LANDSCAPES OF HOUSING

Design and Planning in the History of Environmental Thought

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ENVIRONMENTAL SPECULATIONS

Landscape suburbanism between housing and planning, 1920s–1940s

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Introduction

Throughout the twentieth century, economic crises and related episodes of industrial and regulatory restructuring transformed the relationship between housing and landscape in design and political agendas. The interwar period was especially intense in this regard. State endorsement of the right to a home and access to nature in advanced capitalist countries shifted from embodying the promise of prosperity to evincing the challenge of nascent welfare regimes at a time of social and economic emergency. Reduced to the elementary condition of shelter and food systems, housing and landscape became the focus of grassroots struggles to recapture a sense of home and land, and the target of administrations trying to reshape the imagination of national territories. Architects and planners were galvanized by the prospect of articulating both realms in new design paradigms and speculated on the potential of landscape to reform residential urbanization patterns on a regional scale. Landscape order could inform development not only from a morphological or perceptual perspective but also, more importantly, by introducing ecological and alternative economic criteria in planning agendas. Far from suggesting a mere rescaling of existing park-system schemes, these hypotheses put forward a problematic discourse of organic design, one that used the supposed symbiosis of home and garden to devise new socionatural formations.

This chapter explores these precedents of landscape urbanism through a number of theoretical interventions from interwar Germany and the United States.[1] It begins with Martin Wagner's proposals for a new pattern of residential decentralization in the late Weimar Republic and during his American exile. Wagner is better known as a champion of Modernist social housing and urban design and a collaborator of trade unions and center-left administrations. In the 1920s, he introduced green open space as a constitutive element of the renowned social housing

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programs he coordinated as Berlin's chief planner. However, he developed the potentialities of the housing/landscape nexus to transform settlement patterns on a regional scale only within the context of the post-1929 crash crisis—a much lesser-known stage of his career. Both before and after the crisis, the ideas of his friend and collaborator Leberecht Migge were key to his reformulation of Garden City and linear-settlement concepts. In the mid- to late 1940s, at a time when Wagner's investigations were coming to an end at Harvard's Graduate School of Design, Ludwig Hilberseimer and Hans Bernhard Reichow reconsidered the mobilization of landscape as a planning framework in highly speculative theoretical interventions. Their contributions tackled many of Wagner's and Migge's concerns and spatial patterns with an approach that was specific to their own design conceptions as well as to the socio-ecological contexts in the United States and Germany.

In their attempt to rationalize existing (sub)urbanization patterns using environmental criteria, these intellectual maneuvers opened the fields of planning and architecture to landscape-oriented perspectives in innovative ways and influenced a younger generation of designers. Their experiences illustrate the evolution of planning thought at a crucial historical point. Awareness of the limits of metropolitan agglomerations was combined with the need to rethink the relationship between housing, food systems, employment, and spatial design in the context of industrial restructuring; the emergence of industrial farming; and the normalization of Keynesian policies. At the same time, however, interwar explorations also anticipated subsequent problems in the integration of landscape in design mentalities, subjecting nature to diverse forms of abstraction and reification as a result of an insufficient engagement with ecological tenets and the subsumption of the environment/housing nexus into broader planning agendas.

From social housing to neo-rural settlements

The notion that residential decentralization could generate a new relationship between urbanization and nature became a commonplace perspective in Weimar Germany. Inspired by prewar Garden City principles, this concept was rearticulated by bold Modernist proposals to radically alter settlement patterns during the 1920s. To name just some of the most salient contributions, between the postwar political turmoil and the stabilization period, Bruno Taut moved from the embrace of "the soil [as] a good home" in *Die Aflösung der Städte* (1920) to his interventions in peri-urban housing programs in the second half of the decade. According to him, the latter were an opportunity to "accelerate the transition to a new humanity" by means of the "interpenetration of the urban and the rural" and the "transcendence of the antithesis between peasant and urbanite."[2] In a similar fashion, town planner Martin Mächler proposed developing Berlin with low-density settlements extending 50 kilometers from the city's core, including domestic and commercial gardens within residential areas.[3] The influential art critic Karl Scheffler went further to suggest that in five decades, a "systematic loosening of [Berlin's] excessively dense urban structure" would take the metropolitan area to the vicinities of the frontier

with Poland, turning the "country dweller" into a "metropolitan" and the "former inner-city dweller" into a "farmer."[4] This notion of territorial hybridity went beyond specialized circles and reached the general public. Scheffler's statements, for instance, appeared in a popular illustrated magazine at a time when the promise of suburbanization as escape from city nuisances pervaded the conventional press and other media. Films such as Gerhard Lamprecht's *Unter der Laterne* (1928) or Maximilian von Goldbeck and Erich Kotzer's *Die Stadt von Morgen* (1930), and flâneur narratives such as Franz Hessel's *Spazieren in Berlin* (1929), located the future of the metropolis in green peripheries that pursued the restoration of a linkage between home and landscape.

This was the context of the better-known stage of Wagner's career. Distancing himself from the vernacular approach of his Garden City education, Wagner's 1915 dissertation advanced a rationalization of the relationship between residential and green areas that prefigured subsequent attempts to render nature an abstract, instrumental variable of urban development.[5] The dissertation drew upon Camillo Sitte's differentiation of "decorative" versus "sanitary green" to emphasize the latter's preeminence in planning strategies at a time of severe environmental and social distress in large metropolises.[6] Under these conditions, the use-value of open space—i.e., its accessibility and capacity to foster active fruition through sports, play, and so on—should take precedence over formal aspects, so as to turn green areas into social reproductive apparatuses that would improve physical and mental health. In order to secure the effectiveness of these functional landscapes, they had to be codified into a strict taxonomy, especially in terms of their relation to residential areas at several scales. Thus, the dissertation put forward a set of categories and quantitative ratios to guarantee the presence of forest areas, parks, gardens, playgrounds, and outdoor sports facilities as an essential public equipment of housing developments. A certain governmentalization of landscape was afoot here.[7] Wagner emphasized the need of state action and regulation to achieve not only the incorporation of green space in urbanization but also the normalization of nature vis-à-vis residential development.

Before the war, he had also met garden designer and theorist Leberecht Migge, who became a highly influential collaborator for two decades.[8] Migge participated in Wagner's two main authorial achievements in Weimar Berlin—Schöneberg's Siedlung Lindenhof (1918–1921) (Figure 5.1) and the initial steps of the famous Hufeisensiedlung in Britz (1925–1927)—and in other major peripheral settlements under Wagner's supervision, including the Waldsiedlung Zehlendorf (1926–1932) and the Siedlung Siemensstadt (1929–1931).[9] The interventions in Schöneberg and Britz, co-designed with Bruno Taut, became pioneer social housing experiences led by partnerships of public administrations, cooperatives, and trade unions. More importantly for our interests here, Wagner, Taut, and Migge used design approaches that incorporated landscape aspects as fundamental features at several scales, from the consideration of site-specific topographical and hydric conditions in the configuration of building blocks to the visual and productive organization of collective green spaces and private gardens. For them, landscaping was key to

FIGURE 5.1 Siedlung Lindenhof, Berlin, 1921. Reprinted with permission from Martin Wagner, "Gross-Siedlungen: Der Weg zur Rationalisierung des Wohnungsbaues." *Wohnungswirtschaft* 3 (1926), 82.

stabilizing neighborhood identity and securing the transition between private and public space, as suggested by Taut's concept of an *Außenwohnraum* (outdoor living space) expanding the domestic realm to surrounding open areas including parks, gardens, and water elements. Migge's early notion of a functional, simply and clearly organized "architectural garden" (*architektonischen Garten*) proved especially attuned to *Neues Bauen* aspirations of rationality and clarity that Wagner and Taut had embraced by the mid-1920s.[10] However, in these experiences—especially Britz, where Migge's designs were soon altered—landscape features were often subordinated to overall layout morphologies.

During the "'creative break' in the construction industry"[11] after the 1929 stock market crash in the US and the ensuing slump in Germany, Wagner developed a more consistent approach to the potential symbiosis between architecture, urbanization, and nature, critically addressing national emergency policies of self-help housing in semi-agrarian settlements.[12] At this point, within the context of a crisis of reproduction, the dialogue with Migge triggered the incorporation of landscape as a primary nurturing element. In 1931, following the suggestion of Hans Poelzig, Wagner initiated a competition around the concept of a "growing house" (*wachsende Haus*). The selected entries—including Migge's, Wagner's and Hilberseimer's—were built as prototypes for the 1932 exhibition *Sonne, Luft und Haus für Alle* (Sun, Air and Houses for Everyone) and were published with a long introduction by Wagner himself. Within the context of increasing suburbanization, and in response to "a general aspiration to bring the human body . . . into the closest and most intimate contact with light, air and nature," he put forward the notion of "biological dwelling."[13] Besides the attention to domestic metabolism and the recycling of waste, this hypothesis proposed a morphological and functional interpenetration of housing and landscape: "the house grows in all directions into the garden" and the garden

gets "into the house," not only in the form of sunlight and air but also the "children of nature, flowers and plants, closely surround and grow into this home"; "house and garden grow together into a spatial and biological unit."[14] This formulation echoed Migge's seminal consideration that "[h]ouse and garden not only belong together" but should also "emerge from each other," the latter constituting an "extended dwelling" that transfigured domestic life into garden life: "the inner structure of the house has an organic continuation and translation in the garden."[15]

Supervised by Migge, Wagner's prototype appeared as a straightforward elaboration of these theoretical intentions (Figure 5.2). The house-garden plan was organized in three "rings" around the core living room, including a layer of functional

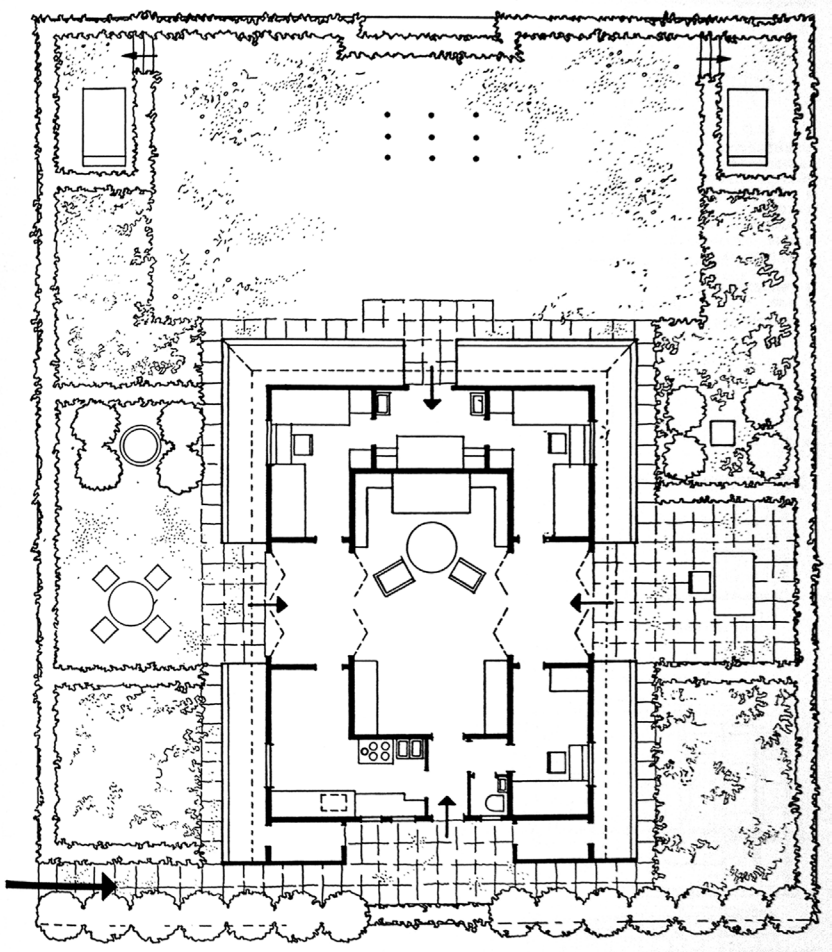

FIGURE 5.2 Martin Wagner, The Growing House (*Das wachsende Haus)*. Reprinted with permission from Martin Wagner, *Das wachsende Haus. Ein Beitrag zur Lösung des städtischen Wohnungsfrage*. Berlin: Bong & Co., 1932, 145.

spaces (bedrooms, bathroom, toilet, and kitchen); a walk-in greenhouse skin surrounding the building to regulate thermal performance and provide room for plants and garden tools; and the outer space of the private garden, compartmentalized to extend dining and working areas within the house and including a sunbathing and gymnastics space larger than the house itself, adjacent to the bathroom. "[D]edicated to body care and the regeneration of all physical forces,"[16] the preeminence of this latter section showed Wagner's ongoing focus on health and exercise, a fundamental feature of 1920s Berlin's agenda for the reproduction of urban labor power. The tone, however, was ostensibly altered, with an unexpected emphasis on the individual, private practices encouraged by a new articulation of architecture and nature. The hitherto pervasive reference to the collective substance of urban housing and parks was replaced by mere residential aggregates without considering their metropolitan or regional insertion.

Ironically, it was Migge who first elaborated a proposal at a larger scale that same year. Following the guidelines of the Brüning cabinet's emergency decrees,

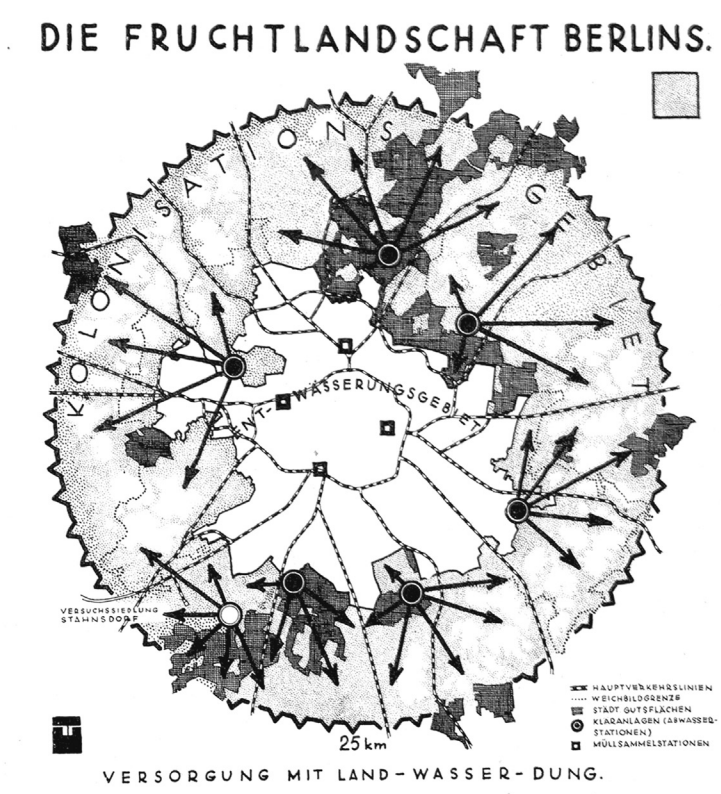

FIGURE 5.3 Migge's concept of *Fruchtlandschaft* sought to link home, agriculture, and regional landscape. Reprinted with permission from Leberecht Migge, "Eine Chance für Gross-Berlin." *Deutsche Bauzeitung* 7 (1933), 125.

his book *Die wachsende Siedlung nach biologischen Gesetzen* (The Growing Settlement According to Biological Laws), suggested a scheme of agrarian urbanization to house part-time industrial and farm workers in self-built dwellings. The residential units would include large garden plots that could organically evolve with household necessities. Disseminated in clusters across metropolitan areas and connected to agglomerations by public transport, the dwellings were conceived as autonomous homesteads using compost strategies.[17] Linking home, agriculture, and regional landscape, Migge focused on the land's capacity to sustain a working population and referred to his concept as a *Fruchtlandschaft* (productive or fertile landscape). This notion stressed the capacity of intensive farming to shape a broader cultural landscape (*Kulturlandschaft*) based on principles of self-sufficiency and mutual aid.[18] Devised at a time when Migge was about to embrace National Socialism, the *Fruchtlandschaft* was also presented as an opportunity to reconnect the individual and the nation through an intimate bond with the soil. He subsequently proposed to apply this solution in Berlin, relocating a population of one million in settlements around the capital. They would reuse the city's organic waste and wastewater to nurture the gardens, which would in turn become a source of food for the whole metropolitan area (Figure 5.3).[19]

Suburban townscapes for America

In 1932, however, Wagner was also working on a new regional scheme that rescaled the *wachsende Haus* prototype. This new elaboration combined his previous proposal with elements from the Garden City tradition and Nikolai Miliutin's *Sotsgorod*, a radical linear-settlement concept for "de-urban" resettlement in Soviet Russia.[20] In that framework, the aforementioned "growing house" groups can be understood as one of the layers of Wagner's proposal for a "band-city" (*Bandstadt*) running "like a long big village . . . through the countryside."[21] The residential quarters of these units of 50,000 inhabitants extending parallel to mass transport infrastructures would be embedded in gardens between an industrial layer and a larger "space of nourishment" (*Nahrungsraum*), conceived as a metabolic apparatus providing food and processing the settlement's waste.[22] Unlike Migge's neorural vision, Wagner used an emphatic machinic jargon to stress the continuity of factory and farm and their central place in the new country-town's (*Stadt-Land*) economy. The scheme was developed two years later, without graphic elaboration, in *Die neue Stadt im neuen Land* (The New Town in the New Country), where Wagner discussed his regional vision for a town-country-town (*Stadt-Land-Stadt*) of linear settlements of 5,000 inhabitants with adjoining agricultural spaces, articulated in broader urban clusters of 25,000 inhabitants.[23] Farming and industry were integrated in intensive systems in order to maximize job creation, increase output, and raise the population's consumptive power.[24]

After joining Harvard's Graduate School of Design (GSD) in 1938, Wagner turned these intuitions into a more systematic, collective research project.[25] During this period, he worked with students and colleagues—amongst others, his friend

Walter Gropius—on a program of regional "rehabilitation" based on a new decentralization pattern including the systematic renewal of city cores to eliminate residential uses and the restructuring of suburban territories to create new towns fusing residential, industrial, and agricultural activities that would absorb the metropolitan population. Within this framework, Wagner and his collaborators produced abundant material until he retired in 1950. The exploration was prompted not only by Wagner's previous concerns but also by the perspective of a continuation of New Deal policies in the fields of housing, transport infrastructure, industrial recovery, agricultural modernization, and landscape conservation, and later by the need to plan postwar economic scenarios securing full employment and shelter for veterans. More specifically, Wagner saw his work as an extension of Franklin D. Roosevelt's first brain trust's intrepid resettlement arrangements, such as the Resettlement Administration's greenbelt-town program and the projects of the Division of Subsistence Homesteads.[26]

Within this context, Wagner and his collaborators rehearsed urbanization morphologies in New England that transcended the traditional city/country divide. The term "town" referred now to an urban system "covering a whole region in which a 'township' would be the lowest sub-section of this organization . . . a new type of . . . settlement which is part of a new country-town in a new 'town-country'."[27] These formulations, already present in the early 1930s, were adjusted to emphasize the role of landscape and its relationship with residential groups. The new "regional pattern" would consist of "garden-cities embedded in regional city-gardens";[28] or "an organic group of garden-cities (*Gartenstädten*) in city-landscapes (*Stadt-Landschaften*), i.e. in units where town-scapes (*Stadtschaften*), forest-scapes (*Waldschaften*) and country-scapes (*Feldschaften*) would penetrate and mingle with each other."[29] The contact with the American landscape design tradition and the contemporary efforts of GSD Dean Joseph Hudnut to bring together architecture, planning, and landscape architecture in a new curriculum helped Wagner to consolidate an interest in the environment that, as we have seen, was already *in nuce* in Berlin. Echoing Migge's old recommendation that the "garden designer has to be taken into account before anything of drastic importance is decided" in housing design,[30] Gropius and Wagner remarked that:

> The landscape architect ought again to be the first man (sic) to appear on the planning field. Modern planners and builders therefore should rid themselves of the notion that landscape architecture is something to be applied in the "back-ground" or in the "fore-ground" for mere "beautifying" purposes. In our new township the landscape will become an integral and organic part of the region and it will have to penetrate the various parts in and around the town and thus serve as a feeding ground for a new culture.[31]

Wagner's first forays in the United States applied the ideas of the late Weimar period in a ribbon development pattern around high-capacity transport networks between Boston and New York. Between 1938 and 1940 he prepared

two proposals, one distributing township clusters along a network of so-called superhighways—following the idea of the 1938 Federal Highway Act—and another, more consistent continuous assemblage of settlements and infrastructure connecting both cities. The latter was divided into bands comprising agricultural and horticultural areas; a zone with small gardens, industry, and public facilities; a "super-highway" including a suspended high-speed train; and a residential area with detached neighborhood units based on a Radburn-style layout connecting pedestrian paths to green wedges and a final layer of parks and forests (Figure 5.4). The residential areas of this latter scheme were occupied by groups of Wagner's famous igloo-house prototype, devised as part of this broader project.[32]

In his explorations with colleagues and students in the 1940s, Wagner abandoned the linear pattern, using a more traditional satellite structure with self-contained townships of 5,000 inhabitants surrounded by greenbelts of parks and productive land (Figure 5.5, Figure 5.6).[33] Each township was composed of five to six lower-scale "townlets," and in turn formed a larger entity with another four to five townships, a town-country-town (*Stadt-Land-Stadt*) of 25,000–30,000 inhabitants.[34] The settlements were devised to absorb the families of industrial workers from the Boston metropolitan area, a fraction of which would be employed part-time in farming activities in an attempt to engineer a new suburban lifestyle. In order to locate the townships, the research team evaluated the environmental qualities of diverse sites including natural attractions, land suitability, wind regime, and climate conditions.[35] The proposals, especially towards the mid- and late 1940s, used very-low-density housing patterns and flowing geometries in an attempt to dilute the built fabric in the immediate landscape, halfway between radical back-to-the-land initiatives such as the Tennessee Valley Authority's Norris, Tennessee, and postwar sprawling subdivisions. The street pattern eroded traditional architectural hierarchies. Lacking a front façade, the prefab houses became structures embedded in a continuous garden, open in all directions to common open space. Using one of his intricate neologisms, Wagner referred to this form as an "organic townscape-town" (*organische Stadtschaftstadt*).[36]

These interventions insisted on the open country's central role in the new town economy, which should work as a "promoter of agriculture, forestry and recreation."[37] About half of the available land was reserved for the creation of "spaces of nourishment." They would provide further job opportunities and local production of everyday goods for the settlement's population and industry. Farms would use both locally produced industrial fertilizers and the townships' waste and sewage water to enhance soil quality which, together with reduced distribution costs, would secure higher revenues for farmers, helping to revive the primary sector in the vicinities of metropolitan areas.[38] Some of the proposals considered the feasibility of the farming schemes through painstaking calculations of the distribution of dividends amongst different actors in conventional and reformed market circuits.[39]

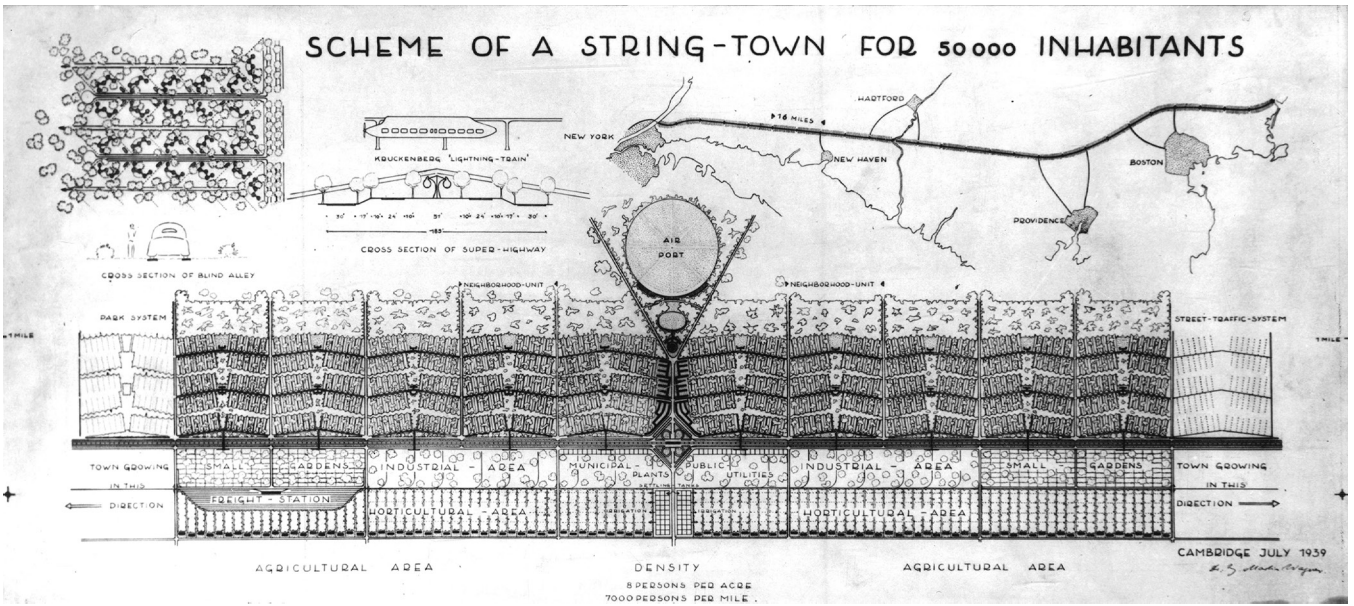

FIGURE 5.4 Martin Wagner, scheme of linear settlement between Boston and New York, including agricultural and horticultural areas, food gardens, and a park system, 1939. Martin Wagner Papers, folder 57, housing types and sites. Courtesy of the Frances Loeb Library, Harvard University.

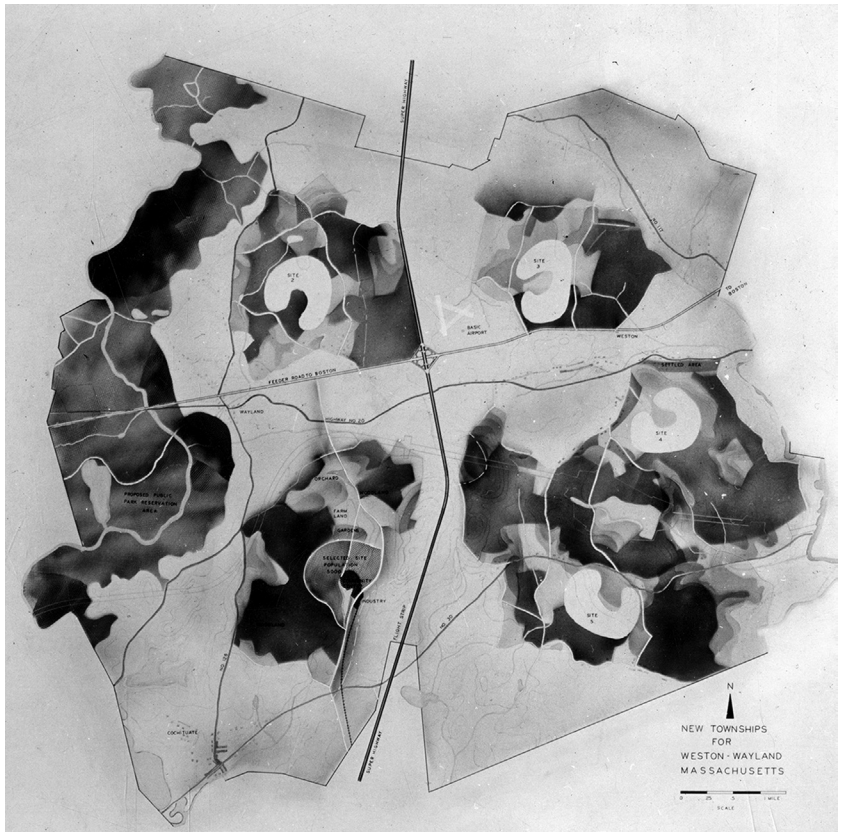

FIGURE 5.5 Cluster of townships between Weston and Wayland, Massachusetts, 1942. The different shades of black and gray designate land reserved for farms, orchards, food gardens, forests, and a park reservation. Photostats of work by unidentified students of Martin Wagner and Walter Gropius, NA2300. H37-W341x. Courtesy of the Frances Loeb Library, Harvard University.

In these explorations, however, landscape tends to become an abstract, malleable element ready to be mobilized at several functional levels, from the provision of food to waste management, the protection against environmental pollutants or as camouflage during aircraft attacks. In that sense, this development can be read not only as a rescaling of Wagner's earlier instrumental, quantitative approach to the design of urban open spaces as sanitary equipment but also as a precedent of current debates about ecosystem services. Housing was framed in an even more radical program, systematically relying on prefabricated standards that reduced architecture to a generic ingredient of broader planning compounds. At the dawn of postwar Fordism, Wagner was suggesting an industrialization of the housing–landscape nexus that turned home and nature into dependent variables of regional and national growth strategies.

FIGURE 5.6 Design of a township between Concord and Acton, Massachusetts, showing the imbrication of the built layout with natural elements, 1946. Collection of photostated plates showing work of unidentified students of Martin Wagner, NA2300.H37-W342x. Courtesy of the Frances Loeb Library, Harvard University.

Regional abstractions and metabolic organicism

Ludwig Hilberseimer and Hans Bernhard Reichow returned to many of these issues in the mid- to late 1940s, providing extreme morphological and conceptual variations of topics that Wagner had already dealt with. They were in many respects opposite characters. Hilberseimer, a radical, left-wing–oriented architect who had developed a brilliant career as a critic in Modernist circles during the Weimar Republic, left Nazi Germany and focused on his academic activity at Chicago's Armour Institute of Technology from 1938. Reichow, a younger architect who had begun his career as a planner in the late 1920s, held institutional positions during the Third Reich as an NSDAP (Nationalsozialistische Deutsche Arbeiterpartei) member but managed to remain a prolific practitioner after the war. As planning theoreticians, however, both of them embraced landscape as a means to

overcome the social, functional, and environmental conflicts of urban agglomeration, particularly through new forms of residential urbanization integrated with agricultural and industrial activities, explored by means of radical morphological abstractions. Much in the same way that he had explored the *Großstadt* problem in Weimar Berlin, Hilberseimer dealt with the conflicts of American decentralization taking ongoing processes to an extreme rational, diagrammatic conclusion. He had explored the possibility of rethinking the metropolis as a Garden City since the late 1920s, and some of these earlier intuitions—such as the tree-structured "settlement unit" or the L-shaped house with garden—reappeared in his ambitious 1944 treatise *The New City: Principles of Planning*. Hilberseimer maintained that planning ought to pursue the restoration of a balance where cultural forms are molded by the environment, with the mediation of technology. The deviation from this primary ontology should be reversed by incorporating nature's principles in planning approaches, reorienting urbanization trends to take up organic patterns, understood here as the settlement's capacity to work with topographical and environmental influences but also in economic and functional terms as the correct articulation of residential, industrial, and agricultural activities.[40] The integration of gardens and small farms in industrial community life was the main argument to promote massive decentralization, "dispersed over . . . the entire country."[41] As was the case with Wagner, the magnitude of this regional rescaling justified the incorporation of landscape criteria as a central design perspective:

> Settlement units . . . with their gardens and surrounding parks and the adjoining agricultural areas, bring the city into close relation with the landscape—its natural recreation area. The city, in fact, becomes part of the landscape. The one-story house in the settlement unit disappears among trees and behind shrubs and a natural camouflage results. The city will be within the landscape and the landscape within the city.[42]

The New City, however, still lacked consistent engagement with landscape issues. Hilberseimer presented decentralization as an opportunity to shift urbanization approaches from the engineer's to the landscape architect's viewpoint, but at this point his criteria were still typical of the former's instrumental rationality. Transport efficiency and low urbanization costs were the main factors determining the form, structure, and large-scale development of the settlement unit.[43] Hilberseimer seemed to hesitate about landscape's primary purpose as a recreational or productive element, but both farms and parks were subordinated to exogenous goals such as infrastructural efficacy or the protection against industrial pollution. Landscape was still an indefinite outside of the settlement instead of a constitutive part thereof.

In 1949, *The New Regional Pattern: Industries and Gardens, Workshops and Farms* corrected these lacunae with a more consistent engagement with environmental factors, now considered the main precondition of human settlements:

> The new regional pattern will be determined by the character of the landscape: its geographical and topographical features, its natural resources; by the

> use of land, the methods of agriculture and industry, their decentralization and integration; and by human activities, individual and social, in all their diversity.[44]

This renewed attention to landscape was in part a response to the emerging postwar problematic of employment that Hilberseimer, like Wagner, addressed through the integration of productive natures in industrial–residential schemes.[45] The book began by analyzing agricultural criteria such as the right size of the homestead, the adequate crops for each type of farm, possible schemes of cooperation between farmers, land property regimes, and so forth. Hilberseimer was moving from a mere engineering of landscape to a proper landscape planning, informed by Geddesian regionalism.[46] Just like in *The New City*, the settlement units resembled Wagner's ribbon-development proposals from the late 1930s, shaping a tree-patterned linear city divided in bands of infrastructure, residence, commerce, industry, and park and garden areas, subsequently complicated in a series of morphological variations.

In 1949, this scheme was also combined with a "rural planning system" that included different farm types and agricultural–industrial compounds, from disseminated subsistence homesteads to small and large towns with manufacturing clusters.[47] Hilberseimer suggested the need to reimagine traditional agronomic approaches to secure not only a balanced regime but also the creation of jobs in the primary sector and the possibility of part-time dedication to subsistence farming for industrial workers.[48] In relation to housing, both books combined high-rise apartment blocks and single-family houses, but the one-story house was usually taken as the elemental design unit, emphasizing the privacy of both domestic space and the adjoining garden. The latter often appeared as a closed element, reducing the reproductive dimensions of the home–garden nexus to a function of basic individual and family regeneration.[49] The collective potentialities and social dimensions of landscape as an element fostering leisure, encounter, or identity formation remained unexplored (Figure 5.7).[50]

The core of Reichow's theoretical approach to landscape planning is also contained in a synthetic treatise. *Organische Stadtbaukunst: von der Großstadt zur Stadtlandschaft* (Organic City Design: From Metropolis to Urban Landscape) opens with a call to reintroduce the "rationality of nature" in planning so as to avoid the conflicts of "compact cities" and promote organic urban development. Reichow described the latter as the accomplishment of a "unity of human being, city and landscape" that preserved nature's biological cycles.[51] In that sense, he defined the central concept of *Stadtlandschaft* as a new settlement pattern that gave equal value to the built and unbuilt environments in order to "achieve the greatest possible. . . 'metabolism' (*Stoffwechsel*) between humans and nature."[52] Just like in Hilberseimer's work, residential and industrial decentralization became an opportunity to restore lost territorial balances, framed here in terms of damaged cultural landscapes. Reichow, however, tackled this conflict more consistently as an opportunity to reestablish a purported continuity and harmony between biological and community processes. The rhythms of intensive farming and the interdependence of

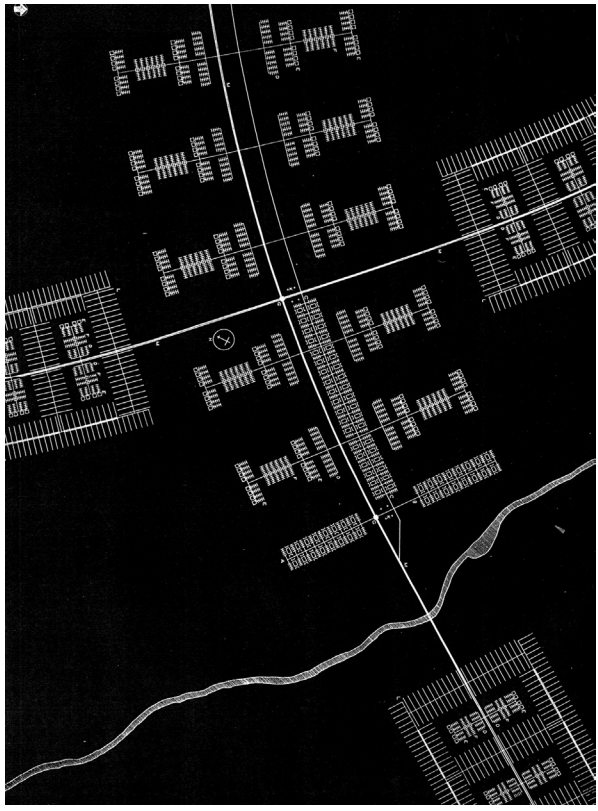

FIGURE 5.7 Ludwig Hilberseimer, diagram for the restructuring of Chicago area using his "urban-rural planning system," 1949. Reprinted with permission from Ludwig Hilberseimer, *The New Regional Pattern: Industries and Gardens, Workshops and Farms* (Chicago: Paul Theobald, 1949), 161.

home and countryside in the rural realm inspired a notion of organic settlement with undertones of the *Heimatschutz* tradition and Theodor Fritsch's regressive version of the garden city. Refigured in a more modern perspective, this principle was mobilized to understand the linkage of built and natural environments at several scales. The organic unity of home, garden, and landscape was regarded as the primary relational structure of a logic that should inform design approaches from the conception of a room to regional planning. The reshaping of the national identity appeared as the ultimate consequence of this project.[53]

At first glance, Reichow's scheme corrected both Hilberseimer's tendency to present nature as a purely functional one-dimensional framework and the essentially quantitative approach of those that equated the organic condition simply with a larger provision of green areas.[54] The assimilation of landscape ecology principles should instead lead to a "biologically informed planning,"[55] a concept—shared with Migge—with an advanced awareness of the need to preserve natural cycles

including energy, water, and waste. Reichow's illustrations of urban metabolic circuits and the stages of tree growth were included in the book not only as design tools but also as an inspiration to shape "residential cells," the *Stadtlandschaft*'s basic unit including workshops, retail, and houses equipped with large private gardens and immediate access to surrounding forests.[56] The whole metropolitan pattern unfolded from this core principle through the aggregation of residential cells. They should be combined to form "neighborhoods" with scale-specific facilities and economic activities, in turn articulated to create cluster "districts" around a "City," an overall hierarchy similar to the one Wagner had suggested in the early 1940s. The continuity and connection of landscape elements should be preserved across all design scales, from the house garden to the meadow, from the street tree to the woods (Figure 5.8).[57]

This ecological approach set new limits to settlement standards. Whereas political or military concerns had determined city boundaries in the past, *Stadtlandschaften* should be regulated by the ecosystems' environmental capacities. Against the industrial promise of unconstrained growth, Reichow conceived landscape not only as the material and aesthetic edge of the city but, more importantly, as the very consciousness of the limits that nature imposes on urbanization. The assimilation of landscape order should also encourage the replacement of a static conception of the city as architecture with the awareness of the *Stadtlandschaft*'s dynamic, growing, and changing character.[58] This seemingly relational approach, however, was embedded in an ostensibly essentialist conceptual framework that reified the notion of "unadulterated" land, community, nature, and home as the roots of the national character, a deeply problematic subtext in contradiction with Reichow's postwar attempts to leave behind his Nazi past.[59]

Conclusion

These explorations remained mostly in the realm of theory and academic speculation. Only Reichow was commissioned to build large settlement projects partially incorporating his ideas, such as Bremen's Neue Vahr and, especially, Sennestadt, a new town near Bielefeld housing over 20,000 people.[60] Several of Wagner's students would later develop his approaches in salient new-town projects including William Conklin's Reston, Virginia; Macklin Hancock's Don Mills, Toronto; and the more preservation-oriented *Plan for the Valleys* by Ian McHarg and David Wallace. The documents considered here, however, stand on their own as intellectual forays into uncommon ground that helped to expand planning perspectives, combining diverse design techniques with the potentialities of landscape approaches to address the inefficiencies of both ongoing agglomeration and suburbanization. Migge was the first of the authors studied here to advance the need to incorporate landscape criteria—both aesthetic and ecological—into housing conceptions. Wagner had the opportunity to give institutional support to this notion and was the first to publish comprehensive schemes addressing not only the geography and morphology of the new settlement type but also the political-economic and

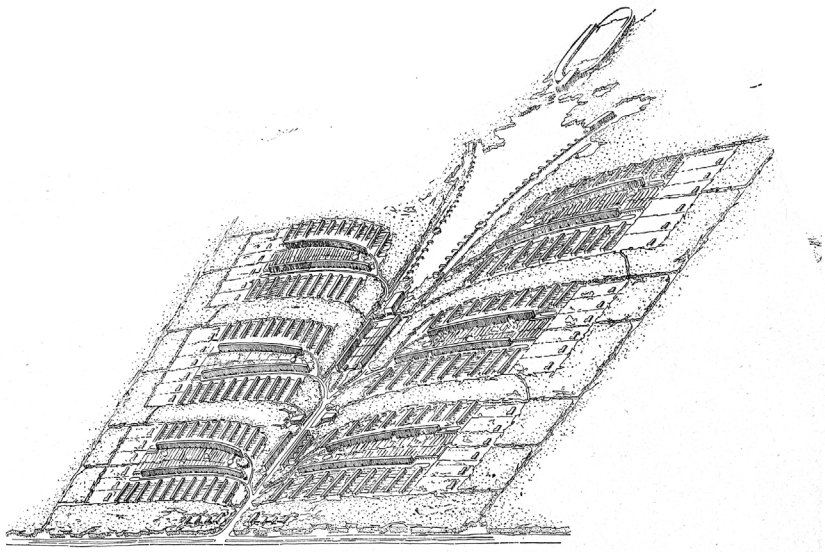

FIGURE 5.8 Hans Bernhard Reichow, detail of a residential cell in the *Stadtlandschaft* system, 1948. Reprinted with permission from Hans B. Reichow, *Organische Stadtbaukunst: von der Großstadt zur Stadtlandschaft* (Berlin: Westermann, 1948), 107.

managerial aspects of landscape planning. Hilberseimer and Reichow subsequently revisited some of Wagner's topographies and produced richly edited treatises that disseminated this approach to broader professional audiences in the United States and Germany, endowing it with their own design palettes.

Problematically, the four authors based their approaches to landscape on the relation between elemental architectural and natural units—house and garden, the homestead, and so on—and translated that symbiosis to larger scales. Although Wagner derided the idea that nature could be used as a template for housing design, he was perhaps the most explicit about the need to incorporate landscape as a basis of residential urbanization, adapting Migge's conception of the dwelling/garden nexus and the *Siedlungen* as food systems to an expanding industrial context. Hilberseimer and Reichow were more inclined to focus on the formal aspects of natural environments and their potential to inform suburban morphologies, but they did not develop consistent theorizations of landscape *per se* or its role in the social economy of residential and industrial decentralization. Wagner and Hilberseimer, however, tended to conceive both housing and landscape as generic, increasingly standardized byproducts of regional and national planning and economic strategies; Reichow, on the other hand, emphasized the specificity of settlement ecosystems but provided only loose intuitions about the tools required to work with them.

Agriculture was a prominent feature in all the proposals, which persistently returned to Migge's early notion of "productive landscape" in their attempts to link housing patterns and farming. They were ambivalent towards emergent agro-industrial arrangements and state promotion of modernization and mechanization programs. Wagner was perhaps the only one with a realistic reading of the new scenario, pursuing a critical compromise that retained the concept of community farming clusters but connected them to larger state and industrial enterprises to rebalance regional economies. Exploring land productivity, food distribution, and the potential symbiosis of industry and agriculture at several scales, his work converged with federal attempts to mobilize the primary sector for national development in a sensible approach to agrarian urbanism. On the other hand, the idea of reviving pre-capitalist and subsistence farming methods on a large scale made sense only in Migge's case at a time of emergency crisis, but it seemed rather naive in the late 1940s when Hilberseimer and Reichow published their works. The political potential of this radical perspective remained unexplored in the work of these authors. In that regard, the earlier, richer visions by activists or radical intellectuals such as Ralph Borsodi, Benton MacKaye, or the Southern Agrarians in the US suggest the need to explore alternative approaches within and outside the sphere of design to ground new hypotheses of agrarian urbanism.

When considered together, these experiences show the increasing attention to landscape's economic and ecological role in the transformation of housing patterns during the interwar and early postwar periods. These documents demand close scrutiny in the context of current interests in the productive dimension of landscape and green infrastructure, and broader calls to embrace landscape urbanism as a new design paradigm. Their contribution, however, should not be taken as immediately operative. We should bear in mind that, at a time when state agendas and apparatuses were ripe for implementing regional-scale restructuring schemes, these visions failed to provide feasible models to bring together residential urbanization, industry, and landscape. Their tendency to imagine an all-purpose landscape without qualities and their incapacity to embrace ecological criteria on a really transformative basis rendered environmental flirtations a mere deviation concealing morphological, economic, and regulatory contradictions that planners were no longer able to control. In that sense, these documents constituted important steps in the longer history of a gradual conciliation of planning and landscape approaches, but they could also be read as precedents for a purely cosmetic mobilization of reified natures.

Notes

1 The idea of organizing city development with green structures dates back to the nineteenth century. The notion of "landscape urbanism," however, has been popularized only in recent decades to designate an approach to the conception and design of urban dynamics driven by landscape and ecological principles. See Charles Waldheim, *Landscape as Urbanism: A General Theory* (Princeton: Princeton University Press, 2016), 2.

2 Bruno Taut, "Via London—Paris—New York—Neu-Berlin," *Das neue Berlin* 2 (1929): 30.
3 Martin Mächler, "Die Grossiedlung und ihre weltpolitische Bedeutung [1918]," in *Martin Mächler: Weltstadt Berlin*, ed. Ilse Balg (Berlin: Galerie Wannsee, 1986), 73.
4 Karl Scheffler, "Berlin in 50 Jahren: Perspektiven einer Weltstadt," *Uhu* 2 (1926): 52–53.
5 Martin Wagner, "Das Sanitäre Grün der Städte: Ein Beitrag zur Freiflächentheorie" (Ph.D. diss., Königliche Technische Hochschule zu Berlin, 1915).
6 Camillo Sitte, *Der Städtebau nach seinen künstlerischen Grundsätzen [1909]* (Basel: Birkhäuser, 2002), 208–9.
7 For the notion of "landscape governmentalization," see Álvaro Sevilla-Buitrago, "Gramsci and Foucault in Central Park: Environmental Hegemonies, Pedagogical Spaces and Integral State Formations," *Environment and Planning D: Society and Space* 35 (2017): 165–83.
8 David H. Haney, *When Modern Was Green: Life and Work of Landscape Architect Leberecht Migge* (London: Routledge, 2010), 30.
9 Ibid., 179–94.
10 Leberecht Migge, *Die Gartenkultur des 20. Jahrhunderts* (Jena: E. Diederichs, 1913), 64–66.
11 Martin Wagner, *Das wachsende Haus: Ein Beitrag zur Lösung des städtischen Wohnungsfrage* (Berlin: Bong & Co., 1932), 2.
12 Ibid., 1.
13 Ibid., 6.
14 Ibid., 7–8, 23.
15 Migge, *Die Gartenkultur,* 58, 62, 63.
16 Wagner, *Das Wachsende Haus*, 6.
17 Leberecht Migge, *Die Wachsende Siedlung nach biologischen Gesetzen* (Stuttgart: Franck'sche Verlagshandlung, 1932). See also, Haney, *When Modern Was Green*, 227–32.
18 Migge, *Die Wachsende Siedlung*, 10–11, 16–17, 32.
19 Leberecht Migge, "Eine Chance für Gross-Berlin," *Deutsche Bauzeitung* 7 (1933).
20 Nikolai A. Miliutin, *Sotsgorod: The Problem of Building Socialist Cities*, [1930] translated by Arthur Sprague (Cambridge: MIT Press, 1974).
21 Martin Wagner, "Städtebau als Wirtschaftsbau und Lebensbau," *Die neue Stadt* 8 (1932): 178.
22 Ibid., 176–78.
23 Martin Wagner, *Die neue Stadt im neuen Land* (Berlin: Karl Buchholz, 1934), 16, 21–23.
24 Ibid., 13, 19.
25 For an in-depth study of Wagner's work during the last stage of his career, see Álvaro Sevilla-Buitrago, "Martin Wagner in America: planning and the political economy of capitalist urbanization," *Planning Perspectives* 32 (2017).
26 Joseph L. Arnold, *The New Deal in the Suburbs: A History of the Greenbelt Town Program, 1935–1954* (Columbus: Ohio State University Press, 1971); M. L. Wilson, "A New Land-Use Program: The Place of Subsistence Homesteads," *The Journal of Land & Public Utility Economics* 10 (1934): 1–12.
27 Walter Gropius and Martin Wagner, "Housing as a Townbuilding Problem: A Post-war Problem for the Students of the Graduate School of Design," 1942, typescript at Harvard Frances Loeb Library, 21.
28 Walter Gropius, Norman Newton, Hugh Stubbins, Christopher Tunnard, and Martin Wagner, "Housing Problem," 1941, typescript at Harvard Frances Loeb Library, 11.
29 Martin Wagner, *Wirtschaftlicher Städtebau* (Stuttgart: J. Hoffmann, 1951), 19.
30 Migge, *Die Gartenkultur*, 60.
31 Gropius and Wagner, "Housing as a Townbuilding Problem," 45.
32 See the drawings of linear and satellite settlements in Martin Wagner Papers, Folder 57, Harvard Frances Loeb Library; *The Christian Science Monitor*, "Lineal Community Forecast as the 'City of Tomorrow,'" Boston ed., April 5, 1940, 13.

33 See Martin Wagner and Walter Gropius, "Cities' Renaissance," *The Kenyon Review* 5 (1943): 17; Walter Gropius and Martin Wagner, "A Program for City Reconstruction," *The Architectural Forum* 79 (1943); Martin Wagner, "Die Stadtschaft auf dem Reissbrett—Eine Studentenvision," *Bauen und Wohnen* 3 (1948). The relevant typescripts at Harvard Frances Loeb Library are: Gropius et al., "Housing Problem"; Gropius and Wagner, "Housing as a Townbuilding Problem"; Martin Wagner, "Townlets and Towns: A Study on City Reconstruction," 1946; Martin Wagner, "New Town Economy," 1949.
34 Wagner, "Die Stadtschaft," 193; *Wirtschaftlicher Städtebau*, 36–37, 39.
35 Wagner, "Townlets and Towns," 65–66.
36 Wagner, "Stadtschaft," 195.
37 Gropius and Wagner, "Program," 79.
38 Wagner, "Townlets and Towns," 72.
39 Gropius and Wagner, "Housing as a Townbuilding Problem," 14.
40 Ludwig Hilberseimer, *The New City: Principles of Planning* (Chicago: Paul Theobald, 1944), 18–19, 23, 47–48.
41 Ibid., 51.
42 Ibid., 126.
43 Ibid., 55, 72–74, 106–7.
44 Ludwig Hilberseimer, *The New Regional Pattern: Industries and Gardens, Workshops and Farms* (Chicago: Paul Theobald, 1949), 120.
45 Charles Waldheim discusses Hilberseimer's role in the emergence of agrarian urbanism in *Landscape as Urbanism*, 124–39.
46 Hilberseimer, *The New Regional Pattern*, 89, 128–29.
47 Ibid., 149–67.
48 Ibid., 126.
49 See e.g. Hilberseimer, *The New City*, 92–97.
50 Richard Pommer, "'More a Necropolis Than a Metropolis': Ludwig Hilberseimer's High-Rise City and Modern City Planning," in *In the Shadow of Mies: Ludwig Hilberseimer, Architect, Educator, and Urban Planner*, ed. Richard Pommer et al. (Chicago: Art Institute of Chicago, 1988), 45.
51 Hans B. Reichow, *Organische Stadtbaukunst: von der Großstadt zur Stadtlandschaft* (Berlin: Westermann, 1948), 1–2, 19.
52 Ibid., 28, 78, 81–82, 105. See also Elke Sohn, "Hans Bernhard Reichow and the Concept of Stadtlandschaft in German Planning," *Planning Perspectives* 18 (2003).
53 Reichow, *Organische Stadtbaukunst*, 28, 32, 102.
54 Ibid., 60.
55 Ibid., 53.
56 Ibid., 18, 71, 105–8, 194.
57 Ibid., 165–66.
58 Ibid., 64, 87, 90, 94.
59 Ibid., 66.
60 Hans B. Reichow, ed., *10 Jahre Sennestadt: Planung und Aufbau, Stand Oktober 1964* (Gütersloh: Bertelsmann, 1965). See also Elke Sohn, "Organicist Concepts of City Landscape in German Planning After the Second World War," *Landscape Research* 32 (2007): 504–7. Mies van der Rohe and Hilberseimer's Lafayette Park in Detroit, using the latter's mixed typological approach already suggested in the late 1920s, can be considered only a timid implementation of the settlement unit.

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