just the description of natural features or human activities on the surface of the earth; it actively contributed to comprehensive planning at a new regional and even continental scale. Nevertheless, such projective geography – a design approach as opposed to descriptive science – was developed not only in the Soviet Union. From the 1940s to the 1970s, planners, architects, and a range of new kinds of experts in the so-called First World as well as the Second World expanded their ambitions from designing housing, neighborhoods, and cities to reshaping the national geography at large. This explicitly geographic register of design, in which nature was first and foremost a resource to exploit, can be considered
a paradigmatic product of the Cold War world order: a consequence of the global proliferation and institutionalization of modernism and a tool of economic development and international competition.

French planning experts, even if they were not able to put territorial design fully into practice, articulated this geographic register most explicitly, using the term géographie volontaire. According to the geographer Jean Labasse, géographie volontaire was a scientific approach born out of the growing realization, from the 1930s onward, that the “geography of laissez-faire capitalism had failed.” The ultimate goal of géographie volontaire then was to organize private enterprise geographically, through the “controlled evolution of landscapes.”3 But where did French geographers stand in relation to their Soviet colleagues who restructured territory for the state-run economy? How was projective geography – as theory and as practice – shaped by the intertwined political realities of East and West? And what did the massive projects of territorial design do to the architectural expertise essential for turning the chimera of development into facts on the ground under both democratic and authoritarian regimes?4

Gestations
Projective geography offers a particular mode of understanding and making territory, one in which the state assumes an unquestionable centrality. How did this approach develop? In the second half of the nineteenth century, a new regime of empire building emerged through territorial expansion and consolidation, but only after the Second World War did that internal territorial development, under the influence of modernist precepts, become the quantifiable measure of state-led modernization. In the 1920s, modernist architecture and planning had begun to promote the use of objective parameters for design. From the 1920s until the 1950s, state planners gradually harnessed this approach to present territorial development as the vehicle of economic and social progress.

In the Soviet Union, projective geography was initially both implicit and central to the new communist state. Regional planning informed by descriptive geography and aiming at the reconstruction of the Soviet Union into a uniformly developed industrialized nation was born out of the GOELRO plan.5 This was an ambitious scheme for the electrification of Russia drafted under the personal supervision of Vladimir Lenin in the early 1920s. The plan was both a technocratic modernization project and a blueprint for regional planning masterminded by Ivan Aleksandrov (1881–1954) and Nikolai Kolosovskii (1891–1954). These geographers, with a background in railroad engineering, proposed a projective and proactive approach to regions as an
instrument of scientifically informed territorial development. However, not until the 1950s did the Soviet state acquire enough economic stamina and expertise to realize its vision (fig. 1).

The science of economic regionalization, associated since the 1960s with the name of Nikolai Kolosovskii, whose *Foundations of Economic Regionalization* (1958) and *Theory of Economic Regionalization* (1969) defined and framed the discipline, is hardly mentioned in the context of post-Stalinist urban planning and prefab construction – and for good reason. First, Kolosovskii passed away in 1954 just a year after Joseph Stalin and therefore could not envision the role of modernist design in the realization of his schemes for the economic development of Siberia, northern Kazakhstan, and the Russian Far East that he had advocated since the 1920s. Second, and more important, even though his students and other proponents of economic regionalization played a decisive role within Gosplan, the central planning agency of the Soviet Union, unlike Stalin’s government they never dictated to architects and urban planners the exact formal parameters of urban settlements (beyond the most basic demographic requirements) – needed to house the workforce that was transported to regions east of the Urals.

At the same time, several important axiomatic moves and pragmatic
procedures within the discipline of economic regionalization allowed for the reshaping of functionalist design and planning principles to such an extent that by the 1980s Soviet planning had almost lost its connection with the original ideas of the Congrès Internationaux d’Architecture Moderne (CIAM; International Congresses of Modern Architecture) or even Nikolai Miliutin’s Sotsgorod (1930) – an earlier attempt at merging architectural modernism with Soviet industrial planning. Above all, the goal of economic regionalization was to locate alternative sources of raw materials and energy for Soviet industry, thus securing the Soviet economy from an overdependence upon its industrially developed western regions, which bordered the ‘imperialist’, capitalist, and inevitably hostile Western Europe. (The Donbass in eastern Ukraine had already twice been occupied by the Germans – first in 1918 and again during World War II.)8 This goal necessitated the introduction of mining, hydroelectric construction, and heavy industry into sparsely populated territories gridded by Kolosovskii into regions (raiony) – economic rather than administrative units – based on the available natural resources (primarily metal ores, but also timber, arable soils, phosphates, etc.) and types of energy (coal, oil, or hydroelectric power).

Siberia, northern Kazakhstan, and the Far East suffered from a deficit of demographic resources – that is, a workforce – which, therefore, had to be imported from the western regions of the Soviet Union. But whereas before Stalin’s death the workforce was transferred East mostly as forced labor (urban settlements attached to new industries thus constituted an ugly combination of “high style” palaces for the administrative elite and slums – barracks and dugouts – for workers), the Khrushchev and Brezhnev governments hired free labor and stimulated its move across the Urals by offering simple apartments in functionalist microrayons (clusters for residential neighborhoods with separate service facilities) designed and planned by the new post-Stalinist generation of Soviet modernists. Yet in their designs they had to take into account the climate of the newly developed regions, the hectic pace of construction, and the numerous limitations of the Soviet planned economy.

In France, the idea of projective geography can be traced to the early 1930s. In the wake of the 1929 economic crisis, political elites marshaled older technocratic ideas as a way of overcoming the failures of capitalism. They were guided by a particular tradition of political thought, rooted in Saint-Simonianism, which advocated resolute leadership in the form of neutral expertise. Cast in direct opposition to the ideology of economic liberalism and nourished by the crisis of parliamentary politics during the 1930s, planisme, or expert planning, found enthusiastic supporters – including modern architects such as Le Corbusier – but could not be put into practice until
wartime, when the authoritarian, conservative, and anti-Semitic government of Vichy took it on. One of that regime’s most urgent concerns – especially after the bombardments of the Renault factories in the suburbs of Paris in 1942 and 1943 – was what experts called “industrial congestion.” The concentration of key industries and infrastructure around the capital was a danger to national military and economic interests and required a comprehensive relocation of industry at the scale of the French hexagon. Furthermore, this industrial and military strategy could be linked to the modernization of rural France, another key point in the Vichy government’s agenda. To this end, the government commissioned a team of experts, led by engineer and businessman Gabriel Dessus and including Pierre George. Their work was published in 1949 as *Matériaux pour une géographie volontaire* (Materials for a Volitional Geography). The book, firmly establishing the notion of *géographie volontaire* in French political culture, expounded a theory for the geographic localization of French industry that was intricately linked to mass housing construction. Partially inspired by Le Corbusier, the authors left little doubt as to who would bear this rationality and its executive power: the centralized state.

After Liberation, the French government distanced itself from Vichy but continued to rely on the idea of expert planning for postwar reconstruction and economic development. France became a “planning state” in which national pride and economic modernization went hand in hand. Under the influence of Jean Monnet, the economist and diplomat who would later become one of the main architects of the European Union, planning became the product of enlightened bureaucracy, crafted behind the scenes of public politics. In 1946, the Commissariat général du Plan (CGP, or Plan Commission), a governmental think tank established by Monnet, was charged with the creation of a detailed five-year plan for industrial modernization.

This state apparatus brought the disciplines of geography, planning, and architecture unparalleled opportunity. Even though experts’ political leanings diverged widely – from Communist to far right – the postwar state offered a key platform of exchange between these different forms of expertise. Eugène Claudius-Petit, minister of reconstruction and urbanism from 1948 until 1953, further promoted *géographie volontaire* with his *Plan national d’aménagement du territoire* (National Plan for Territorial Planning). Advocating for a harmonious distribution of people and activities over the national territory, his plan proposed a radical decentralization of industry away from the Paris region. National economic development could be achieved only through such geographic volition, Claudius-Petit and his experts argued. Their plan was inspired not only by decentralist geography but by the ideas of CIAM and Le Corbusier in particular. In 1945, Claudius-Petit and Le Corbusier visited the
projects of the Tennessee Valley Authority together, and both were deeply influenced by the experience. *Géographie volontaire* required not only geographic knowledge but architectural vision, even if the relationship between international modernism and French state-led planning remained indirect until the 1950s, when projective geography finally came to shape large-scale realizations in both East and West.

**The Territorial Production Complex**

After Stalin, projective geography in the Soviet Union took the form of the territorial production complex. This concept, propagated by Gosplan, was first introduced by Kolosovskii, although he himself preferred the term “combine” (“kombinat” in Russian). The territorial production complex was intended to streamline the flow of raw materials, energy, and labor within a geographically limited area usually defined by a locally specific type of mineral resource. In many ways the territorial production complex replaced the idea of a city in the mind of Soviet urban planners, much in line with Le Corbusier’s dismissal of a city in favor of a geographically defined region, as expressed in the Athens Charter. However, if for Le Corbusier a region was a product of natural topography’s ability to contain population, Soviet planners perceived it through the prism of production cycles planned and often constructed before the arrival of the workforce. Thus, for example, Kolosovskii pointed to hydroelectricity in the East Siberian Region as a core natural resource that would generate several combines; that is, the combination of electric power generation with the production of timber and aluminum (fig. 2). The cascade of hydroelectric power plants built on Angara River and its tributaries primarily in the 1960s and the 1970s after his death supplied a general scheme for the distribution of urban settlements within the region.

The parameters of the new urban settlements built or radically expanded one after another east of the Urals in the last three decades of the Soviet era were defined by central and local institutes of planning. In every specific case those institutes used the plans for prospective industrial development outlined by Gosplan as a point of departure and combined them with the data on local climate, soils, and available and projected population. Generally, the institutes of planning did not publicize their work, and actual design and planning procedures were presented to the public as an outcome of scientifically defined algorithms. One exceptional case was Tselinograd (currently Astana) in northern Kazakhstan, for which in 1964 the Moscow-based Central Scientific-Research Institute of Urban Planning (TsNIIP Gradostroitelstva) published a detailed survey of its planned radical expansion. In 1961 the small colonial town of Akmolinsk was renamed the City of
Virgin Lands (Tselinograd) and made a capital of the new region patronized by Nikita Khrushchev, who hoped that northern Kazakhstan would become a new center of wheat production; its population was expected to increase from 115,000 in 1961 to half a million in the next two decades. The elevated status of the new regional center stimulated the publication of its planning documentation (fig. 3).

Soviet planners expected that the industrial profile of Tselinograd would be defined by its central location within a newly projected wheat-growing region that would rely on the heavy mechanization of agricultural production. Hence the city was to house the factories and workshops that either repaired agricultural machinery or produced the replacement parts for them. Besides, Tselinograd served as a center for the initial processing of agricultural goods and had two textile factories. The planners made every effort to structure both industrial and residential zones along two parallel lines separated by a narrow green belt. Here they were apparently inspired by the Athens Charter and Miliutin’s ideas of a linear city – without quoting either. What made their approach to planning radically different from that of Le Corbusier was the pragmatic distinction between the residential and the recreating zones, with the latter placed along the river that defined the linear expansion of the urbanized area. A point of significant concern was the

**fig. 2** East-Siberian economic region. Southern part (RSFSR). Source: Atlas SSSR (Moscow, 1983), 189.
The future of Tselinograd as imagined in the early 1960s. Source: *Tselinograd (opryt proektirovshchika)* (Moscow: Stroiizdat, 1964), 60.

The increased density of residential areas organized in microrayons with local schools, kindergartens, policlinics, food stores, and service centers provided protection from the strong winds of the northern steppes and created pockets in which trees and shrubs could grow. Due to the intentional suppression and thus lack of private initiative that was characteristic in the Khrushchev years, the planners had to go into the smallest details when calculating the number of facilities – shops, restaurants, and so on – per inhabitant based on the estimated number of active workers and dependents expected to flow into the new center. The same procedure applied to public transportation. Private car ownership was expected to be restricted – not exceeding one car per 20 people by 1980. Leisure facilities were not limited to the immediate recreation zone but extended into the region forming a network of camps, tourist centers, and sanatoria intended at improving the hygienic and health conditions of industrial workers stuck between fairly densely populated residential quarters and the industrial zone. The population density of historic Akmolinsk would be increased as existing one- and two-story houses were demolished and new five-story apartment blocks were constructed in their place, essentially turning the old part of the city into another microrayon with some additional administrative and cultural functions. By increasing the density, the planners of Tselinograd hoped to save on costs when building the new infrastructure (fig. 4).

The reality of Soviet planning for the new urban settlements in the prospective regions was equally far from the utopia of Ebenezer Howard’s garden city and the modernist vision of the Athens Charter. Returning to the East Siberian Region advocated by Kolosovskii and moving forward in time to the
mid-1970s, we see a microrayon in Ust-Ilimsk provisionally constructed for the pulp combine powered by Angara River\(^{13}\) (fig. 5). Ust-Ilimsk was built from scratch in the middle of taiga. The town was photographed by the East German engineer Günter Mosler, who was contracted by the Soviet Union to supervise a brigade of German youth willing to contribute their labor to the development of Siberia. Its apartment blocks are distinctively uniform, which is explained by the absence of a housing market in the Soviet Union. Design is reduced to pure function, while the role of an architect is limited to the climatically sensitive arrangement of the blocks. Thus, by the 1970s the mass production of urban settlements became an aspect of economic regionalization.

Projective geography, institutionalized as the science of economic regionalization (raionirovanie) at the Geography Department of Moscow State University, provided opportunities for urban planners and architects and simultaneously constrained them. The giant machinery of territorial production complexes necessitated functional solutions for housing the workforce imported to the newly developed regions. Modernist functionalism, initially
intended to improve dwelling conditions, was processed and utilized by the Soviet system of projective planning, resulting in the complete evaporation of its original messianic spirit embodied in the figure of an architect-creator. Overtaken by anonymous planning institutes, the design of new residential neighborhoods was reduced to algorithms, genetically related to the ideas of CIAM and the dreams of the Russian avant-garde, but simplified, serialized, and trivialized to ensure reproducibility.

**Géographie volontaire**

In France, one of the first large-scale realizations of *géographie volontaire* was the work of the *Délégation à l’aménagement du territoire et à l’action régionale* or DATAR (Delegation for Territorial Planning and Regional Action). Created in 1963 and populated by the country’s powerful corps of engineers, it became France’s centralized body for regional planning in the following decades. One
of its first projects was the development of the Languedoc-Roussillon into a tourist region. Compared to the wealthy and densely populated Côte d’Azur, the western side of the French Mediterranean coast was a relatively unpopulated swampy area suffering from depopulation and economic decline. DATAR understood this region to be a potential for the state-led development of mass tourism (fig. 6). The modernist architecture of new tourist resorts, such as Jean Balladur’s La Grande Motte or Georges Candilis’ Leucate–Le Barcarès (fig. 7), represented the ambition to design comprehensive regional territories, inclusive of highways, artificial pleasure ports, camping grounds, and mosquito removal measures. In order to realize such enormous and complex projects, planners had to stave off land speculation by secretly buying up vast amounts of land through intermediaries. This was exactly the type of situation for which géographie volontaire could offer a particular logic for managing private development territorially; it was a geography that viewed territory as a function of both state intervention and the dynamics of a market economy. That meant accepting both the omnipresence of the state and surplus value as the basic motor of territorial development. While regional balance could never be permanently achieved because of the inherent dynamics of capitalist development, it needed to be continually pursued through state intervention.
This idea of soft guidance corresponded to the ideology of state planning, which went back to the mid-1940s when the national Monnet Plan had set the basic parameters for postwar reconstruction.

In parallel with these projects for regional development, the French government focused its efforts on the decentralization of Paris, following earlier proposals such as Claudius-Petit’s. To this end, Charles de Gaulle launched the *villes nouvelles* project in 1965. Building on the precedent of the British and Scandinavian New Towns, which French planners studied carefully, the *villes nouvelles* project aimed to decentralize Paris and to promote regional development by creating a series of new, independent cities in the countryside. Five were eventually constructed in the Paris region and four in the provinces (fig. 8). In contrast to the Soviet Union, transportation and mobility was at the forefront of planners’ concerns. By the mid-1960s, modern housing estates built in the suburbs of Paris were criticized for their lack of public facilities and, in particular, the lack of public transportation. The *villes nouvelles* were planned in conjunction with a new regional express network, the RER, but would also be connected to the new highway network that was being built at that time. Another concern for planners was mono-functional zoning. To avoid building bedroom suburbs, they aimed to integrate housing with commercial and other functions. In contrast to Soviet planners, however, they focused on tertiary economic development rather than heavy industry. Their concern was ultimately with the territorial organization of consumption rather than production: *géographie volontaire* differed from projective geography in the Soviet Union in that the geographic exploitation of natural resources was focused on the creation of new landscapes of dwelling, mobility, and leisure rather than on mineral or other forms of industrial extraction.

The resulting concepts and methods of *villes nouvelles* planning were “softer” than their Soviet counterparts and at the same time more expansive than the conventional master plans that had continued to shape urban development in France. This is perhaps not surprising since planning by the late 1960s had become a multi-disciplinary field, fundamentally reshaped by the social sciences. While such planning was still to be geographically volitional, it also needed to be realistic, meaning it had to take as its basis the dynamics of the market, and thus consumer choice in the urbanization process. Consequently, planning could no longer revolve around a static master plan. Designers faced the complexity of an actual geography rather than an imagined one. Even though projects were no longer generated in a tabula rasa, they were inflated to the scale of ever-larger swaths of territory. Instead of the imposition of a set of functional zones allocated to specific human activities on empty land, the existing territory was reinterpreted as a field
of relations and connections, force lines and attraction poles. Only such an approach would be able to efficiently reorganize very large areas of suburban or exurban land while inserting entirely new forms of urbanity that could compete with the center of Paris.

For the New Town of Evry in the exurban outskirts of Paris, this approach amounted to the large-scale and flexible programming of new development zones distributed in the midst of existing suburban developments. For the New Town of Cergy-Pontoise, it meant drawing up an armature urbaine (urban armature) for the existing territory, which included the old village of Pontoise, nearby forests, and an old river bend turned into a lake. A similar approach characterized the New Town of Trappes, later renamed Saint-Quentin-en-Yvelines (fig. 9). Planners reinterpreted existing landscape features as new recreational facilities that became central elements in the New Town’s projected identity.

When these New Towns were built half a decade later during the 1970s, the look of some of the proposals had changed dramatically, even if their conceptual underpinnings were the same. The urban centers of New Towns like Cergy, for instance, were still megastructures, but they downplayed that fact in various ways. During the 1970s, experts and the general public alike fundamentally criticized the kinds of large-scale urbanism sponsored by the centralized state in collaboration with large private developers. They saw the New Towns as the last gasp of such unwarranted megalomania. Where they
could, planners thus cloaked their projects—many of which were already underway—in a new aesthetic, informed by a desire for more intimate environments and for more attention to the site and the historic urban fabric of the city. Based on architectural-modernist concepts such as the vertical separation of vehicular and pedestrian traffic, the center of Cergy-Préfecture was still a single architectural environment united by a plinth—an artificial territory dedicated only to pedestrians, two stories above the existing ground. But with a fine-grained articulation of diverse programs distributed on top of its artificial topography, designers meant to give the new center an intimate scale and the characteristics of “Latin” inner-city neighborhoods like those of central Paris (fig. 10). Despite these transformations, the villes nouvelles and the regional planning and development policies of DATAR constitute the belated actualization of géographie volontaire in France, even if fundamental gaps separated planners’ ambitions from their real impact on urban and regional change.

Conclusion
Soviet geographers seem to have remained generally unaware of géographie volontaire. They tended to look farther west than France, at American planning, even if planners there remained far more skeptical about the civilizing powers of the centralized state than their French colleagues. American liberalism and perceived “opportunism” provoked strong reactions among Soviet planners. For instance, in 1966, Abram Probst (1903–1976), a leading
Soviet economic geographer and Gosplan bureaucrat, in an introduction to the Russian translation of Walter Isard’s *Methods of Regional Analysis* (1960), wrote: “[Isard] proceeds from the supremacy of the demand (sales) over the production even though it is completely obvious that consumption is defined by the production, since people can only consume what has already been produced […] Therefore it is incorrect to point exclusively at the dynamics and location of the demand for the objects of personal consumption as the direct first cause of the dynamics of development and particularly the territorial placement of the production.”¹⁴ Thus, Probst – echoing the French geographers – insisted on the volitional and non-descriptive nature of regional planning; and yet he highly valued the mathematical statistics of inner- and inter-regional exchange developed by the American economist and explicitly advised Soviet planners to learn from him. Regional planning clearly spanned the Cold War ideological divide; at least in its technocratic modes.

Considering the Soviet Union’s continued reliance on heavy industrialization and France’s shift towards a postindustrial society in the 1960s and 1970s, it is not surprising that one of the key differences in Eastern versus Western projective geographies was the attitude towards production and consumption. While French planners in the 1940s still dreamt of reorganizing industrial production on a national territorial scale, the next generation of planners in the 1960s focused almost entirely on consumption and mobility. Their neglect of issues of production and employment was arguably also one of the factors in the gradual downfall of the *villes nouvelles*, some of which suffered
the same social problems as the modern housing estates that preceded them. France’s combination of liberal capitalism with centralized planning shaped géographie volontaire as an attempt to marry state volition with individual freedom and consumption, a tension that came to characterize French New Town designs as they were gradually being conceived, revised, and ultimately built. Soviet projective geography, by contrast, remained production-oriented until the dissolution of the Soviet Union in 1991.

In contrast to French planners’ increasing focus on consumption, Soviet territorial design remained elevated above the “petty” needs of citizens, an approach that tended to trivialize architectural modernism. The experimental modernism of French architects and urban planners reflected a much more nuanced culture of design, never completely dissociated from an older, bourgeois respect for the customer – even when the figure of an individual commissioner was replaced by the state. Despite such differences, however, projective geography was fundamentally the product of transnational exchange – as when Le Corbusier and Claudius-Petit visited the built projects of the Tennessee Valley Authority, Pierre George studied Soviet planning, and Soviet planners themselves looked west, adopting both the modernist approaches of CIAM and the American methods of industrial and regional development.

Endnotes

5 For the early history of geographers’ involvement in regional planning see N. N. Kolosovskii, “Razmeshchenie proizvoditelnykh sil SSSR i zadachi Akademii nauk” (The distribution of production forces of the USSR and the goals of the Academy of Sciences) in idem, Osnovy ekonomicheskogo raionirovaniia (Foundations of economic zoning) (Moscow: Gospolitizdat, 1958), 49–59.
6 See N. N. Kazanskii, “N. N. Kolosovskii v nauke i zhizni” (N. N. Kolosovskii in life and work) in N. N. Kolosovskii, Izbrannye trudy (Selected works) (Smolensk: Oikumena, 2006), 10–25.


12 V. A. Shkvarikov et al. eds., *Tselinograd (opyt proektirovshchika)* (Tselinograd (planner’s experience)) (Moscow: Stroiizdat, 1964).


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