

## CHAPTER XVI

### CITY PLANNING IN EUROPE

THE motive of city planning in the past has been the beautification of a capital city or the aggrandizement of a monarch. Pericles built the Acropolis and adorned the city with temples and amphitheatres as emblems of the city's greatness. Rome was rebuilt by the Augustan emperors in the early centuries of the Christian era, when forums, temples, aqueducts, theatres, and public gardens were laid out on an enduring scale.

#### **Athens and Rome.**

"The Athenian of the time of Pericles pursued his work in the midst of the most admirable buildings, disposed in that large, monumental manner which is of the highest quality of architecture. Hippodamus of Miletos had laid out the Peiræus in orderly squares and liberal spaces. Far away on the Acropolis gleamed the marble of the Propylæa and the Parthenon, and between them the bronze figure of Athene Promachos seemed to quiver in the splendid light that played around the city of the violet crown. It is a significant fact that while the other towns of Greece were content with narrow streets and squalid buildings, the fine intelligence of the Athenian expressed itself in the ordered beauty of his city.

"The Roman laid out his cities on a broad comprehensive scheme with ample thoroughfares and

public spaces, and no difficulties of engineering or considerations of cost induced him to deviate a hair's breadth from his monumental plan. He adorned his public spaces with the finest statuary and lined the walls of his courts with rare and beautiful marbles. He had moreover the habit of grouping his fine buildings in such relation to each other that their effect was enhanced instead of being stultified. Even when the fact is discounted that he had slave labor and the resources of the known world at his back, the courage of his expenditure on public works and the adornment of his city makes our own municipal efforts seem little less than contemptible." <sup>1</sup>

The towns of the Middle Ages were built for protection and shelter. Everything was subordinate to this end. The houses were closely crowded within the walls; the open spaces were outside the city. The idea of laying out a town on a deliberate plan was not yet thought of, and when new communities were founded the plan adopted was subordinate to military considerations.

It was not until the Renaissance that the idea of public architecture or the systematic disposition of streets, squares, and open spaces with a view to their orderly effect was again realized. The cities of Italy were beautified by the merchant rulers who encouraged art and architecture and erected splendid palaces and laid out open squares. Religion expressed its ideals in Gothic cathedrals, while the commercial aristocracy of the north erected city

<sup>1</sup> Reginald Bloomfield, *Public Spaces, Parks and Gardens in Art and Life and the Building and Decoration of Cities.*

halls and guild palaces in Brussels, Bremen, Frankfurt, and other mediæval towns which were an expression of the pride of these cities.

#### **Paris.-**

Paris was the first great city to be planned in the modern sense of the idea. Louis XIV, ambitious for his capital, intrusted its planning to the Academy of Architects, which prepared designs upon which the Madeleine, Place de la Concorde, Invalides, and the wide avenues about the Tuileries existed years before they were realized. As Paris grew into the suburbs it followed a prearranged and spacious design at little other cost than the preparation of the plans. Napoleon I had similar dreams for a capital of the world. He saw that the Paris of 700,000 people would in time have many times that population and that provision should be made for its orderly growth. He opened up new streets, spanned the Seine with bridges, and transformed its appearance by the construction of new quays and embankments. Napoleon III continued this work on an even more ambitious scale. He employed Baron Haussman, who reconstructed the centre of the city by cutting new streets through the congested quarters and the opening of a series of great boulevards which encircle the older sections. The cost of these projects was \$265,000,000, but the investment brings thousands of people to Paris every year and yields dividends annually to shopkeepers, hotels, and restaurants. Now Paris is planning a fourth great development at an esti-

mated cost of \$180,000,000. The old fortifications which still surround the city are to be developed into a great park and boulevard system like the Ringstrasse of Vienna. Provision is to be made for an increased water-supply, for new hospitals, and many other great improvements. The rulers of the smaller German states also carried through isolated planning projects. The kings of Bavaria involved themselves with their subjects in their extravagant expenditures for the beautification of Munich, for art galleries and museums, for palaces, gardens, and open spaces which give so much charm to that city. Dresden, the capital of Saxony, Carlsruhe, and Mannheim were also embellished by their rulers much as was Munich. They are little Hauptstädte with their palaces, galleries, and Hofgartens.

In 1666, after the great fire in London, Sir Christopher Wren devised a plan for London which, if it had been carried out, would have made London one of the most beautiful cities of the world. Saint Paul's Cathedral, instead of being hemmed in by shop property, would have stood in the centre of a fine, oval place, approached by a broad roadway from Ludgate, instead of narrow Fleet Street. He planned a great embankment to border the river from Blackfriars Bridge to the Tower. But the plan was never carried out and the opportunity was lost.

#### **Modern City Planning.**

As an organized art city planning has reached its highest development in Germany, from which

country it has spread all over the world. The beauty of the old towns as well as the perfection of municipal administration made it natural that town planning should develop first in that country. Moreover, the industrial revolution reached Germany much later than it did Great Britain and America, for, prior to the Franco-Prussian War, Germany was an agricultural country. In 1870 68 per cent. of the population was engaged in agriculture. In 1907 the agricultural population was but 28 per cent. of the whole. In the former year only 25 per cent. of the people lived in cities of more than 5,000 population, there being but nine cities of over 100,000 people. To-day there are forty-seven cities in this class.

The inrush of population to meet the demands of industry, with the coming of mills and factories, threatened the beauty of the old towns. Population leaped over the walls and spread out into the country where land speculators laid off their property as they wished, upon which tenements were erected and bad housing conditions reproduced. The old quarters of the towns were also terribly congested, while the health of the city was endangered by the overcrowding which resulted. Provision had to be made for new streets, for water and rail communication to accommodate the business and traffic. Especially was this true in the Rhine towns, where the industrial development was most rapid.

**Town Planning a Protest.**

Against these conditions a protest arose, and the cities, which have more power than in this country, began to study the problem. They assumed control of the outlying land and planned it as a unit. New streets were laid out so as to insure adequate air space and proper circulation. The smoke of the factories was a nuisance, so ordinances were passed which required factories to locate on the outskirts away from the prevailing winds, so that smoke would be carried away from the city rather than toward it.

Town planning had its birth as a protest against just such license as prevails in America. It was an assertion of the right of the community to protect its life. Germany said to the land owner, the factory builder, and the house owner: "You must so use your property that it will conform with the general plan which our architects have designed; you must plat your streets, locate your structures and use your property so that it will not injure the health and well-being of the community." In a sense, the city had its birth in town planning. Men began to see it as a whole.

**The New Science.**

No large city in Germany is now without an official plan for its future growth, prepared by experts and frequently after competition. A profession of town planning has come into existence, while colleges devoted to the subject have been opened in Berlin and Düsseldorf. Experts go from city to city to

aid local officials in the planning of suburbs, the designing of centres, the grouping of public buildings, the arrangement of streets, parks, and open spaces, much as efficiency experts in this country go from factory to factory. There is a voluminous literature on the subject as well as frequent conferences. In 1910 a town-planning exposition was held in Berlin with exhibits from all over Germany. A similar exposition was held in Düsseldorf in 1912. Town planning in Germany has become a science, to which men devote their lives as they do to other municipal activities. Competitions have been held by Berlin, Munich, and Düsseldorf for the proper planning of the city. Specifications are drawn by the city authorities like those for the erection of a building, and prizes are awarded in the competitions which attract experts from all over the country.

#### **City Planning in France and England.**

In 1909 France enacted a compulsory town-planning act for cities of more than 10,000 population. The preparation of the plans is left to the local community, subject, however, to the approval of the central authorities. Each city is required to complete an extension-and-improvement plan within five years for the future growth of the community. These plans must indicate the location of public parks, gardens, and open spaces, as well as the width, style, and character of streets. By-laws must be enacted controlling the construction of houses, the area of land that may be built upon, and in general provide for the city's growth along

hygienic and artistic lines. When the plans have been prepared they must be submitted to the state for approval. They must then be exhibited in the city hall for a year to give citizens a chance to object or suggest improvements. If a city fails to comply with the act, then the state itself may prepare plans on its own initiative and impose them on the city. When finally approved the plans remain the official plan of the city for thirty years. They must be observed by the city itself in all its development work as well as by private owners and builders.

Great Britain adopted a similar town-planning act in 1909 and placed its administration under the control of the local government board. Under the law local authorities are permitted to make provision for the development of the suburbs and fix by ordinance the allotment of land, the building of houses and factories, and all other regulations for the health and sanitary needs of the community. When completed the local plans must be submitted to the local government board for approval. Under this act a large number of towns have worked out plans of city widening which, in connection with the garden-suburb movement, give promise of changing the appearance of the great industrial centres in which the great majority of the British people dwell.

### **Street Planning.**

The streets of the German city are planned with the care given to a public structure. They, more than anything else, control the life of the city.



Streets ought not to be all alike, the German planners say. They should be planned for the use to which they are to be put and should have as much variety as possible. One type is suited to retail business, another to the official centre, another for expensive villas, and still another for factory districts. In sections where fine houses are to be built the streets should be spacious and parked with trees. Here the houses should be set back a certain distance from the street; they should be separated from one another by a certain number of feet. The height of buildings is also limited, and rarely is it more than the width of the street. In most sections of the city the building line is much lower.

Vienna, Frankfort, Cologne, and Bremen were surrounded with fortifications which formerly belonged to the state. They were acquired by the cities and developed into Ringstrassen or made the sites of public buildings. The Ringstrasse of Vienna is the most commanding street in the world. It was designed to be such. Upon it are located the palaces, museums, art galleries, the city hall, university, and other public structures, which form commanding groups. Vienna retained title to the land until these improvements were completed, and then sold a portion of the land at a greatly increased value, and by so doing reimbursed itself for much of the cost of the undertaking.

Many German cities have laid out circular boulevards of the same general style. They form the

circumference of the city. Radiating out from the business or official centre are wide, radial thoroughfares which are designed to be the main traffic streets. These thoroughfares are very wide and are in the nature of continuous parkways. In the centre is a promenade way with trees and gardens. On either side street-car tracks are laid in the grass-plats to reduce the noise and dirt. Bridle-paths are provided, while next to the curbs are the roadways for traffic. These radial thoroughfares are lined with trees and beautified with fountains and gardens. Often they are curved or winding. The charm of winding streets may be seen on the Grand Canal in Venice, in Regent Street, London, or High Street, Oxford. There are new vistas at every step.

#### **Mediæval City Streets.**

Some planners are reverting to the irregular street, like those found in the old cities of Nuremberg, Rothenberg, Oxford, or Cambridge. The irregularity of the streets in these towns was generally assumed to be due to accident or ignorance, but recent discoveries have disclosed that the streets were designed in this way. They were broken off in dead ends for more easy defence, to keep down the dust in summer and the cold winds of the winter. There was no paving in those days and fuel was difficult to obtain, so the streets were designed to minimize these conditions as much as possible. The street plans of some of the more recent suburban developments are designed along these lines. They aim to reproduce in the modern town the

charm and picturesqueness of the sixteenth-century city.

The planning of the streets and the laying out of new allotments is done by the city rather than by the owner. Pavements, sewers, water and other service pipes are also installed by the city and the construction is very permanent. Before a new territory is opened up to building it is carefully studied to ascertain its natural advantages and the particular use to which it should be put. And when a decision is reached the streets are planned accordingly. This is sometimes done by the city engineer, often by experts called in for the purpose, sometimes after competition.

#### **The Zone System.**

The city also determines the use to which property shall be put. This is not done arbitrarily but in accordance with the natural advantages of the land. This is known as the zone system. If the land is located by the railroad station or in proximity to the harbor, it is naturally suited for industrial purposes and is planned accordingly. Where possible the factory zone is located on that side of the city away from the prevailing winds, which protects the city from smoke and dirt. All new industries are required to locate in this territory.

The worker should be able to live near his work, so land in the neighborhood is laid off for working men's houses. Here the streets are not very wide, for the traffic is not heavy and should be discouraged. Small parks or play spaces are pro-

vided to afford recreation for the children and the family. Other sections are laid out for expensive villas or high-class apartment-houses, and here the streets are planned on a more spacious scale.

All this makes for permanence. The owner is assured that his property will be protected from alien use and will not be depreciated by factories, warehouses, or other objectionable buildings. He can build with the expectation of protection by the community itself.

### **The Control of Buildings.**

Similar restrictions are placed upon the builder. Ordinances zoning the city provide for the kind of structures that may be erected in each zone as well as their general architectural effect. The maximum height of all buildings is fixed. Rarely are they permitted to be higher than the width of the street. The amount of land that may be covered is also determined in advance as well as the distance of the house front from the street line. In the zone dedicated to detached houses a certain distance must be left between the houses. This still further insures harmony and beauty; it gives permanent character to each district.

The city of Ulm, for instance, divides the building area in one zone as follows: 17 per cent. is first dedicated to streets; 50 per cent. is then reserved for front gardens and 13 per cent. for rear ones. Only 20 per cent. of the land may be covered by buildings. In Frankfort there are three districts. In the business district 75 per cent. of the land may

be covered by structures, but the buildings must not exceed five stories or be more than 65 feet in height. In the next outer zone houses may be four stories high provided they are not higher than the width of the street. In the third zone two stories is the limit, while factories are not allowed in the residence districts. In Cologne 25 per cent. of the land must be left free in the business section, 35 per cent. in the next outer zone, while in the suburban districts only 50 per cent. of the land may be built upon.<sup>1</sup>

Under these regulations similarity of use and architectural harmony is insured in each district, while the street presents a uniform sky-line. By setting the houses back an equal distance from the street a certain uniformity in frontage is also insured. Beauty is still further secured by frequent gardens, by flower boxes along the house fronts, by the planting of trees and ornamental shrubs.

#### **Harbor and Water Fronts.**

European cities prize their water-fronts and rarely permit them to fall into private hands. This is as true of the small streams and inland lakes as it is of the rivers and seacoast cities. Dresden, upon the river Elbe, is one of the most beautiful cities of Europe because of its river-front development. The river terrace is known as the Balcony of Europe. Budapest, said by many to be the most splendid

<sup>1</sup> A commission has recently reported in favor of districting the city of New York, of limiting the height of buildings, and the fixing of other limitations on the uses permitted in the various districts.

city in Europe, was planned by the Hungarian people in a patriotic determination to rival Vienna. The Danube River is retained within high embankments terraced down to the water. On the lower level are landing-stages for steamers. Higher up are wagon roads for traffic, while on the top of the embankment are promenade-ways and parks which form the favorite resort of the people. Both sides of the river are flanked with splendid public buildings and palaces, while the river itself is spanned with beautiful bridges. The river Seine, in Paris, has been beautified by successive governments, as is the Thames in London. The river Rhine, from its mouth to its source, is protected in the same way by the cities. Private interests are not permitted to encroach upon it, the harbors and docks being everywhere owned by the city. Unlike the waterfronts of the American cities, the rivers and canal ways in Germany are the centres of all sorts of life of the people. Even where intensively used by commerce they are so planned as to be accessible to the public for other purposes.

Hamburg converted a swamp in the centre of the city into a series of lakes known as the Alster. The parks about it were laid out for restaurants and places of refreshment. The lake is surrounded by beautiful residences, and during the summer months is covered with all kinds of pleasure craft and is used by the entire population for recreation. In Düsseldorf, Bremen, Nuremberg, and elsewhere the old moats which surround the towns have been

preserved and beautified. The canals running through Berlin are bordered with shade trees and promenades, and the busy traffic in no way interferes with the beauty of the city.

Harbors are built by the cities as an aid to commerce. They are linked up with the railroad system so as to reduce transportation costs to a minimum. Upon the embankment hydraulic and electrical equipment is installed for the handling of water and rail freight. The neighboring district is laid off as a site for factories, with spurs from the railroads running to each, so as to offer the best transportation facilities to a large number of factories. Düsseldorf increased its water commerce 300 per cent. by the building of a harbor on the Rhine. Cologne, Mannheim, Mainz, and other cities have been converted into great manufacturing centres by the intelligent development of their water facilities. Frankfort, a city of 414,000, is spending \$18,000,000 on a harbor undertaking, which involves deepening the river Main for seven miles and the excavation of a great harbor basin out of the land.

City planning in Germany includes the unification of the steam railroads, waterways, and harbors so that they all become an integral part of the city. In place of the conflict between railroads and waterways so prevalent in America, instead of controversy as to stations, terminals, and rights of way, the means of transit are subordinated to the city and made to take their place in the social organism much as does the circulatory system of the

human body. They are agents of city building and are intelligently used for that purpose.

#### **Land Ownership.**

From the earliest times German towns have owned common lands and forests round about the village, which were used for pasturage, for forestry, for agriculture, and the gathering of fuel. This land has been generally retained. It is stated by a German writer that no less than fifteen hundred towns and villages in Germany still own and have owned right down from the Middle Ages so much common land that their inhabitants pay neither rates nor taxes.

Cities are constantly increasing their landed possessions. Cologne has recently increased its landholdings by 1,269 per cent. Between 1890 and 1902 Chemnitz added 605 per cent.; Munich, 334 per cent., Dresden, 290 per cent.; Mannheim, 254 per cent. to their previous possessions. The government encourages the cities in this policy, and the interior department recently issued orders to administrative officials to use their influence to induce the towns to buy as much land as they could obtain.

Cities are also land speculators. Düsseldorf has provided a special fund of \$3,750,000 with which to buy and sell real estate the same as a private speculator. The purpose of the investment, according to the city's own statement, is "to restrain the unnatural augmentation of the price of land." Through its landholdings the city competes with private speculators. It retains the unearned increment from the



growth of the city and also keeps down the price of building sites for the people.

Inasmuch as the cities often own the street-railways, they know in which direction the city is to grow, for the city itself decides as to street-railway extensions. With this knowledge it buys land in advance of the extensions and reaps a return in the increased value which the street-railway creates. In addition, the ownership of land enables the city to plan for its development in a generous way. It can provide open spaces for parks and playgrounds; it can locate schools and public buildings and can protect new regions from slums and tenements. Landownership is part of the city-planning and housing policy of German cities.

Frankfort owns 16,650 acres, or 48.9 per cent. of its area. Its total holdings amount to 16,650 acres. Mannheim owns 35.4 per cent. of the land which it covers and Vienna 32,062 acres.

The following table indicates the extent of landownership by some of the other German cities:

	TOTAL AREA OF CITY	TOTAL AMOUNT OF LAND OWNED BY CITY	PROPORTION OF TOTAL CITY AREA	
			WITHIN CITY	WITHOUT CITY
	ACRES	ACRES	PER CENT.	PER CENT.
Berlin <sup>1</sup> .....	15,689.54	39,151.28	9.2	240.8
Munich.....	21,290.24	13,597.02	23.7	37.8
Leipsic.....	14,095.25	8,406.84	32.3	27.4
Strassburg.....	19,345.45	11,866.98	33.2	281.1
Hanover.....	9,677.25	5,674.90	37.7	20.4
Schöneberg.....	2,338.60	1,633.33	4.2	65.1
Spandau.....	10,470.37	4,480.79	3.05	42.9

<sup>1</sup>Much of the land owned by Berlin is outside of the city limits.

**How the German City Anticipates Its Needs.**

The German city also anticipates its needs by acquiring land in advance of its growth. Sites are bought for schoolhouses and other public structures, for parks and playgrounds, out in the suburbs. One of the competitive plans of Munich provided for eighteen little centres in the outlying districts about which public buildings, churches, and schools were to be located. Existing villages were to be left undisturbed and new centres were to be built about them. Düsseldorf owns a controlling interest in the capital stock of a suburban street-railway which is also a land-speculation company. By this means the city reaps a return on its investment, just as does any private corporation, and at the same time secures the co-operation of private business men in carrying on its enterprise.

**The Meaning of City Planning.**

City planning is a recognition of the unity as well as the permanence of the city. It involves a subordination of the individual to the common good. It enlarges the powers of the city to include the things men own as well as the men themselves, and widens the idea of sovereignty so as to protect the community from him who abuses the right of property as it now protects the community from him who abuses his personal freedom.

In a big way city planning involves a new vision of the city. It means a city built by experts; by experts in architecture, in landscape gardening, in engineering and housing; by students of health,

sanitation, transportation, water, gas, and electricity supply; by a new type of officials who visualize the complex life of a million people as the architect visualizes an individual home. City planning involves new terms, a wider outlook of urban life in all its relationships.

City planning also recognizes the permanence of the city. It recognizes that the city need not be an evil but has tremendous possibilities for good if it is but organized as an instrumentality with this end in view. Through proper planning the cost of living can be controlled, as can housing, rents, and comfort. City planning is far more than the city beautiful. This is but incidental. The real motive is community living.

### **Summary.**

City planning has made phenomenal progress in Europe, especially in Germany, France, and Great Britain. As a modern art it had its beginnings in Germany, in which country it has been developed into a well-recognized municipal profession. German cities are built as a unit, from centre to circumference. Officials, citizens, and owners unite in the realization of the fact that the city should be planned with as much care as a private building and with every provision for the future. Regulations are adopted by the town council for the laying out of suburban territory, so as to prevent the reappearance of the evils of the past, to limit the land that can be built upon, the kind of houses that can be constructed, as well as the uses to which the property may be put. Similar provision is made for commerce and industry, while the railways and

waterways are definitely co-ordinated into the city plan.

Following the example of Germany, France and England have adopted town-planning acts by means of which the new urban developments in these countries are under the control of public authorities, to insure the orderly and symmetrical development of the cities.