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THE STRUCTURE OF THE BASE OF LIFE[1]

This essay was written early in the summer of 1942 during the war, and I stressed that the qualities housing had to possess could only be discussed when the structure of society as a whole had been clarified; but I also dealt with this issue in an article entitled "Jūkyo no shitsu ni tsuite" [On the quality of housing] published in *Kenchiku Zasshi* [Architecture magazine] in June the year before, as well as in a collection of essays entitled *Jūtaku Mondai* [Housing issues] in the beginning of that same year. Well then, if that was my way of thinking in this regard, in what way could I specify the qualities housing had to have? I kept asking myself what sort of concrete statement could be made on the matter, and this essay is the bringing together of those ideas on the structure of the overall life space. It was published in a small magazine called *Kenchikugaku Kenkyū* [Research on Architecture].

Because I had looked into the various conditions required for housing in the aforementioned article, in this essay I focused more on examining the space that lay beyond the structure of life as a whole, and the various types of housing built in response—this is called the "life base," but refers to the "local life base" in the particular area of space around where people take up permanent residence.

It is divided into four sections: the first discusses the examination of the structure of all life (*samsara* or cycle of life) and the overall structure of life space (the life base consisting of housing areas, city, and nation), to work out guiding standards and aims for the quality of housing; and setting goals to attain that ideal vision. Section 2 is an historical appendix that touches briefly on subjects such as the sorts of proposals made in the past on the development of the capitalist city and ideas about the structure of the life base viewed from that perspective (ideal vision of the local life base); the demand for the revival of the garden in urbanization; zoning systems; the garden city; the satellite city; proposals for big cities by Le Corbusier and Hilberseimer; the linear city of the Soviet Union; and Feder's proposal. Section 3 discusses the structure of the life base as a contemporary issue to squarely meet the demands of national defense and a strong military, but why this is impossible to settle due to wartime austerity. Section 4 investigates claims about: the placement, combined form,

and concentration and division of households that have become problems in the structure of space for housing zones, which include zones consisting of various households and communal or regional facilities, when these facilities are adopted for housing in ideal visions of this sort of life base and regional space; proposals for communal housing and the Socialist city in the Soviet Union; or the structure of neighborhood housing. And finally, it discusses not just the state of housing, but also that of places of production and labor that together make up the structure of the city and overall local space; in other words, how it must be pursued while considering the combination of work and relaxation, production and consumption, among the problems of how to systematically construct total life amenities.

In general, however, problems initially identified ended up not being properly solved because of labor shortages. Moreover, wartime slogans like *Dai Tō-A sensō kansui* (Successfully prosecute the Greater East Asian War) were heard everywhere, and although there was significant interest displayed regarding calls for "national planning" at the time, accounts about austerity were undeniable as I discussed in volumes 1 and 2 of my collected works [which deal with *urban* planning and housing, respectively. Trans.]. However, this is the first time the aspect of having to consider housing as life space for the individual or the family, or strictly speaking local space, has been discussed, and I think it is appropriate that it is included here in volume 3 of my collected works, which brings together studies on this sort of issue. Further, my article on "the quality of housing" from *Jūtaku Mondai* mentioned above is included in volume 2, and is the first chapter of section 5 "Housing designs" (Chapter 25). The present essay follows on from that, and with the reader's forbearance, I attempt to expand that argument. With regards to the diagrams, some explanations have been added to remedy simplifications made during the war due to printing constraints.

(Originally published as "Seikatsu no kōzō to seikatsu kichi" [Life structure and the life base], in *Kenchikugaku Kenkyū*, volumes 110–111, September-October 1942.)

1. The Quality of Housing and The Structure of the Life Base

1.1. The Quality of Housing

To obtain a (legally proscribed) basis to prevent the deterioration of the quality of housing, it is generally possible to demand minimum thresholds for the various conditions that regulate the quality of that housing. This is because, no matter how well other conditions are met, the drastic deterioration of one of those conditions will bring about the overall lowering of the quality of housing. Quality regulations in building codes and laws governing residences enacted in various countries around the world since the 19th

century have their logical foundation here. However, we now find ourselves facing the task of looking for proper national and social standards for housing. To find quality regulations for housing that can act as standards for guidance, the nature of the various conditions that define the quality of dwellings must be clarified through the separate fulfillment of each of those conditions.

1.2. Total Control over Life

In this case, "the quality of housing" means thinking about the totality of life (or *rin'ne*, the endless cycle of life and death), and must commence with how to rationally construct this. That is, considerations about the quality of housing are closely connected to consideration of the formation of the overall life base. All these things must be regulated according to "the structure of life."

This essay is an attempt at a few theoretical investigations from such points of view regarding the structure of life and methods to construct the life base.

1.3. The Need to Find Ideal Standards

It is easy to succumb to fanciful statements when discussing the structure of life or constructing the life base on the assumption that these are simply theoretical. Needless to say, the problem is solved through concretely building the life base by realizing methods based on such considerations, and by training and enlightening consumers themselves in the values that satisfy this. Nevertheless, we still mustn't neglect theoretical topics regarding how the life base is to be constructed. While the urgent subject of large-scale construction of housing to keep pace with boosting productivity during the Greater East Asian War remains to be solved, answers must also be provided for the pressing questions of methodically reorganizing the national spatial layout aimed at strengthening national defenses in order to establish the East Asia Co-Prosperity Sphere, and maintaining the industrial and economic system. And a great deal of work also lies ahead of us if we are to bring about our future aspirations for the long-term construction of Greater East Asia. Greater East Asia, and in particular Japan where the national lands for the life base of the Japanese people are located, must be reforged into a homeland for the Japanese race who provide the driving force behind this major construction project, and must be redeveloped to become strong and beautiful. To accomplish this great undertaking, the task facing us now is to describe the most complete ideal build for the homeland. Alongside its actual construction, the description of this ideal build in the most robust and sound way is also one of the urgent tasks we must carry out. The theoretical explorations into the construction of the life base in this essay are conducted with this purpose in mind.

2. Historical Review of Ideas for the Construction of the Life Base

2.1. Urban Life

Now, having established the issues, the first thing that presents itself when looking at actual reality is life today in big cities.

Rapid urban development, the evolution of urban life, and the absolute and relative growth of the urban population in our nation since the Meiji era, have been indispensible conditions politically and economically for building up Japan, the leader of Greater East Asia. Big cities have become the life environment where the majority of Japanese lead their daily lives and are nurtured. At the same time cities, in particular the big cities, are the locations which form the core of our nation's industries and economy. Even though cities now occupy an ever vital place in the structure of our homeland, it is becoming more apparent that, along with the evolution of urban life, the life environment over which most of our gradually burgeoning population is dispersed has become degraded, and the process which is fouling and distorting the homeland where we live and where the people lead their lives is an unconcealable fact.

Apart from urban life, our homeland also sustains life in farming, mountain and fishing villages. The reexamination of the people's life base must take both these elements into consideration. However, for the present, the issue we must tackle is life in the big cities as discussed above. We must reflect first upon urban life, and at the same time the urban industry and economy that forms the base upon which it has arisen, and think about how that must be restructured; in this sense, rural issues will be left out of consideration here for the time being.

Let us first reflect on how the structure of the life base associated with the system of living has been included in the historical development process of the city.

2.2. Development of the Modern City

After the Industrial Revolution, cities that emerged with the advance of factories and manufacturing became centers for industry, and as a result residential areas for the workers expanded rapidly. Further, due to the development of the capitalist economy and the explosive growth in commerce and trade, cities that were commercial and financial centers became increasingly prosperous. Regional cities were integrated into the world economy as centers for local commerce and industry, and became world cities that gradually grew. Cities formed the hub of the industrial economy, and at the same time became the center of the political culture. Urban life became the life environment that represented the new age.

2.3. Origins of Urban Life

However, the course of development of these modern cities was propelled forward by activities stemming from independent innovations by individual entrepreneurs, the driving force of the capitalist economy, in pursuit of profit, and cities were formed as the accumulation of these results. This was not achieved as an organic entity following a single plan, but rather was an agglomeration created following the rules of development characteristic of capitalist societies. Structure in the new life could be improved, rationalized, and put in order by those with analytical ability, but only if they used it; however, those without this ability, or those unable to realize this ability even if they possessed it, were only compelled to adapt to the new life to meet the needs of daily existence. Furthermore, urban life on the whole was a matter of spontaneously generated chaos. As might be expected this "chaos" was ignored, but soon became a threat to urban society itself. This disaster was keenly felt the earliest in England, the first country to pursue the Industrial Revolution. Social problems in the form of various societal evils appeared here. Social defects, such as problems with roads and transport, the unsanitary state of residential areas for workers, morality and law enforcement in these areas, and the role played by dangerous sources of radiation in urban life, gradually came to be recognized. To counter anti-social degradation of the life environment caused by the convergence of unchecked and unprincipled behavior by individuals, a series of public measures was launched including hygiene legislation and the undertaking to improve substandard housing.

2.4. Distorted Working Class Life

However, these were all so to speak palliative measures to counter the "results" of abuses and dangers that could no longer be ignored, and were obviously not planned actions to completely reorganize urban life. Life for factory workers alternated between damp, substandard housing, and back-breaking work in unsanitary factories. This monotonous grinding life that was repeated mechanically day in and day out was followed, like a shadow follows an object, by the growth of urban amusements, relaxation, and social intercourse (the various unhealthy pursuits to be found in red-light districts such as drinking and carnal pleasures). The places where the public thronged became hubs for social interaction, and people went shopping to alleviate their loneliness. However, these activities were all part of an unhealthy lifestyle conducted in a polluted environment.

2.5. Restoring the Garden

Every intolerable aspect of this crowded life became the focus of attention. The terrifying urban situation was compared to malignant skin eruptions. This

poisoned, unhealthy urban life in the early phase of the development of the modern city was criticized as a degenerate evil brought about by capitalism, and calls arose to return to the reactionary medieval garden or an imaginary city/garden amalgam, and some imaginative socialists even tried their hands at building some ideal villages. However, these attempts ran counter to the progress of the capitalist society, and all of them failed.

An emerging Germany trailing behind England ventured into the world market of monopolistic capitalism, and looked at the mistakes made by this predecessor; following the Franco-Prussian War, it adopted in succession pioneering urban planning legislation, such as zoning systems and building regulations covering frontage lines, and moved forward with national regulation of urban development. Zoning systems regulated the construction of various zones in cities according to type and intensity of usage, thereby adding further improvements to the overall spontaneous nature of urban development. However, this amounted to little more than rationalizing the mutual interference of various land-users when similar land usages were concentrated in a single zone, and the comprehensive formation of life amenities was still very far away.

2.6. Garden City Movement

The garden city movement in England from the end of the 19th century through the early part of the 20th century was an attempt to restore the garden by using novel technological methods that further aligned new social and economic relationships. The harmonizing of town and country meant putting together only the advantages of each. It was life that united a garden surrounded by green fields with a certain number of manufacturing facilities through moderate concentration, and the benefits of a degree of culture allowed in "towns."

In 1898 the proposer of the "garden city" Ebenezer Howard clearly laid out his proposals outlining the shape of ideal housing for the future of humanity in his publication *Garden Cities of To-Morrow*. His position was based directly upon three views advocated by those who came before him:

1) A new perspective on land, where land is owned by the people or by self-governing bodies;
2) Theories on the collective permanent residence of people who have formed into small societies completely on their own; and
3) The idea of the new model cities of [James. S.] Buckingham with proposed population of 25,000, surrounded by rural villages, and which integrated industry and agriculture.

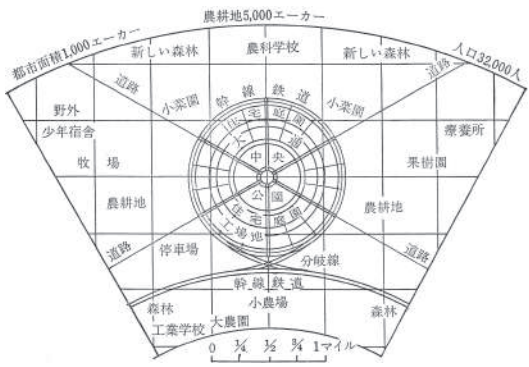
While Buckingham laid out his plan for the new city under regulations governing a cooperative, Howard believed it could be achieved by residents

self regulating in a free economy, that new methods would be employed only for the ownership and management of the land, and also that it would be a means to revolutionize society.

2.7. Howard's Proposals

His thoughts on the garden city are summarized below:

1) Self-sufficiency: Towns with small business and industry surrounded by rural areas; the integration of industry and agriculture; agriculture for industry, food production and other uses; commerce relating to that trade; education, entertainment and religious facilities; completely furnished buildings for self governance; fresh foodstuffs; fresh air; the reuse of waste products in agricultural areas, etc. The example he gives has a total area of 6,000 acres, of which 1,000 acres is set aside for municipal use with a population of 30,000, and the remaining 5,000 acres is for agricultural use with a population of 2,000. (See Figures 1 and 2.)



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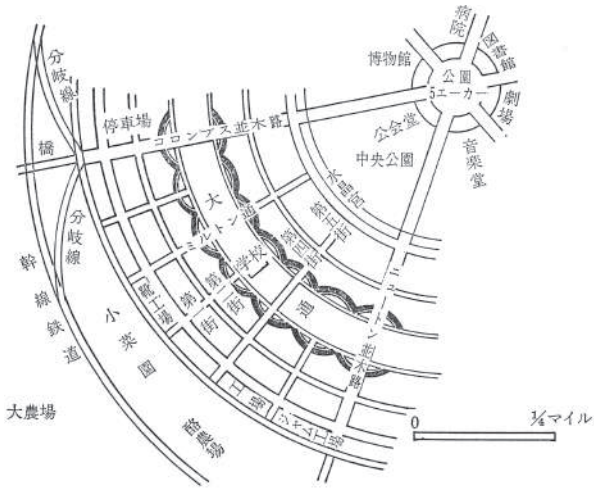
都市面積１０００エーカー	City 1,000 acres
農耕地５０００エーカー	Agricultural land 5,000 acres
人口３２０００	Population 32,000
新しい森林	New forests
農科学校	Agricultural college
新しい森林	New forests
道路	Road
道路	Road
少年宿舎	Children's cottage homes
小菜園	Allotments
小菜園	Allotments
療養所	Convalescent homes
牧場	Cow pastures
果樹園	Fruit farms
農耕地	Farmland
農耕地	Farmland
道路	Road
道路	Road
停車場	Car park
分岐線	Branch line
幹線鉄道	Railway trunk line
森林	New forest
小牧場	Small holdings
森林	New forest
工学学校	Industrial college
大農園	Large farms

Scale: 0, ¼, ½, ¾, 1 Miles

Text: center circle

幹線鉄道	Railway trunk line
住宅	Housing
庭園	Gardens
大道	Grand Avenue
中央公園	Central park
住宅	Housing
庭園	Gardens
工場地	Factory zone

Figure 1 Diagram of Howard's garden city (1)



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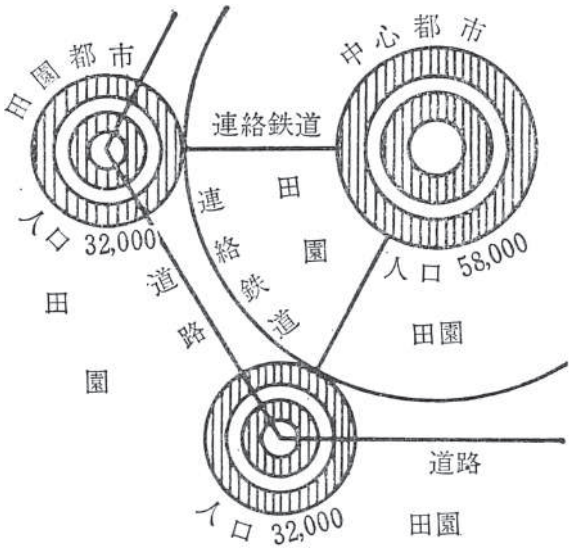
大農場	Large farms
幹線鉄道	Railway trunk line
分岐線	Branch line
橋	Bridge
分岐線	Branch line
小菜園	Allotments
酪農場	Dairy farms
停車場	Car park
靴工場	Boot factory
工場	Factory
ジャム工場	Jam factory
コロンブス並木路	Columbus Boulevard
ミルトン通	Milton Road
第一街	First Avenue
第二街	Second Avenue
大通	Grand Avenue
学校	School
ニュートン並木路	Newton Boulevard
第四街	Fourth Avenue
第五街	Fifth Avenue
水晶宮	Crystal Palace
中央公園	Central Park
博物館	Museum
公会堂	Town hall
音楽堂	Concert hall
公園５エーカー	Garden (5 acres)
病院	Hospital
図書館	Library
劇場	Theater

Figure 2 Diagram of Howard's garden city (2)

2) Public ownership of land: Collecting rents generated by the development of the city, and the burgeoning ability of city dwellers to contribute taxes as "public rent." Covering interest and sinking funds on investment in land purchased at an initially inexpensive price, and extracting sufficient expenses incurred in the maintenance and management of various public enterprises. Land use entirely at the systematic direction of self-regulating supervisory committee.
3) Limiting urban population: Building a small city composed of a well-organized society, with a city center, a series of commercial zones (called Crystal Palace, which also provides recreational areas for the people), closely connected to two rows of residential zones, surrounded externally by commercial and industrial workplaces, railroad, and rural areas. Because everything is within walking distance, the optimum population for a city this size is 32,000, and at most 58,000. Future development would occur by division in the new city as well as new builds, and the old city and new city are separated by rural areas but connected by high-speed rail. Each new city would gradually be built up like a satellite around the central city. (See Figure 3.)

2.8. Ideal of Constructing Small Self-Sufficient Societies

Notable subjects in this proposal included trying to create a small self-sufficient regional community confined to a small area in the form of a garden city, and



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田園都市	Garden city
中心都市	Central city
連絡鉄道	Inter-municipal railway
人口３２０００	Population 32,000
連絡鉄道	Inter-municipal railway
田園	Countryside
人口５８０００	Population 58,000
田園	Countryside
道路	Road
田園	Countryside
道路	Road
人口３２０００	Population 32,000
田園	Countryside

Figure 3 Diagram of developed form of Howard's garden city

also the new doctrine for regional development to build the nation through the construction of these small cities one after another.

What form this would take—specialization on a larger regional or international scale, and tie-ins with various facilities not to be found in smaller communities but in larger ones—could not be achieved without considering association with a larger hub, but the plan would be for a self-sufficient society as a place where a group of people could produce and consume. Here, he reveals the first overall reconstruction plans for urban life facilities that try to bring about the total "fulfillment" of residents' lives through a small society. Therefore this also meant the overall constructing of the actual lives of the city's inhabitants. This focused on the idea of trying to realize a small city that improved the substandard living conditions of urban residents including laborers and located them close to workplaces, that embraced the countryside, and had well-ordered life facilities.

2.9. Working Models

Two noteworthy examples of this ideal were realized. They were Letchworth and Welwyn. (See Figures 4 and 5.)

These were the products of the extraordinary enthusiasm of certain interested parties, and the "entrepreneurial vision" that was possible in an advanced capitalist nation with vast colonies like England. This success stimulated great interest in the garden city. However, even this new life structure that had everyone's blessing was an extremely difficult undertaking in a free economy,

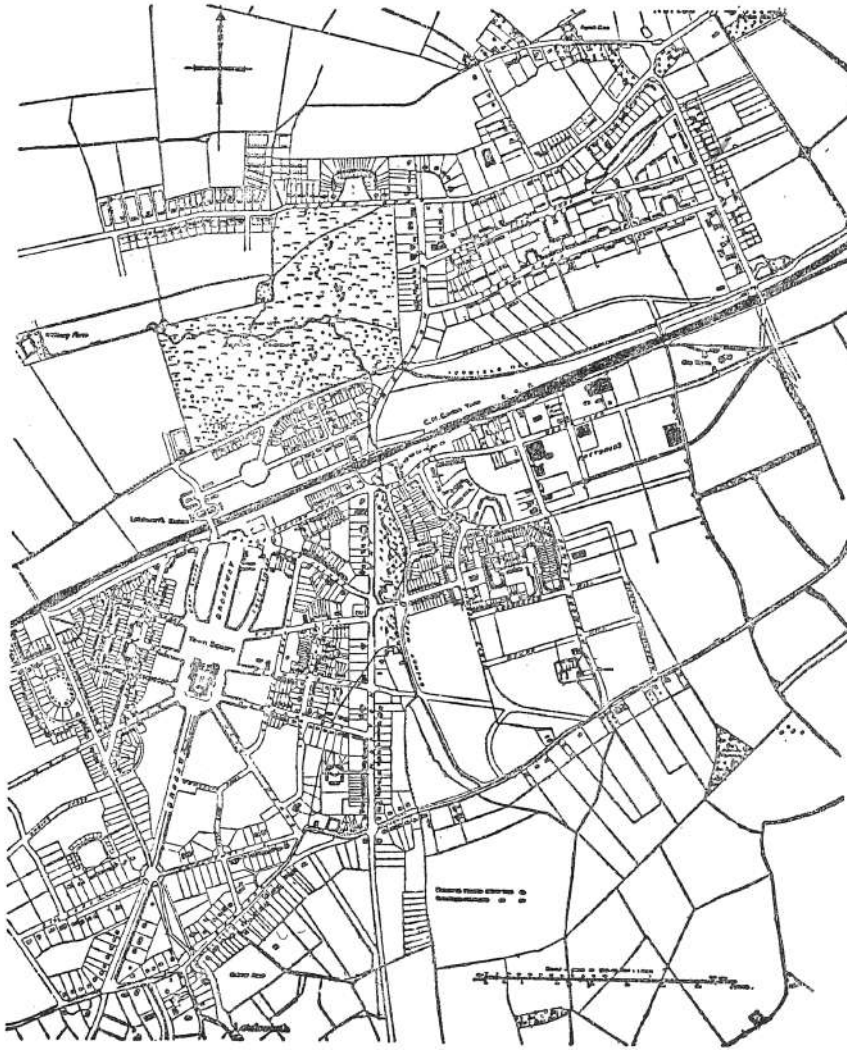


Figure 4 Garden city—Letchworth

where it was impossible to realize unless the interests of financiers, entrepreneurs, landowners and builders corresponded completely, and so no further progress was made. These efforts were pioneered by the urban planning movement in England, and ended with their contribution in enacting the English Town Planning Act of 1909. This aimed to bring about the systematic regulation of urban development, and the garden city was kept within a limited zone, but as the comprehensive construction of a perfected life base it was not a clear solution.

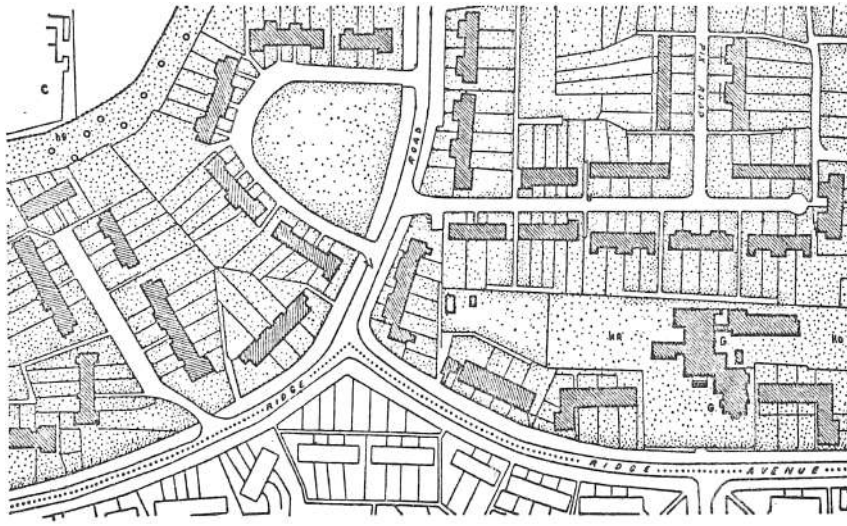


Figure 5 Example of cul-de-sac and "overhang" (Letchworth)

2.10. Garden City Suburbs

The complete and rational construction of life facilities first planned in the proposed garden city, ended in this way with extremely limited success; and although the ideal that was desired here and the actual content were completely different, a solution later became apparent that in form closely resembled it.

The experiment for "garden city suburbs" to build residential zones on sanitized lands surrounded by countryside, rather than small towns with proprietary workplaces (factories and so on), became possible in the 20th century thanks to developments in transport facilities. Of course, this only applied to a small coterie of people able to commute these long distances, but this residential arrangement liberated people from urban living while also securing a way of life where they could freely enjoy the consumer culture flourishing in the heart of big cities. This trend further stimulated the development of transportation; expanded the spatial separation of residential areas from cities that were now places of work; spurred forward the vertical and horizontal growth of big cities; and further encouraged the expansion of 20th century megacities. Villa-like places of refuge in these garden city suburbs soon became permanent places of residence, and before long suburban residential areas transformed into towns that surrounded the peripheries adjacent to large cities. This living arrangement created by separating the workplace from where people lived, along with the associated commercial environment, also spread to small commercial business owners and inner city residents who previously lived where they worked.

2.11. Separating the Workplace from the Place of Residence

However, changes of this nature did not ease the strain of life in big cities. Dense housing in inner city areas remained difficult for urban residents with low incomes to avoid; and the development of transportation, and the unrestricted growth of passenger numbers, brought about the new problem of commuter congestion. The unnecessary complications and irrationalities of a way of life that abandoned the benefits of high-density living were further exacerbated.

2.12. Satellite Cities

Despite proposals for the garden city as the ideal development for residential arrangements, big cities encroached further into the suburbs and continued to expand extensively and without interruption. This expansion was seen as an inevitable part of the development of capitalist society and impossible to avoid. This meant that the only option left was to eliminate as much as possible the chaos produced by limitless belt-like development, uninterrupted expansion, and the unnecessary complication of life. Building new concentrated centers located like satellites a certain distance away from a central mother city; focusing development in places away from existing cities and connecting each of them with high-speed transport facilities; and allowing residents in every small town to enjoy the advantages of the big city too—this was the so-called theory behind satellite cities.

In this manner, it was anticipated that the way of life for people living in all urban areas would consist of a combination of forms including town life, big city life, and life that alternated between town and city. However, like theories behind the garden city, realizing this proposal also faced many difficulties. To restrict the continuous and extensive expansion of the city, a few countries employed methods that provided for the entire periphery, or wedge-shaped areas, to be zones where building was prohibited (green land), but this type of methodical urban development in expanding urban areas failed to gain attention. More than likely, in countries where it was possible to thoroughly and positively carry out large urban planning in a systematic and comprehensive way, rampant urban development itself would naturally have emerged as something to be controlled; and theories on satellite cities, but also many others related to the formation of urban areas, would have been seen as rather idealistic in countries where such theories could not be realized. It was inevitable that countries that could realize them criticized these theories as being overly compromising and half-hearted.

2.13. Ideal City

However, it is not as though no systematic construction based on purely idealistic beliefs about the city took place at all. For instance, a city located in

the colonies such as Canberra in Australia was built according to a "plan" with a geometric layout (based on a 1911 prize-winning design). Nevertheless, looking at this from the perspective of how life amenities were constructed here, it could be argued that basic facilities were merely organized and arranged geometrically in the existing city.

After World War I, urban reform attracted the attention of many architects. However, many of their proposals merely called for the "architectural" reform of the city. For instance, even Le Corbusier's reform of Paris, a typical proposal for a large-scale urban area, merely resolves in an architectural sense the crowding and lack of hygiene in the central areas of an existing large city, but omits all mention of urban life amenities. In his project for a city of 3 million people, he drafted plans for urban development that included 24 skyscrapers 1 km apart, each 16 stories high, that housed between 10,000 and 50,000 workers and were located in the heart of the city, medium-rise housing complexes around the periphery, and industrial zones placed in distant surrounding areas. However, this was only "architecturalizing" the spontaneous form of the capital city of a modern country central to the financial capitalist society, by simply reforming building facilities that perpetuated all manner of criminality, contamination and disorder; the functional configuration of the city retained its American, spontaneous urban life, and not the slightest attempt was made at an "imaginative" solution.

Germany's [Ludwig] Hilberseimer also put forward a proposal for an ideal residential city based on considerations of the satellite city. (Figure 6.) This is a city of rectangular form connected to other major cities by a high-speed rail which transects the center; that is divided into six areas by roads crossing from one side to the other; has four commercial centers; and locates four schools and a hospital on either side that protrude into the rural areas outside the city.

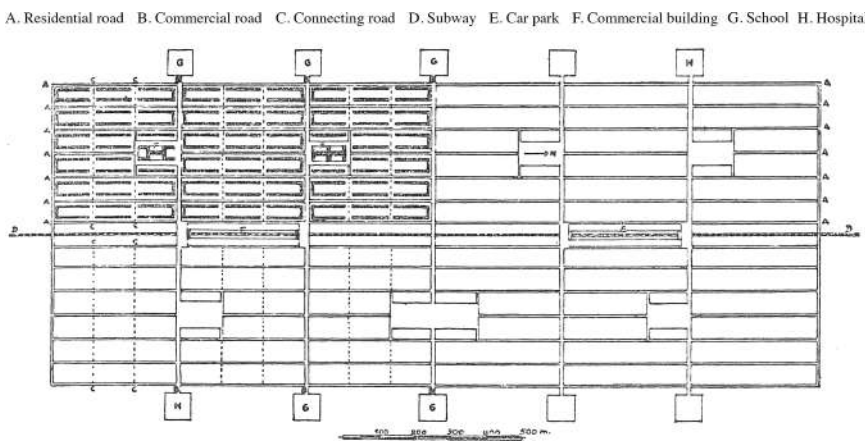


Figure 6 Hilberseimer's residential city plan

All accommodation consisted of 10-story high-rise buildings, with the upper floors for residences and the lower floors for shopping arcades. Here too, what is proposed was merely the partial separation of various constituent elements of a spontaneously formed city, including residences, schools, hospitals, shops, downtown area, and workplaces; from the perspective of reforming the function of the city, or the perspective of the structure of city life, it was insufficient and of doubtful effectiveness.

2.14. Experiments in the Soviet Union

In the many countries run under capitalist freedoms, there was a rigid belief it was inevitable that big cities would continue to expand, that no kind of order would ever be established in urban life, and that the complex interconnected relationships of urban life would uselessly only be of interest for sociological studies.

However, a new development regarding the ideal of the garden city came to light outside the British Islands.[2] This happened in the Soviet Union. Locating home and work adjacent to each other; rationally applying the time and energy lost traveling between both to the life process; and maintaining a moderate population collective to create a total life environment surrounded by rural areas and fully equipped with cultural and public facilities—the ideal of a garden city with healthier living and continually flourishing culture was developed into a completely different form in the Soviet Union with its different political and cultural foundation. It was the culmination of a new design concept called "belt-shaped cities."

2.15. Linear Cities

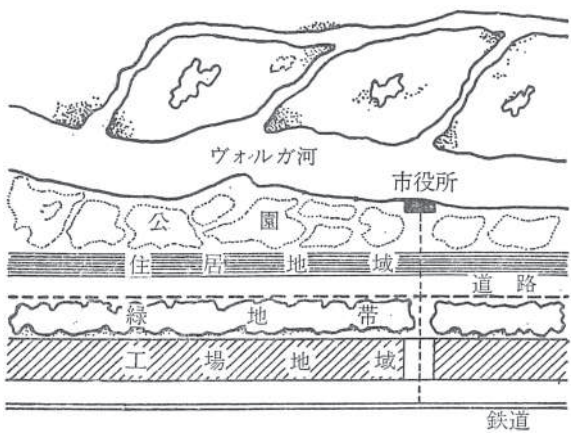
[Arturo] Soria y Mata's proposal for the linear city is sometimes cited as the forerunner to the belt city because of its shape. The city comprises narrow strips of housing located alongside vehicular roads that pass through rural areas, and this network of strips form a web of residential areas that eventually cover the green land, and residents use these roads to travel to factories located in predetermined locations. The one built in Madrid in 1882 was 22 km long and had a population of up to 30,000.

However, while the so-called belt city may somewhat resemble this in appearance, it is based on an entirely different hypothesis. Here, the production facilities themselves are placed linearly, and this system of production facilities is rationally located along transport lines (rail, road traffic, etc.) according to each one's place in the production process, with public and residential facilities, and green land, etc., located lengthways parallel to these. This uses green land to separate housing for urban residents from workplaces, and can be referred to as a particular type of linearly built garden city.

In his book *Sotsgorod* [Socialist City], [Nikolay Alexandrovich] Milyutin describes the belt city he advocated in the following way. First of all, to

eliminate the wastefulness and difficulties produced by the jumble of different facilities and multiple-usage roads seen in cities of the past that had uncontrolled development, he urged that residential areas must be systematically built as a "comprehensive whole" with respect to fundamental elements including industrial and agricultural production, transport, power, management, life processes, and education including further studies. His specific stipulations were as follows:

1) Optimal placement of each and every production facility and multiple-usage road; construct functional flows.
2) Although topographical conditions and industry type may vary, in principle the locations of workplaces and residential areas should be separated by 500 m of green land (protected area). Commute within 10–20 minutes walking distance. Benefit of fresh air, woods, and fields. Enjoy commuting.
3) Railroad to be placed to the rear of production facilities. Vehicular roads pass through green land. Provide parking lots in areas between facilities. Connected to cities by cars.
4) Optimal placement of agricultural areas. State-run farms, including dairy farms, market gardens, and horticultural farms. Irrigation with waste water.
5) Specialist (industrial, agricultural, economic, and medical) and mid-level education facilities with ties to production facilities (factories) and farms, government agencies, hospitals, etc. Integration of work and education. Through theoretical and experimental research facilities, workplaces, green land, libraries, and archives, etc., extend educational opportunities to all in the expectation of raising interest in education.



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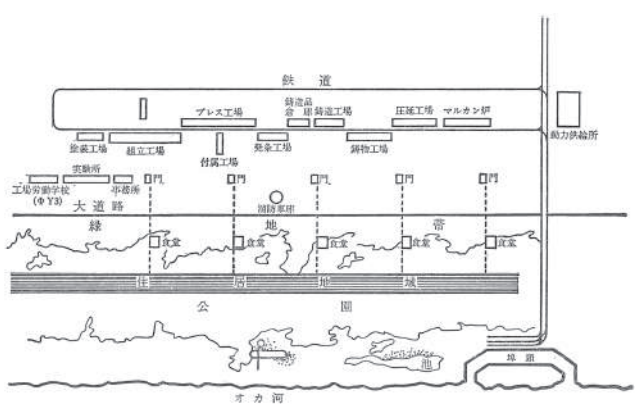
ヴォルガ河	Volga River
市役所	Town hall
公園	Park
住宅地域	Residential area
道路	Road
緑地帯	Green belt
工場地域	Factory area
鉄道	Railway

Figure 7 Model diagram of belt city, Soviet Union (Magnitogorsk)



Text: from top	
鉄道	Railway
プレス工場	Pressing plant
鋳造品倉庫	Castings warehouse
鋳造工場	Casting plant
圧延工場	Rolling mill
マルカン炉	Marquand furnace
動力供給所	Power supply plant
塗装工場	Paint factory
組立工場	Assembly plant
発条工場	Spring plant
鋳物工場	Foundry
付属工場	Attached factory
実験所	Laboratory
門	Gate
工場労働学校	Factory worker school
事務所	Office
大道路	Road
消防車庫	Fire house
緑地帯	Green belt
食堂	Canteen
住居地域	Residential area
公園	Park
池	Lake
埠頭	Wharf
オカ河	Oka River

Figure 8 Nizhegorod auto plant and residential area plan

6) Hospitals to become more like fixed institutions located in residential areas, and to include public health institute, teaching hospital, sanitarium, and research institute. The latter to be located within healthy green areas.
7) Seven-year public schools located in youth villages, with ties between general educational facilities (clubs, library) and factories, to integrate production and work with study and physical education. Parents not prevented from participating in education, but superior socialist enlightenment to be carried out.
8) Management and administration facilities in production areas, in the most convenient locations for management and distribution.
9) Storage and production areas close to railway and roads.
10) Completely prohibit and eliminate unclean areas.

The above principles give rise to the following zoning structure.

2.16. Structure of the Belt City

1) Railway zones.
2) Factory and management/administration facility zones: storage, parking and associated education and research organs.
3) Green zones: vehicular roads.
4) Residential zones:
   a) Public facilities—canteen, public health institute, urban and rural meeting halls;
   b) Housing;
   c) Youth village (Young Pioneers, kindergarten, nursery school).
5) Public park zones: areas for relaxation, athletic fields, swimming pools.

6) Agricultural zones: dairy farms, market gardens, horticultural farms, vegetable fields, irrigated land—the placement of state-operated farms and zones will be determined by factors such as river systems, topographical conditions, and prevailing winds.

2.17. Air Defense Advantages

The structure adopts a placement method based on the work processes of factory facilities relevant to each case; and when these urban zoning placement methods are used, this is arguably the most ideal urban formation, not only because there is self-sufficient "integration of city and farm," but also the usual city center disappears and there is no particular weak point in the transport network, or for air defense.

Putting this to one side for the time being, there are not a few new cities in the Soviet Union built on these principles, but it is sometimes said that the results are extremely unsatisfactory because of shortages of technical experts.

2.18. Reforming the Life Structure

For us though, among these theories no clear image has yet to emerge from earlier ideas on the garden city; and regarding the structure of life and the system of life amenities, we must not overlook what is revealed in the following sorts of considerations. That is to say:

1) Comprehensively grasp the working life of workers (these are people directly employed in work that this city must contribute to the national economy) and their other activities (including relaxation, amusement, exercise, and education), with the aim to realize a life cycle that satisfies the equilibrium within the entire life amenity system—this is obviously what is also sought by the "garden city." However, facilities for activities such as enlightenment, social interaction, and amusement, should precisely follow the example set by various forms of public facilities and shopping districts, etc. developed spontaneously (and profitably) in existing big cities; but it is proposed to take things a step further and design a "garden city" that is neatly organized merely by limiting the scale of things, while being aware that fundamental reform of these facilities overall will support and develop new social life and interaction.
2) Give traveling to and from work by employees a positive meaning in a life sense (cycle of life). Attach positive meaning to what can only be called "the karma of suffering" found in present urban life, and make it a part of the life process within the garden city environment that is absent in factory life.
3) Integrate education with production and labor, and in particular make the lives of students (young people), or the next generation of workers, living in the homes of [present] workers not merely subsidiary to urban life but

an important element of it; that is, comprehensively construct the city in its entirety, as a "homeland" or ideal environment to nurture residents who are growing all the time spiritually and physically.

2.19. The Issue of Remodeling Old Cities

Effort must be made to attain these principles also in the remodeling of old cities. Attention is focused on executing structural reform and integration of social life through the remodeling of large-scale residential areas and city center areas, and especially the construction of areas including those for relaxation inside and outside the city as well as nationally (integrated into educational facilities).

The subject of proposals for the belt city has mainly been the new manufacturing city. Systems of completely novel life amenities that anticipate this new life formation are sought after here. When the utmost effort can be expended to nationally regulate all types of social and economic phenomena, building a new city makes it possible to realize in physical form the creation of this type of ideal life structure (cycle of life). However, in many countries, problems arise almost entirely in big cities that already exist, and prevailing conditions restrict everything. Furthermore, the problem of reforming the structure of life and creating a new life pattern also means an entirely different form must take shape. On this point, attention should be paid to welfare movements in countries across the world, including experiments taking place in totalitarian states like Germany and Italy.

2.20. Welfare Movements

The welfare movement brought about the first notable settlements over life facilities: in tackling the distortion to youth life caused by uncontrolled urban development in the United States, the playground campaign provided them with "playing areas." However, what garnered more attention were halting attempts to kick-start the welfare movement through the reorganization of leisure activities. These included undertakings such as Italy's *Opera Nazionale Dopolavoro* [National Recreational Club], and the German *Kraft durch Freude* [Strength through Joy]. These activities of course still did not develop into a reformation of the total system of life amenities, but as ongoing experiments in the direct and rational reconstruction of life itself, ultimately (and based on their achievements) they could probably be used as a guide for a more fundamental reform of life amenities overall.

New perspectives like these on constructing the life base still lacked coherent form. However, by starting with beautifying the environment and organizing leisure life in the daily cycle of life—whether it be for a day or a year, or even as far as events that only happen once every few years—because they directly tackled the reform of life itself, they could be seen as harboring within them new ideas regarding the life structure and the life base.

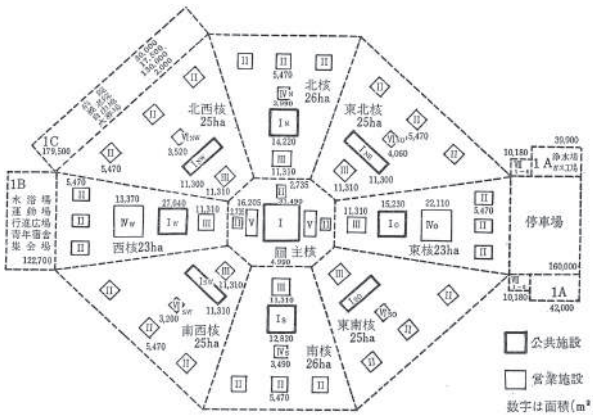
2.21. Housing with Gardens

Just as the pursuit of permanent rural housing largely in the eastern regions was an attempt to expand the homeland of the German people, the quest for permanent housing for urban workers in Nazi Germany was an attempt to nurture middle-aged support for the Reich by forcing workers to own their homes. While the main stated benefit was to provide workers with a healthy living environment and at the same time make evacuations possible during air raids, secondary benefits included improving labor resources by both supplementing family incomes during times of economic decline and [providing room for] relaxation, exercise, and food production during times of economic growth. This was something fraught with many uncertainties, in light of the aim of food self-sufficiency to provide relief for the unemployed inherited from before the Nazi era; however, organizing factory workers in their leisure time outside factory work to do farming linked with production activities as well as relaxation and exercise, was an ideal once advocated by theoreticians of a small-industry associative society, and it gained attention as a further step towards the positive restructuring of the life base.

2.22. Feder's Ideal City

All these experimental solutions devised by the Nazis began of course to appear in their concepts for the new city. Worthy of attention is the proposal for the ideal city devised by Professor [Gottfried] Feder, [a key figure involved in] drafting the party program for the Nazi Party. Feder clearly describes the process of his quest for the ideal city in his work *Die Neue Stadt* [The New City], and in the sample design proposals for the city (see Figures 9 and 10) he puts forward in conclusion, the following points stand out:

1) Self-sufficient small city with population of 200,000—Surrounded by agricultural areas, an industrial/agricultural city with factory zones and workplaces in close proximity along the sides. In devising the proposal for the structure of this city of 200,000, he surveyed the various facilities in existing cities, and based on this research he established the type, scale, and number of public and commercial facilities this ideal city should have.
2) Construction of the region in stages—The entire city would be divided into nine zones, each with three districts. Each zone (hub) would consist of five cells comprising commercial facilities focused on daily life, and the entire zone would in addition be the center for schools, churches and theaters, etc. Every zone would be made up of three districts (east, central, and west), and public facilities would be located within each district. In the central nucleus, key facilities would be built to service the entire city, but among these, cultural facilities would be separately located to the east, and factory facilities along with parking to the west. In more specific terms, along with



Text: 1A, 1B, 1C

	1A
浄水場	Water purification plant
ガス工場	Gas plant
停車場	Car park
	1B
水浴場	Swimming pool
運動場	Athletic field
行進広場	Parade ground
青年宿舎	Youth hostel
集会場	Meeting hall
	1C
病院	Hospital
養老院	Retirement home
自由地	Open spaces
火葬場	Crematorium

Text: clockwise, from top

North hub (北核)
Northeast hub
East hub
Southeast hub
South hub
Southwest hub
West hub
Northwest hub

Text: center

Main hub

Text: key, bottom right

Public facilities
Business facilities
Numbers refer to area, in m^2

Figure 9 Model diagram of Feder's city of 20,000

commercial facilities focused on daily life, the central zone would have various government agencies, assembly halls, banks, markets, libraries, cinemas, nursery schools, and specialized schools, etc.; located outside the city there would be water purification plants, gas plants, power distribution stations, farms, abattoirs, and waste treatment works, etc., associated with the parking zone (east side); exercise zones equipped with swimming pools, athletic grounds, public squares, youth hostels, and assembly halls (west side); and a convalescent zone with hospitals, retirement homes, open spaces, crematories, etc. (northwest side). The city as a whole would be surrounded by small market gardens, dairy farms, and agricultural zones.

In the design proposal for Kirs, which appears among the various proposals for actual designs of this construction, cell, nucleus and city deal with daily, weekly and monthly usages respectively, and are also made to deal with party cell, regional group, and nucleus, respectively.

One could say that the proposal above recreated the various principles related to the ideal city that had emerged since the garden city, with respect to building a small yet completely self-sufficient society in the middle of green areas, and also in other respects, such as dividing the city into sub-districts that had public facilities including schools.

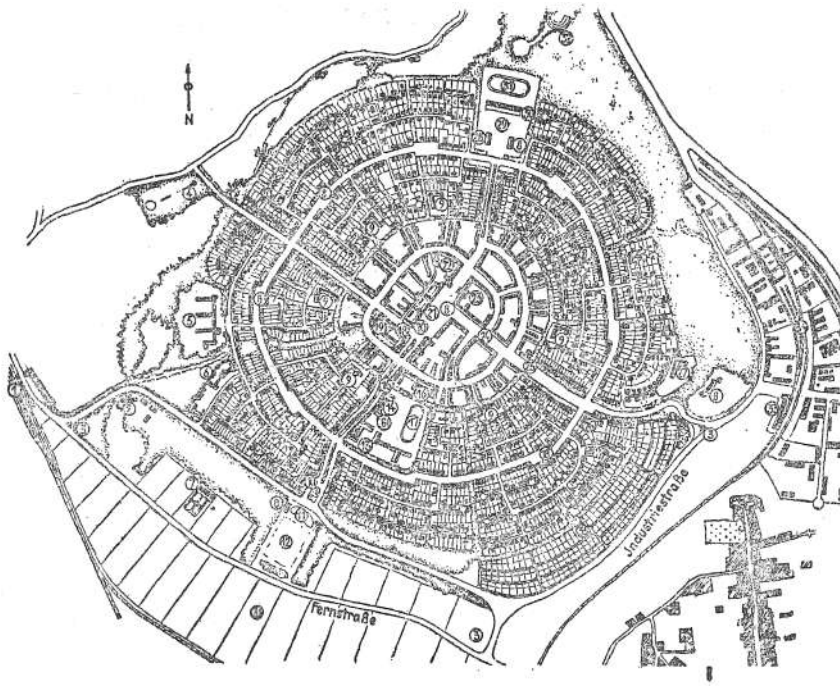


Figure 10 Feder's new city proposal

Also, things such as the integration of convalescence and exercise, and the nurturing of the youth, were supported by the Nazi experience; and the insertion of thoroughly realistic amenities, such as outdoor activities, group training, and exercise, into the city structure was particularly worthy of note.

By attempting to establish the scale and quality of these facilities based on surveys of existing cities, and organically linking these facilities to daily life (circle of life) and making them part of the daily, weekly and monthly tempo, it could be argued this was a theory for the garden city that was derived in a more realistic, more organized manner. On the other hand, though, this was not a proposal like the belt city that anticipated a social structure with completely new production and distribution elements, and combined these elements; it was closer to recreating a small medieval city, just by trying to bring order to all sorts of facilities in forms that existed previously.

2.23. The Life Structure Issue

The small number of historical experiments above have allowed us to look back at various tentative proposals for constructing a positive life base aimed at reexamining and rationally reforming daily life (circle of life), in light of the

spontaneous urban environment produced by the capitalist liberal economic society and the structure of urban life; and [also] at some important points that should be taken seriously. However, our theories on the structure of the life base, our ideal build; are they actually adequate?

3. Contemporary Themes on the Structure of the Life Base

3.1. Urban Problems

The development of capitalist society gave rise to the big city. As the heart of the industrial economy and culture, it was the foundation that made the development of capitalist society possible. However, its growth and development have brought about many ills. Problems with housing, transport, and public health are some of the most prominent issues.

The chronic hardships of life make it difficult for the working class, which constitutes a large part of the urban population, to acquire suitable housing, and as a result they are offered a supply of houses of shoddy quality that reflects their circumstances; sustained difficulty over affordable accommodation and the growth of anti-social substandard housing becomes unavoidable. Threats to public morals, law and order, and public health surge. On the other hand, while the city during the period of rapid development in manufacturing becomes a rich source for the supply of labor thanks to its presence as a focal point for potential manpower and existing housing facilities, this in itself brings about the concentration of the population in the city and absolute housing troubles, and casts a pall over industrial development. In a contemporary sense, housing troubles increase constantly along with the city.

3.2. The Evils of Uncontrolled Expansion

Moving industry to the city and concentrating the population were demanded by this unrestricted spatial expansion. The emergence of zonal growth was inevitable, and with the sustained elimination of housing from the central zone came the concentration of the manufacturing economy in the central zone, and factory zones that entered the city and were encircled by housing; daily life for urban workers now required repeated commuting out of the city, and back in again. These typical one-directional transport flows, and in this regard transport flows that caused intermittent conflicts because of a profusion of mixed-use zoning, threw urban traffic into chaos and caused extreme congestion, and in the end this spelled trouble for the normal operation of the city.

The exacerbation of this disorder posed a direct threat to capitalist society, but also an indirect threat by reducing the rate of profit, and demanded a solution. As a result, solutions were initially makeshift and only treated the symptoms, but gradually evolved into more comprehensive measures. At the

[development] stage of commercial capitalism or bureaucratic capitalism, arrangements became gradually clearer for the organs that could implement solutions reflecting these demands.

3.3. New Dangers

The aggravation of international conflicts between the Great Powers trying to secure economic blocs covering even greater territory, at this stage brought more clarity to the total-war nature of these conflicts. Not only militarily, it became necessary to mobilize the combined forces of industry, the economy, and human resources for the purpose of national defense; demands arose to configure the homeland, and produce arrangements in the most efficient format to reflect the needs of national defense, and the sublation of liberalism under the control of strong nations gained appeal. In other words, it was a demand for "homeland planning."

On the other hand, developments in the airplane drastically changed the way war was waged, and the transformation of the entire country into a battlefield demanded the homeland be structured for air defense; in particular, drastic change also came regarding the issue of urban structure that lay at its heart. This was the urban air-defense structure.

While the suitable location of a city and the distribution of its wealth and population gave rise to the need for regulation through homeland planning, the urban environment and urban life also became subjects for reconsideration, directly in terms of national defense and air defense, and indirectly in terms of the total war mobilization of human and material supply bases. Homeland planning and dispersing important facilities to the provinces became issues, and a reassessment of the friction between city and country had to be considered. Outdated ideas about homeland planning were critiqued through new eyes, and the reexamination of the urban environment as a life base became a pressing matter.

Let's consider these circumstances and take them a step further.

3.4. The Basic Question of National Defense

It is a fact that the broadening and deepening of the scale and nature of international conflicts has expanded visions to devise measures from political and national defense perspectives, where economic demands take precedence. But rather than merely considering this in the light of prevailing circumstances, why don't we now take things a step further? The ultimate goal of national defense must be to secure victory in the long term. Winning the war and the objective to secure an era of peace afterwards, are both evidence of the quantitative and qualitative prosperity of the people themselves, who are the greatest measure of the development of a nation. The prosperity of a race and a people, who are our ultimate purpose, is determined correctly through

the finest appreciation of the value of the people and the value of the labor force—applying this in terms of housing, it just means having the expectation to properly provide the people with a place where they can adequately live and grow. While housing maintains and nurtures a healthy labor force that is the source for increasing the value of the national economy, it must also be the breeding ground to nurture a strong military.

3.5. Homeland and Home Districts

This is an appeal to provide a national life base and home districts different from those the people have cultivated so far. The city cannot be an area squandered on "people" who are against the countryside. At the same time, the unsophisticated life environment as well as the semi-feudal undeveloped character of the countryside must not be held back and kept as an unreformed area just to maintain a few immediate "advantages."[3] Qualitative reformation of the national life to keep up with a highly developed manufacturing economy; the creation of a new social life; making home districts that nurture a people blessed with strong and abundant abilities throughout both urban and rural areas—these are our goals for rebuilding the national life base.

4. Housing Facilities as Constituent Elements of the Life Base

4.1. The Structure of Residential Areas

The ideal plan for housing in the city must of course involve considerations about collective construction. This makes an appearance first of all by way of issues such as how to arrange housing, and how to make housing estates.

4.2. Collective Housing

Quite early on, collective housing forms were developed to cope with crowded urban life. We know that in Roman times, multi-story buildings already existed to house people from the lower classes; and in the Middle Ages too, in cities enclosed by castle walls, this type of tightly packed housing was similarly built to keep in step with increases in population. The rapid growth of populations in modern cities has created a surge in high-density housing in urban areas, and collective housing started being built markedly in the middle of the 19th century. German barracks-style row houses, so-called flats in England, and American high-rise apartments are all typical of this. This housing format was developed with the support of factors including high-density construction on narrow plots; the advantage of being economical from savings on construction, maintenance and management costs thanks to the concentration [of housing]; the increasing numbers of small families including

single occupants; and the societal demand for simple housing to suit highly-mobile residents. Efforts in the quest for collective housing formats produced various experiments in the arrangement of dwellings, and the composition of the form of buildings, etc. However, this process was led by profit-seeking construction companies and rental firms, and as a result, rather than building desirable housing estates, sometimes it moved in the direction of renewed demands to reduce housing costs.

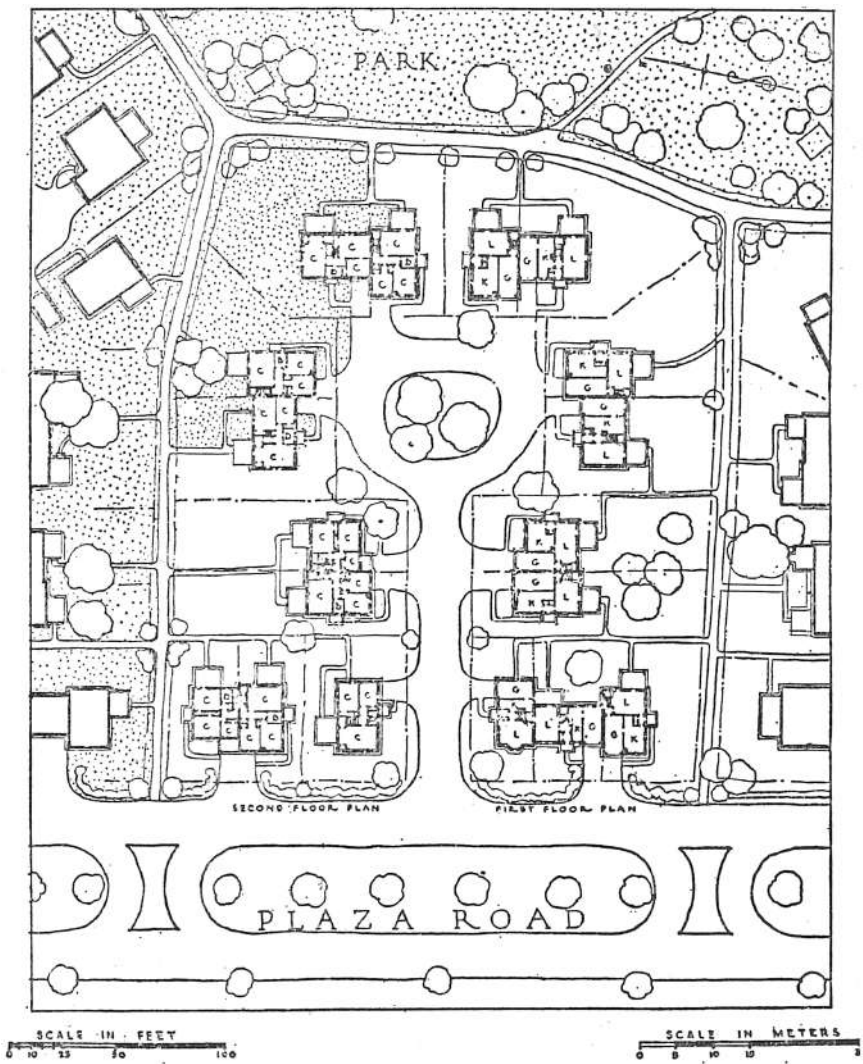


Figure 11 More relaxed cul-de-sac style residential roads, where cars can turn around (Burnham Place)

Japan saw early on the development of row-house-style urban housing, but beyond this not the development of communal or collective housing forms, because of restrictions on construction and materials that were based largely on lumber. With the escalation of the housing crisis after World War I came a rapid increase in semi-detached or communal dwellings known as so-called "Culture row houses"[4] or apartments. However, all of these were deliberately put forward to increase profitability through concentration and not intended to actively improve the quality of housing facilities, so deserved no praise with respect to the construction of housing estates.

4.3. The Placement of Open Housing Estates

During the period of relative stability after World War I, a series of large-scale mass housing construction projects took place in various countries in Western Europe. Naturally, this type of mass construction of housing led to much positive interest in the building of housing estates. In England detached houses that stand alone were the main objective, dispersed and rural-like placement became mainstream ever since the garden city, and limits on the density of dwellings were adopted based on this experience. Legislation in 1923 and 1924 regarding the state-assisted construction of housing determined that in urban areas 20 dwellings could be built per acre, and in the countryside 12 or less.

For this type of free-standing dispersed dwelling, the specific placement method for residences was in the main closely connected to the placement of roads, and of note was the recommendation to use roads such as the cul-de-sac and the "*overhang*."

Cul-de-sacs found in congested city housing zones should have been rejected due to sanitation issues and public security concerns during emergencies, but they were deemed especially useful in open construction because they reduced the road surface area and made housing more private and restful. Furthermore, beautification of the environment through curving roads and variations in the placement of houses was sought after; small garden allotments were possible in the open spaces provided by sufficiently open housing estates, and this brought about the development of ways to make use of recreational areas, including enclosed parks formed by grouping these garden allotments together.

4.4. The Quest in Europe

In Germany, where the development of housing forms had been pursued since the latter half of the [19th] century, there was broad discussion about what sort of housing format should be used in new construction after the Great War: dispersed, open style; concentrated style; or some other style. Naturally, it was decided that the once profitable "barracks-style row house" should be rejected. But sufficiently separated high-rise housing that properly accounted for

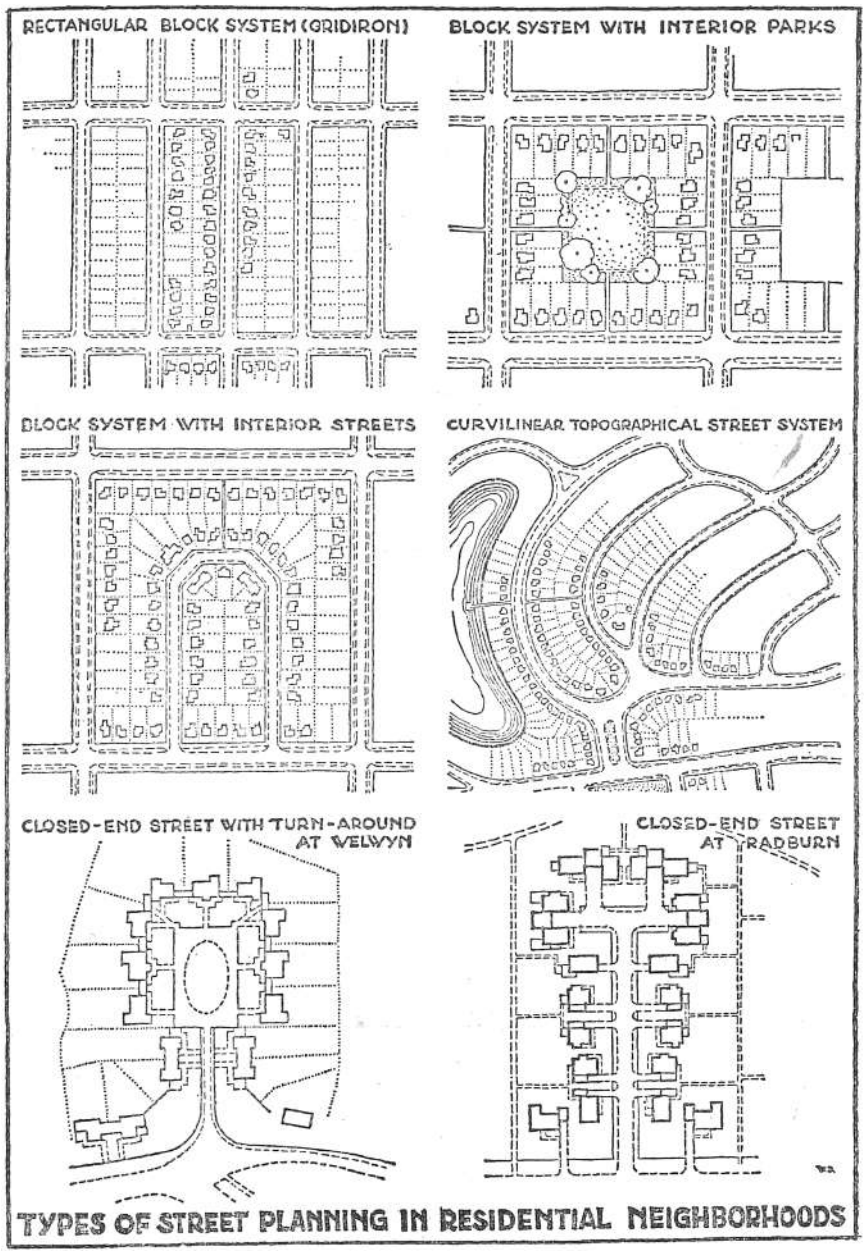


Figure 12 Types of street planning in residential neighborhoods (T. Adams, "The Design of Residential Areas," p. 151.)

legislation concerning placement was not necessarily rejected. And here, among the various principles concerning the placement of housing, the issue of low-rise versus high-rise became the focus of discussion. The most typical examples of this were the various disputes among CIAM (*Congrès internationaux d'architecture modern* or International Congresses of Modern Architecture) members [Walter] Gropius, [Ernst] May, [Ludwig Karl] Hilberseimer, and others; at the 3rd CIAM meeting the theme was "rational methods of placement," but discussions were mainly concerned with this issue.[5] This dispute deliberated over what significance there was in building up life in a new society using housing formations consisting of high-rise or low-rise buildings, but an offshoot to the main discussion dealt with which was the most economical overall (with respect to land, construction costs, and the tax burdens of residents).

4.5. High-Rise or Low-Rise

Purely from the perspective of economics, it is said that the economicity of construction can be found in the cost of land development and fixing minimum values by adjusting the number of stories to offset the expense of elevators. Gropius set this at 10 to 12 stories. In a low-rise building, it is easier to get closely involved with the garden, more convenient to watch over children, and easier to secure the building's privacy. But high-rise buildings can also be built with these qualities, and also be restful; they can be well-ventilated and sunny; they can have broad expanses of lawn and playgrounds; and collectivizing and concentrating facilities makes it more convenient and brings down management costs, so women can be liberated from their housework. According to Gropius, much of the opposition to high-rise buildings was a question of an emotional psychology and the force of habit, and this had to be resolved through politics and world view. However, while making politics and weltanschauung the problem, it could be argued on the one hand that questions had been posed and solutions proposed for things that needed attention—that the cost of housing, one of life's burdens, must be lowered, or the pros and cons of being faced with possible devaluation; in other words, the reflections of the sort of social democrat who would change the subject to "economicity"—but on the other hand, this was done under the sway of an extremely narrow-minded vision.

The actual conclusion drawn by the debate was the notion that a mid-rise building of four to five stories, which didn't need an elevator, was the most economical.[6]

4.6. The Layout of Housing Lots

This type of debate is merely of theoretical interest in our nation, where the structural forms for housing (wooden, single- or double-story) have completely different material and technical requirements. Also, the reality in our

nation is that it is not a problem to exclude construction on individual lots for sale separately, whether they are commercial in nature or managed publicly, when it comes to collective housing construction on a housing complex. The layout of housing there largely accommodates the taste of the customer, and land is subdivided with the target of even higher profits.

4.7. Allotting Land by Rezoning

A type of urban planning work that resembles this is found in land rezoning, which plays a useful role in the urbanization of the city periphery. However, the composition of housing areas here is based on assumptions derived from previous spontaneous allocations and a housing scale; and the size of land parcels is only decided according to the "estimated" standard of the zone, from Grade 1A through Grade 9.[7]

Moreover, it is extremely difficult to realize the designer's intent because the few planning considerations allowed here are based on trying to realize an estimated "size of allotment," and this is a fundamentally unreliable method.[8]

There are substantial contradictions between the planner's expectations and the interests of the landowner on the one hand, and the reality of urban development outside the control of the planner on the other; ultimately, like most "plans" in general, they are not developed according to expectations, and merely attempt to prevent the occurrence of chaotic, narrow and meandering roads.

4.8. New Housing Forms and the Structure of Housing Estates

The structure of housing estates in the Soviet Union is considered from a totally different perspective.

Here it is not merely a question of the placement of groups of buildings; rather, it is to present the objective of discovering a housing form that most conforms with the socialization of life, from the perspective of taking one step further in the promotion of the construction of Socialism through housing facilities that have the closest possible connection to social life.

4.9. Doma Kommunuy

There were extensive discussions on this issue in the 1930s, when Socialist construction started making great progress, about the construction and search for a new socialist-housing form called *Doma Kommunuy* or "community housing."[9] The old form of the detached house was linked to old family structures and individual household budgets, and presented an obstacle to the socialization of life. The Socialist way of life included maximum socialization of life amenities and meals, child-rearing, education and culture, and household management, etc.; and liberating women from the household economy was made a primary consideration. The new housing had to be something

which made possible a collective life that brought advancements in life culture, and gave rise to psychosocial associations and social interaction and customs, while respecting individual abilities. The family was the smallest independent life unit, but to combine these mutually and in an organized manner, housing was needed that socialized child-rearing and other activities in the most rational way possible under the direction of experts—based on the above premises, this was the so-called "community housing," housing consisting of a large construction complex that combined individual rooms for residents to sleep and relax, with shared cultural and commercial facilities.

4.10. Concentrated Format and Dispersed Format

Designs for community housing put forward in various forms by a number of architects could be divided roughly into three types.

The first was claimed to be a concentrated type, and many could accommodate on a scale of between 1,000 and 2,000 residents in a single communal dwelling. These dwellings consisted of individual rooms so everyone could lead their own private lives, and a communal section that was concentrated and differentiated to the greatest degree possible. Since this type was a concentrated format that could be both a building and a city, it was the most economical in terms of construction and operation; but because the individual no longer retained any sense of "self" among this collective of 1,000 or so people, it was little more than a "well-ordered hotel" and was considered unsuitable as a life facility to create the new society.

Diametrically opposed to this, the second claimed to be a dispersed type, and was composed of housing for families surrounded by small gardens; it attempted to organize these detached dwellings into a communal life through the full use of every form of modern mechanical technology including transport and communications systems. This proposal was extremely idealistic from an economic perspective, and even in terms of the development of social life, it was little different from the series of housing estates of the past; whether children were raised there by individual schooling in each home or were educated away from their parents, no rational outcome could be expected from either.

4.11. Proposal for Phased Format

Responding to these two types, the last one claimed to be a "phased" type. Its foundation was a cellular life collective consisting of defined individualistic associations, and it was a proposed cluster of housing facilities that could realize the phased construction of a life community that would build a progressively broader, high-quality lebensraum or living space; the form these individual rooms that comprised the foundation cells would take, would be built from groups of collectives in this gradually broadening living space where each life collective could access communal facilities.

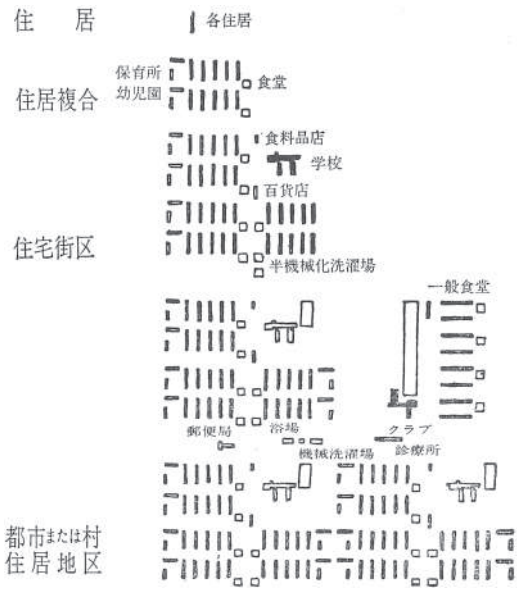
After much heated discussion and debate, it was decided in the end that the third type was the solution most suitable for constructing the material environment of this new social life. What follows next is an introduction to one variant for the proposed Socialist city based on this interpretation.

4.12. One Variant of the Socialist City

1) Communal cell (36 people)
   Single rooms (with built-in wardrobe, toilet, washbasin with shower attachment, telephone; single occupancy for 18 men and women); communal facilities; room for rest and relaxation (reading, listening to the radio, playing chess); recreation room; writing room.
2) Communal primary facilities (180 people)
   Workroom for noisy activities; collective office; assembly hall; social activity room; recreation room; solarium; meeting hall.
3) Communal secondary facilities (360 adults, 20 children)
   General rest rooms; library reading room; collective office; assembly hall; individual rooms for special uses; recreation room; dining hall; kiosk; infant nursery; exercise and recreation grounds for individual or group use; cloakroom; meeting hall.
4) 2,000 person collective
   Social center (assembly hall; cinema; meeting room; children's play center); recreational park (recreation rooms; amphitheater); dormitory school for 3–8 year olds with fitness center (sports center; swimming pool; kiosk); dormitory school for 8–16 year olds; outpatient department (with beds); workshops.
5) Communal collective
   Assembly plaza; cultural house (elegant assembly hall); sports center; school district; park avenues; cinema; library; local medical facility; shooting practice range.
6) Socialist city
   Central square; cultural hall; sports center; advanced specialist colleges; youth cultural hall; science and technology museum; park district (cultural and recreational parks; tree-lined avenues; zoo; botanical garden); radio broadcast station; airport; medical facilities (prevention and public health bureaus, hospitals); etc.

4.13. Standards in Typical City Planning Bureau

Furthermore, according to 1931–1932 standards in a typical city planning bureau, created to meet the needs of rapid construction of collective housing areas in industrial zones, the construction of housing zones established the following type of stages of zonal composition that must coincide exactly with actual demands based on similar principles.[10]



Text: from top

住居	Residence
各住居	Each residence
住居複合	Cluster of residences
保育所	Daycare center
幼稚園	Kindergarten
食堂	Canteen
住宅街区	Residential neighborhood zone
食料品店	Grocery store
学校	School
百貨店	Department store
半機械化洗濯場	Semi-mechanized laundry
都市または村住居地区	City or village residential zone
一般食堂	General canteen
郵便局	Post office
浴場	Bathhouse
クラブ	Clubhouse
機械洗濯場	Mechanized laundry
診療所	Medical clinic

Figure 13 Phased construction of the city's internal structure, according to Soviet Union standard city planning bureau

Construction system for permanent residence areas:

1) Housing cells—Basic housing facilities (bedroom; private restroom; room for reading and grooming; kitchen and dining room for families); homes for individual families and rooms for boarding.
2) Housing—Combining housing cells; communal residents access communal dining hall and rest rooms.
3) Housing compound—Housing collective; dining hall; day care for pre-school children (nursery school for infants; kindergarten for 3–8 year olds); gymnasium.
4) Housing block—School; laundry facility; facilities of a general urban and local nature (bathhouse; department store; grocery store).
5) Local area—Administrative; public facilities (post office; public health bureaus; clubs; restaurants; sports ground).

4.14. Plans for Adjacent Land in the U.S.

In the liberal capitalist United States, which is worlds apart from any Socialist nation, progress on these issues has been made through solutions that reflect its special circumstances, in particular the development of motor traffic. The development of high-speed road traffic, along with rapid urban growth, pushed people off the roads and increasingly distorted the pattern of urban life.

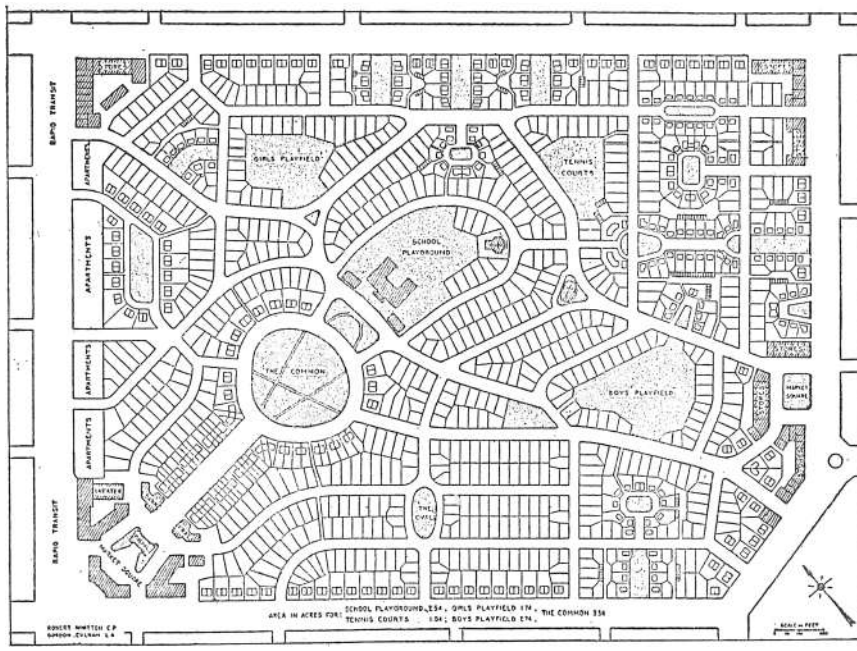


Figure 14 Unit division plans for 160-acre residential estate (R. Whitman)

This dire situation brought about progress in the public health movement as seen in the campaign for playgrounds, but as to where in the city to locate the various types of public health facilities that were planned as a result of this process, views were gradually cultivated on the systematic development of adjacent areas. On the other hand, demands to construct zones separated from trunk roads and their busy motor traffic, to make residential areas peaceful and quiet locations for relaxation and raising children, gave rise to numerous designs for residential estates with cul-de-sacs, park roads and small parks, etc., in adjacent areas. (See Figure 14–17.)

4.15. Research on Housing Estates in Our Nation

Due to limitations arising from actual conditions as previously explained, plans in our nation for residential estates, the basic unit of urban construction, have yet to be seen as an actual issue. However, inspired by plans in a number of foreign countries, especially the United States, for adjoining housing estates, this sort of subject has already gained the attention of experts in the form of theoretical studies into the construction of housing estates.

What happens in a purely theoretical sense to single units of housing that make up a city? If we look at Keisuke Yamaoka's study *Toshi kōsei no tan'i kugaku* [Unit division in urban construction] presented at the 6th

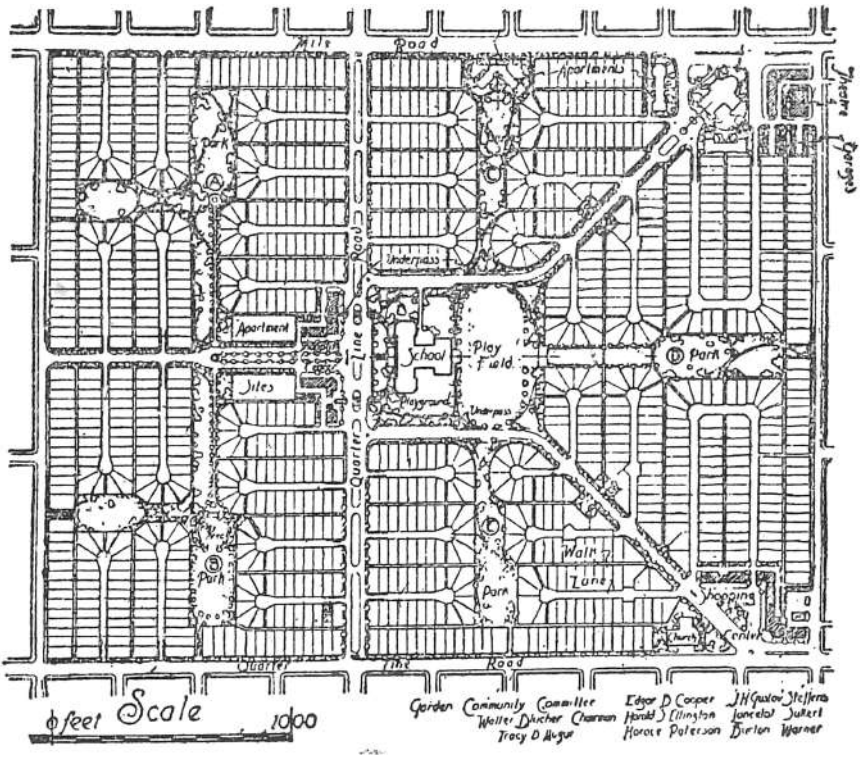


Figure 15 Residential estate proposal

Urban Issues Conference [1938], based on Ministry of Home Affairs road planning standards the author supposed he had a 500 square-meter housing estate unit ringed by trunk roads, and closely scrutinized the point of placement of public facilities such as transport (trams and buses), parks, elementary schools, public markets, air-raid shelters, water mains, and fire hydrants; he proposed placing elementary schools, parks, and markets in the center of this 500 square meters, and concluded that this was generally acceptable, even if there might be slight adjustments to the size due to the level of population density.

4.16. Architectural Institute's Competition

In 1939, the Architectural Institute of Japan held a prize competition, with the theme "Plans for Collective Housing for Workers," aimed at reforming life on the home front for workers in the flourishing industrial sector. The rules called for designs of groups of wooden dwellings to accommodate 3,000 residents including roughly 700 single persons, and associated communal facilities; to be

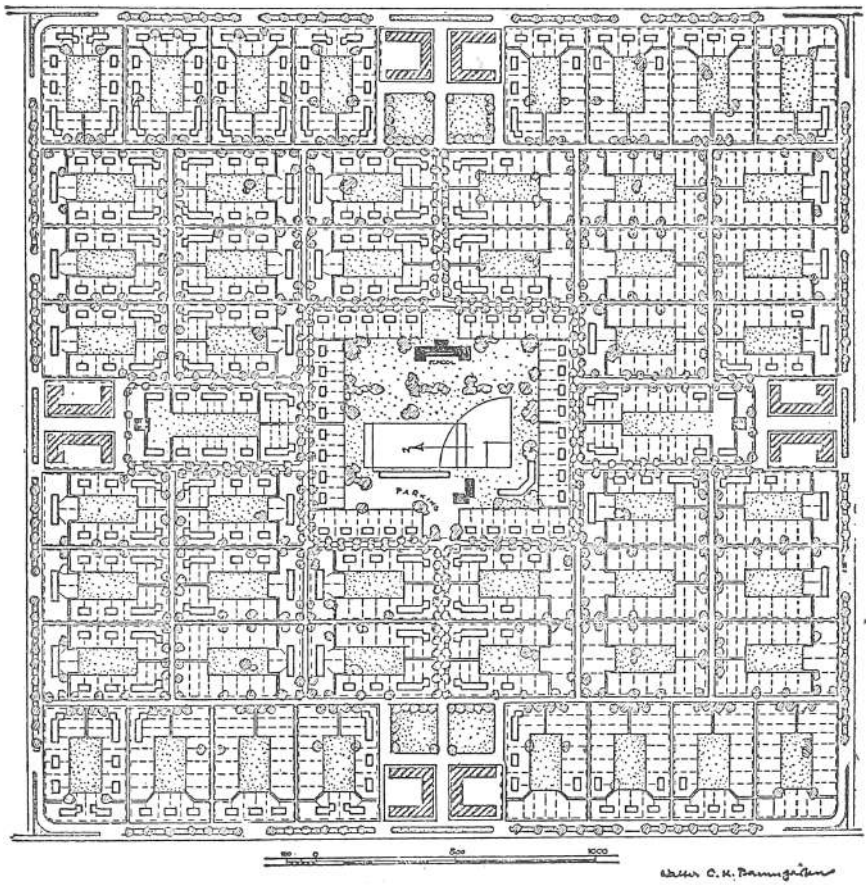


Figure 16 Residential estate proposal (rectangular and crossroad pattern); Thomas Adams, "The Design of Residential Areas" (1934), pp. 210–211

contained in a space with sides of 1,000 m.; to build a main 200 square-meter focal point in the center for an elementary school, post office, and park, etc.; and to divide the surrounding area into four zones measuring 400 by 600 meters, and give each zone a central feature such as a bathhouse, daycare center, market for daily items, or children's park. The winning proposal included elements such as housing clusters for multiple households, communal use of wells and clothes-drying areas, and town meeting halls.[11]

4.17. Elementary School as District Focal Point

The approaches of the two examples given above were completely identical in that their zone formation (or more-specialized incremental zone formation)

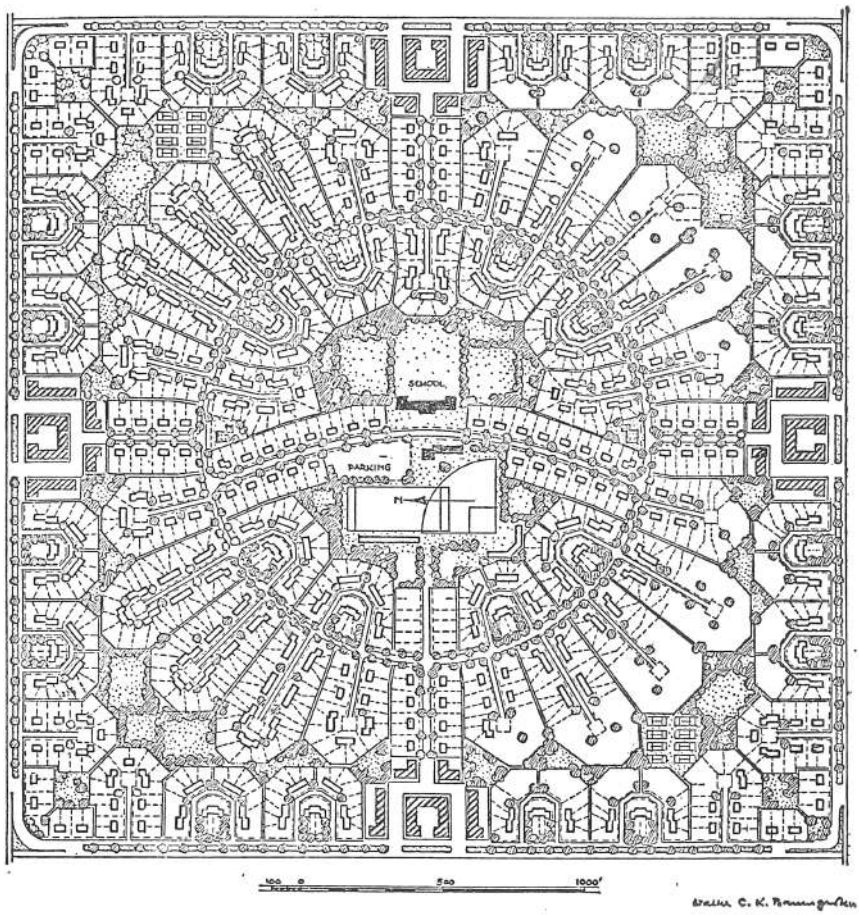


Figure 17 Residential estate proposal (cul-de-sac and circular pattern)

had elementary schools and other public facilities at their center, except that size of zone unit was increased in the latter. With respect to this increase, Tatsuo Yoshimura,[12] in his study into "adjoining units," stated that 100 hectares would ensure that housing would be at the proper distance from railways and shopping districts to remain undisturbed, and there would be less inconvenience when using transport facilities to go shopping or commute to work, and traveling to school, etc.

4.18. Sociological Research

Research into this sort of adjoining unit had to be adopted since the design for the collective housing estate would construct a new social collective; but it

also enlightened the research of sociologists regarding, firstly, a sense of public order and convenience in life, as well as the social character of housing zones where sociability and comfort were necessary. Thoughts on the sociological significance of "adjoining units" were mainly spurred on by studies done in large American cities, and here the discussion was about the need to establish regional communities and protect local character. Individuals wanted to see themselves reflected in their surroundings, in their society. To do that, they needed a sense of intimacy and attachment. A small community built in this way would be an extension of one's own family. A housing zone would first preserve its local character and be built as a small society in this sense, and for the resident it would become a true "hometown."[13]

As a result of this sort of research, sociologists found that a housing zone with an elementary school as its focal point was of course the most suitable. It was only right that an elementary school would be at the heart of a small society with a secluded, local character; however, as an amenity it was not only useful simply for educating young citizens, it also had the advantage that it could be used as a public facility in the middle of the district for many other purposes including meetings, public services, recreation, and sports.

4.19. Incremental Construction of Zones

On the other hand, in response to the reinforcement of national defense and administrative organization since the outbreak of war between Japan and China, the *tonarigumi* or neighborhood association was a regional civilian defense cell, the local bonded group adopted as the lowest unit in a civilian organization, that handled and coordinated practical life matters, such as the control of consumption where it distributed and rationed daily items; as this became increasingly important, gradually people began to advocate that collectives like these *tonarigumi* must be adopted as unit cells in regional structures. As a result, the lowest communal facilities were attached to *tonarigumi* units, and gradually higher-level public facilities were appended to higher-level regional collectives; the theory for "phased" housing zone construction to build up the region overall gained more momentum. The essay "Kinrin jūku no kōsei" [The construction of neighborhood units] appeared in *Shomin jūtaku no gijutsuteki kenkyū* [Technical research on ordinary houses], written by the Architectural Institute's Committee on Housing Problems[14]; it gained notice as having taken this sort of research as far as it could go. A simple outline of this phased construction appears below.

4.20. Proposal by Institute's Housing Problem Committee

1) *Tonarigumi* units (10–20 households, 0.5–1.0 hectares): *tonarigumi* public square (also serves as recreation park for preschool children); air-raid

shelter; well; swimming pool; sandpit (to be used for fire fighting and evacuations during emergencies).

2) *Keibō* [civil defense] units (60–80 households, 3–6 hectares): use children's park in cases where *tonarigumi* unit doesn't have a public square; "communal facility for providing meals" if this is to be done; surround the periphery with roads (wider than 6 meters) accessible by fire engines.
3) *Kōbai* [purchasing] units (400–500 households, 12–25 hectares): market (or distribution center); small park; daycare center; bathhouse; neighborhood association office; police box, etc.
4) *Kinrin* [neighborhood] units (1,600–2,000 households, 60–100 hectares): elementary school (evacuation area in the basement; lecture hall and gymnasium also serve as a civic hall); library; ward office; civil defense office; life guidance bureau; neighborhood park; hospital (clinic); post office.

4.21. Example in Manchukuo

With regards to the collective housing system that must be considered the basic unit for urban construction, proposals in Manchukuo for housing for residents of Japanese descent are based on exactly the same considerations. The exception is that, here, the smallest measure for unit housing corresponds to that given in Point (2) above, and the design standards for *rinho* (neighborhood) housing and *shūdan* (collective) housing are given below as examples.[15]

1) Unit housing (50 households, 250 people, 22,500 m^2); toddlers' park.
2) *Rinho* (neighborhood) housing (300 households, 1,500 people, 157,500 m^2); housing management office (offices; central heating; rubbish disposal); kindergarten; children's park; police box.
3) *Shūdan* (collective) housing (1,200 households, 6,000 people, 810,000 m^2; 900m x 900m square); state-run school; ward government office; housing agency; public health institute; consumer association; shopping district; housing park.

4.22. Housing Zone Completion

The above systems for neighborhood and collective housing are both intended for average workers and ordinary people living in cities (the question posed in the Institute's 1939 competition, which became the basis for their proposal, was more restrictive and only allowed workers); and it is possible to argue that they were theoretical draft constructions for the most idealistic and conceivable unit to build a form of permanent housing for groups of people working at various places of employment located outside the residential area. In terms of solutions previously presented, they match almost entirely the intermediate unit

of urban construction in phased-form solutions presented by Soviet architects in their community housing (*Doma Kommunuy*).

4.23. Two Aspects of Life

However, even if we can realize facilities here with this sort of systematic organization for housing, we must consider the fact that we cannot then declare that similarly our lives will immediately be organized systematically as we would wish. In other words, in addition to our "life in the home" that these solutions address, we also have our lives in the workplace that make up the other important half of living, as well as the various secondary life processes when these two are connected; these two aspects of our lives have a reciprocal and structural relationship. In order to do this we are trying to make this homeland into a more appealing place—surely a realistic process in developing our race—and we must not divide "life" strictly along lines of work and home, nor consider each in isolation.

4.24. The Issue of Overall Construction of Life Amenities

When the decision is made to try to construct a perfected system just by divorcing housing from life in general, especially lives spent in production and labor, this means setting out initially from an idealistic or incomplete and narrow outlook.

This is based on the fixed premise that a society is where enterprises construct workplaces to suit themselves, and build housing with a different intent, namely to derive a part of their income which they extract from it; it is an approach from times past (but also the present day) where urban planning only considers that "work is work, and home is home" and maintains a strict separation between the two. What makes this unrealistic is that, as long as it is based on the aforementioned premise, this kind of theoretical plan is a dream that can never actually be realized. What makes this less than satisfactory is that, if we assume the conditions needed to realize the sorts of ideals we now hold have been secured, it would be time to evolve into a form of systematic structure for *total life amenities*,[16] on a foundation where problems are dealt with more comprehensively rather than just examining the basics, or in other words where *total life*[17] is systematically reconstructed all the way from work to home; moreover, there would be a sense that this had to be done.

In the discussion above we have only taken an extremely brief glimpse at previous research into the construction of housing zones. However, the housing problem is linked, in the sense indicated above, in the first place to life in the workplace, and secondly to the city overall as a life base that combines work and home, in other words the issue of constructing the entire nation.

These various issues must in future become the focus of our consideration.

(Clean copy, July 7, 1942.)

Notes

1 Translated from *Nishiyama Uzō chosakushū 3* [The collected works of Uzō Nishiyama, volume 3], *Chiiki Kūkan Ron* [Reflections on Urban, Regional and National Space] (Tokyo: Keisō Shobō, 1968). "Dai 1 shō, Seikatsu kichi no kōzō" [Chapter 1, The Structure of the Base of Life], pp. 19–56. The English version of this chapter, and of Chapters 9 and 10, provided by Norman Hu Translation.

2 Translator's note: The author uses the contemporary term 英本国 (*Ei-honkoku*), instead of 英国 (*Eikoku*) which is used everywhere else when referring to England. Presumably he is emphasizing here that he means only the British (home) Islands rather than 英帝国 (*Ei-teikoku*), or Britain's extensive empire.

3 Nishiyama's note: This refers to the known wartime slogan "*minzoku taibō*" [national austerity], where a simple environment promotes a strong race.

4 Translator's note: *Bunka nagaya* or "Culture row houses" refers to the buildings that were constructed in the *Bunkamura* or "Culture Village" at the Peace Commemorative Tokyo Exposition of 1922.

5 Nishiyama's note: "Rationelle Bebauungsweisen" Ergebnisse des 3 Internationalen Kongresses für Neues Bauen, Brüssel Nov. 1930.

6 Nishiyama's note: Thirty years later, in the construction of apartments in our nation after World War II, these conclusions were followed virtually unchanged; however, the reciprocal relationship between the appraisal and the condition of highrisification has changed greatly, due to productivity developments, technological advances, and the progression of urbanization and densification.

7 Nishiyama's note: Land Rezoning Design Standards, July 1933.

8 Nishiyama's note: Sadakichi Ibe, *"Jūtaku no hyōjun kakuchi"* [Standard allotments for housing], *Toshi Mondai* [Urban issues], May 1940.

9 DOMA-КОММУНЫ, строительство Москвы 1929–1931 [DOMA-KOMMUNY] stroitel'stvo Moskvy 1929–1931]

10 P. N Blokhin, Tipizatsiia zhilishch, Obshchestvennykh zdannii pri planirovke nasselennykh mest, 1933.

П. Н Блохин, Типизация жилищ, Общественных зданий при планировке населенных мест, 1933

11 Nishiyama's note: *Kenchiku Zasshi* [Architecture magazine], Dec. 1939.

12 Nishiyama's note: Yoshimura Tatsuo, "Kinrin tan'i" [Adjacent units], *Toshi kōron* [Urban opinion], May 1940.

13 Nishiyama's note: Okui Fukutarō, "Gendai daitoshi ron" [Theories on the contemporary city], and "Jūtaku ron no shakaiteki seikaku" [Sociological nature of housing theories], *Kensetsu to Shakai* [Buildings and society], June 1940.

14 Architectural Institute's Committee on Housing Problems Report: *Shomin jūtaku no gijutsuteki kenkyū* [Technical research on ordinary houses], *Kenchiku zasshi* [Architecture magazine], January 1941.

15 Nishiyama's note: "Manshu ni okeru toshi keikaku to shūdan jūku sei" [Urban planning and collective housing system in Manchuria], *Jūtaku* [Housing], January 1941.

16 Translator's note: This is Nishiyama's original emphasis.

17 Translator's note: This is Nishiyama's original emphasis.