

PHYSICAL
PLANNING AND HOUSING
IN POLAND
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W A R S A W 1 9 4 6
for the MINISTRY OF RECONSTRUCTION
TRZASKA, EVERT & MICHALSKI, Ltd.
and E. KUTHAN

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WARSAW

METROPOLITAN COMMUNITY

Editor's Note: The concept and plans of the Warsaw Metropolitan Community were conceived and developed during the German Occupation by the Underground workers. Most of the documents relating to this work were destroyed in the Warsaw Insurrection. The remains are printed here to testify that Polish planners have never interrupted their activities and that the present work of reconstruction is a continuation and development of ideas conceived before and during the war.

Warsaw lies in the centre of a large economic area closely related with the city. It acts as a link between the eastern part of the country, somewhat retarded in its development, and the more civilized western part. It is also an important centre in the system of communications of Central Europe. This situation, very favourable from the point of view of economic development, affords Warsaw great possibilities. The city has to fulfil a number of tasks

in the national life. Its functions fall into four main categories:

1. the main disposition centre of the country (among others of cultural activities).
2. important communication centre in Central Europe,
3. one of the more important centres of industry in Poland.
4. the most important centre of exchange in the country.

As a result Warsaw is the largest human agglomeration in Poland **and centre of high-quality consumption**. She has played this rôle independently, or even in spite, of political conditions and that is why her existence is vital for the whole country whatever its boundaries be. **With a view to the fulfilment of those tasks a certain part of the country must serve the immediate interests of Warsaw.** This area of mutual relationship between Warsaw and its surroundings may be called „the Greater Warsaw Region“.

While consciously dividing the total area of the country into component parts (regions), the Physical Planning of our times attempts to distinguish specialized territorial units, the structure of which will be subordinated to the dominant function proper to each of these units.

The question of the dimensions and boundaries of these units is a secondary problem which must be worked out according to their „dominant functions“ so that the planned territory may become an **organic whole**. The „dominant function“ is unquestionably the **main**, but not the **only** function; therefore the territorial unit must be chosen so as to allow all other functions to find their proper place.

The Warsaw Region has been distinguished from the others on account of the administrative, economic, social, political and cultural dispositive functions of **its centre — the city**.

It must therefore be given a structure suited in the first place to the needs of the city and thus permitting it to perform its functions in the best possible way. The Greater Warsaw Region must have its own urban, agricultural and forest zones, as well as industrial and nutrition areas and finally zones destined for the recreation and community life of its inhabitants.

The Greater Warsaw Region has of course a life of its own, independent of the life of Warsaw proper, but in the mutual relationship between the individual component areas of the Region the relationship with the city has always dominated the others. The division of the Greater Region according to those functions and the interrelation of its areas facilitate and assist the development of the life of the great city **by the creation of a favourable environment.**

The delimitation of the areas of the Greater Warsaw Region brings us nearer to the objective of **spatial solution** for the City of Warsaw. In its physical, economic and social aspects, it exists potentially within the area of the Greater Region.

The urban area is unquestionably the most important spatial component of the Greater Region, its central area being a core or nucleus — the City, which grows within the sphere of influence of the main communication centre, and is the place of highest intensity of urbanization in the whole Region.

It is at the same time an area of the greatest human concentration within the region.

The powerful influence of as huge an agglomeration as Warsaw extends far beyond the purely „urban“ area contained within the administrative boundaries of the city, and creates within the Great Region a **sphere of immediate in-**

terest and influence of the City. This zone is in a way the completion and development of the city and serves to satisfy its immediate needs.

The influence of Warsaw over the Region is not equal throughout the area, theoretically increasing towards the middle. Up to a certain line, it becomes so great, that **the places situated inside that line cease to have a life of their own.** The terms „cooperation“ and „mutual relationship“ become inadequate, since the area is used directly for the needs of the city. It is indeed an area quite essentially vital for the life and rational development of the city. Thus within the Greater Warsaw Region we note the existence of „zones of immediate interests and influence of the city“ which form something like a Region in the narrower sense, and the limits of which a thorough study enables us to define.

This zone, together with the City included in it, is called the Little Warsaw Region.

The Little Region is distinguished from the surrounding Greater Region by a definite degree of urbanization proper to the whole of its area, independent of investments and other factors which may not yet have expressed themselves in the form of investments, but, if unchecked, may become their cause.

The Warsaw Region should therefore be planned uniformly and should form an organic whole with the urban area. It should furthermore contain nutrition areas in the background nearby, grounds for leisure and health purposes, agricultural areas and forests. It must be so designed as to provide fully for the essential needs of the City, which, being a centre of disposition on a national, regional and local scale, is the principal reason for its existence.

The City — centre of the Metropolitan Region.

If the spatial organization of the city is to be sound, the **city's growth should not take place in the whole area** of the Little Region (which is defined within the Greater Region on the basis of some of its characteristics according to accepted standards), but on chosen parts of its area, necessary and sufficient for the physical organization of a modern city.

The rest of the Little Region should remain an isolation zone, and the tendencies of urbanization there should be checked.

The Regional Plan and special legislation should protect this land against the effects of uncoordinated action on part of the neighbouring communities, private land speculation and some unexpected activities of authorities as regards investments contrary to the proposed and accepted structure of the city. The uncontrolled influence of those factors would mean the premature opening of the surrounding zone for its exploitation and subsequent incorporation into the urban area.

The checking of urbanizing processes in the area of the Little Region not to be used for building purposes must be achieved with the active help of the urban administration; that is why the Little Warsaw Region must form a separate administrative area.

The total area of the Little Region consists of 1) **The area of the City proper** (to be defined), and 2) **the areas which should ensure the proper expansion of the City** (by stages established in the plan).

We define the area of both the Greater and the Little Region on the basis of accepted standards which characterize the degree of intensity of urbanization on that territo-

ry. The concept of the **intensity of urbanization** of an area is determined by the following elements:

- a) certain personal qualities of the human individual living in that area (demographic and sociological factors),
- b) the existence of certain physical features (factor of the natural and the cultural landscape),
- c) a certain character of human activity (economic factors),
- d) a certain type of conditions (social factors).

The degree of urbanization of an area may therefore be established on the basis of studies concerning at least three types of phenomena:

- a) demographic,
- b) economic,
- c) social.

Each of these three groups comprises a large number of problems the relation of which to the intensity of urbanization may be more or less complex and evident.

Out of these many problems three were chosen, namely:

- a) the means of living,
- b) the density of population,
- and c) the increase of population,

because a) the relation between the means of living, the density of population and the increase of population on the one hand, and the intensity of urbanization on the other, is comparatively easy to establish,

- b) the picture of the intensity of urbanization obtained from the study of the three above-mentioned characteristics is not contradictory to the picture which may be formed after a full analysis of the actual state.

The area of urbanization, established by the study of the existing situation, is largely a result of past planning and particularly of the development in the pattern of communications. The future communications will also influence their adjacent territories; this must be taken into account in the definition of the boundaries of the areas provided for urbanization.

As already mentioned, the area of the Little Region consists of two parts: 1) the city area and 2) the „non-city“ area.

We can express this relationship in symbols:

$$LR = C + NC.$$

(the area of the Little Region equals the city area plus the non-city area), where C is the total area of the Warsaw Metropolitan Community and consists in its turn of two components: 1) the area of the present city within its administrative boundaries, and 2) the area of land which should be added to the existing city in order to obtain **the complete organism of a city. All the component elements of the city have to have their place and to collaborate harmoniously with each other within this area.**

Thus the Warsaw Metropolitan Community.

$$WMC = C_1 + C_2$$

where C_1 is the given area of the present city, and C_2 represents the area by which the city should be enlarged. The crucial point of the problem lies in the definition of the area of the component C_2 .

The notion of a new city, better adapted to its modern tasks, does not correspond with the area of the present cities, confined within their purely formal and arbitrary administrative boundaries. The existing centres of human concentration: **metropolitan cities and conurbations** —

were formed, with very few exceptions, as a result of uncontrolled and unmastered stimuli; their formation, growth and general structure are largely accidental and chaotic.

A typical instance, a symbol, so to speak, of this sad heritage of the past, is the **street**, on which, among the residential blocks, are crowded factories, shops, offices, hospitals, pleasure-spots, and all kinds of economic, cultural, administrative and social institutions. Such a street is often at the same time used for the transport of goods, for walking, and as a sort of market. All the functions of the city and of the man who lives in it are here jumbled together, crowded, and mutually hampered. It is a typical „mixed area“ — an economic anachronism which renders impossible the rational organization of any section of life.

The structure of nineteenth-century towns was the outcome of an excessive economy of space, which resulted in **congestion**. The growing consciousness of the need for loosening the structure of the modern city leads finally in the opposite direction to a dispersed, not continuous, form.

The change from the old principle of crowding the cities to the modern one of dispersal is **caused not only by the progress of technique, but also by the difference in the degree of consciousness of social needs** and in the greater present sociability of the inhabitants.

In the field of technique, the steam engine which has revolutionized the organization of cities towards the end of the XIX-th century is now being replaced with growing efficacy by the electric and gasoline motor.

The influence of those epoch — making inventions first made itself felt at a time when the face of the towns was still moulded by steam. Their effective application offers **completely different** possibilities of methods of the physical organization of industrial and urban patterns. **It does not**

involve the necessity for concentration, and greatly facilitates a fast and economical transport which in turn favours dispersal. The modern teletechnical facilities work to the same end.

The sociological and social studies of the dependence of cultural phenomena and social bonds on the methods of distribution and organization of human agglomerations have contributed a great deal to the science of Town and Country Planning. This science has definitely grown out of the stage of passive statement and systematization of the factors influencing the formation and growth of towns. It attempts at present to discover the tendencies and laws which rule these concentrations.

Farther, it strives after the proper line of development for its social effects.

It seems therefore that in the present phase of the conscious elaboration of the principles of planned social economy nothing will oppose the introduction of **new conquests of technical, economic and social science into the very process of physical planning**. The effort of the engineer alone is no longer sufficient for the preparation of a plan. Considering the pronounced widening of the field of studies necessary for **a comprehensive treatment of a city, region, or country**, the technical analysis must result from an analysis, based on a broad sociological and economic study of the given area. The outcome of an analysis of physiographical conditions will serve as an actual background for those groups of studies.

No wonder, then, that modern planning must give results **differing widely** from previous works. The study of the territorial limits of the city should lead us to the definition of its absorbing capacity. For this we need at least the coordination of three standards:

- 1) technical,
- 2) economic,
- and 3) sociological.

The optimum of each of these standards taken separately is different from the others, and it seems that only their synthesis can establish the actual optimum for the absorbing capacity of a town at a given moment.

In relation to our problem, these additional studies have proved that Warsaw shows an accelerated rate of growth and a strong spatial expansion, evident in the continuous growth of its administrative area.

Its actual boundaries lie far beyond its administrative ones and the legal area of the city is too small both for its population and for all the investments, indispensable for the proper functioning of the organism of a great city.

The dimensions and boundaries of that area are a logical consequence of the structure of the Warsaw Metropolitan Community.

The plan proposes to take full advantage of the circumstance, that, thanks to the modern transport techniques, distance has ceased to be a factor of vital importance. It will namely apply **the principle of a rational distribution and creation of the different individual elements of the city on a previously defined area.**

This will be so to speak a graphic solution of the „equation of the city“ which we illustrate with the following symbol:

$$C = f(A, B, C, d, e, f, g \dots \dots \dots f/s)$$

where A, B, C, — are functions of the life of man*)
(individual and collective)

*) Historical influences on the development of the city find their expression either in the psychological condition of man (A, B, C), or in the state of material arrangements (e),

- d — the pattern of communication,
- e — the actual state (material forms of former human activity), *)
- f — physiographical conditions,
- g — aesthetic moments (the formation of landscape)
- f/s — the function of community life.

Let us note that the factor f/s is a function of a different grade than the other factor in our equation.

We also assume that the general effect of the functioning of the whole organism of the city must be achieved with the least possible loss of energy (vital forces of man and land). This is the basic principle of Organic Functionalism. In reality it tends to raise the productivity of the work of each of the elements of the territorial pattern by means of its proper localization in space.

We now come to the definition of a spatial hypothesis which would realize the import of the above-shown symbolical „equation of the city“.

We assume that the universal application of electric power and motor transport is decidedly in favour of the idea of deconcentration, and that the study of the rational distribution of work, housing and leisure and of their mutual relation serves as basis for the pronounced limitation of superfluous goods and passenger traffic.

Modern Town Planning seeks to take advantage of all these technical possibilities, by a revolution of ideas concerning the organization of human concentrations.

Considering that the factor of distance no longer plays a decisive part, we may attempt the purposeful distribution in space of the individual urban elements. Those elements

*) Historical influences on the development of the city find their expression either in the psychological condition of man (A, B, C), or in the state of material arrangements (e).

will no longer be the component part of the uniform bulk of the city, but will take the form of separate, functionally interdependent centres.

Each of them will perform a definite dominant function, and will be in a sense a part of a self-sufficient organic whole. **We pass therefore from the concept of a compact city apparently uniform but in reality chaotic, on to the concept of a dispersed and differentiated urban pattern endowed with a logical inside structure.** Instead of the old city-quarters, which were nearly always artificial administrative units of combined undifferentiated functions, we shall now have a number of districts, each of which performs a different function.

The pattern of human concentrations forming the separate districts will not be alike in the whole area of the Metropolitan Community. There will be more of them towards the centre whereas farther from it they will grow looser. The concentration of developed areas will diminish, and the space between them will be filled by ever larger green areas. In the centre will be the City with its distributive functions of various grades. The self-sufficient, autonomous districts of work and residence will be dispersed like islands on the outskirts.

The proposed structure will facilitate the rational localization of work-places, housing, recreation and community centres, the elimination of superfluous by-laws, and the destination of suitable land for special purposes, for which there was till now no room within the accidental boundaries of the city. Such a structure will allow for an adequate present and future development of the pattern of communication. Within the boundaries of this new urban area there will be room for all elements of the structure of a big city and for all the main human functions of work, dwelling,

leisure and community life, independently of the dominant function of the separate parts.

The realization of the plan of the Warsaw Metropolitan Community will permit the regular formation of the individual elements from the very beginning of their existence, and will facilitate their proper localization.

This planned cooperation and organization of elements will ensure the most economical functioning of the complicated organism of the big city.

The chief principles of the structure of the Metropolitan Community.

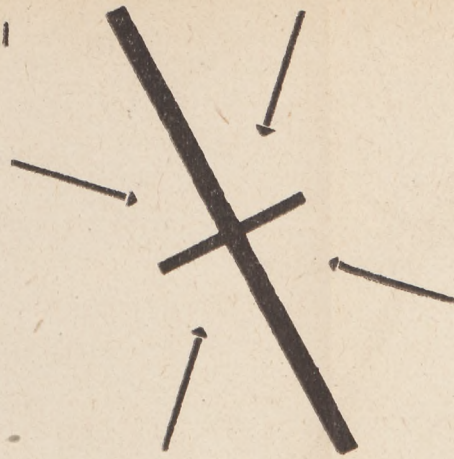
1. The city should cover an area larger than the present administrative one, in order to provide room for all the physical elements of a modern city, namely:
 - residential areas,
 - places of work,
 - areas used for recreation,
 - areas used for community life,
 - and the network of communications.
2. Within the limits of the urban area, precisely defined areas should be destined for housing, work, leisure and communication (also eventual land reserves for the unknown requirements of future years).
3. The plan of distribution of building areas in the Metropolitan Community should bear the character of a **constellation**, formed so as to reduce as much as possible the journeys within the Metropolitan Community.

4. The limitation of goods and passenger traffic within the urban area by means of the proper distribution of the basic elements of the city should be aimed at.
5. Residential areas should be placed so as to give their inhabitants the best possible connection with places of work.
6. The principle of balance between the journeys from home to work and back again should be introduced by way of creation of local „home-and-work“ patterns within the Metropolitan Community. Such patterns will help to reduce the superfluous movement of population by means of:
 - a) bringing the working population with its factories, work-shops and a complete network of services inside the residential areas (primary relations);
 - b) the creation of specialized industrial and other centres in the proximity of residential areas, so as to create a balance between housing and work inside the parts of the city (secondary relations);
 - c) such a distribution of the elements of the constellation which would take the fullest possible advantage of the interdependence between the various specialized elements and between them and the centre of the city (tertiary relations);
 - d) the rational and purposeful coordination of the network of city communications with the regional and national ones.
7. The areas reserved for the unknown requirements of the future, if they are at all suited for agriculture, should be intensely cultivated, pending the future change of their utilization.

I



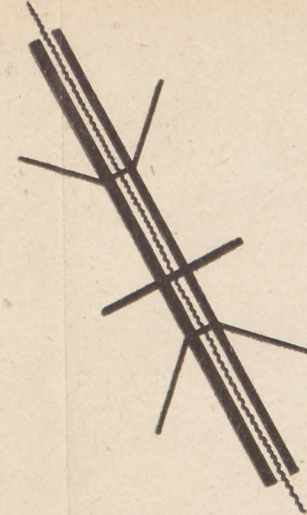
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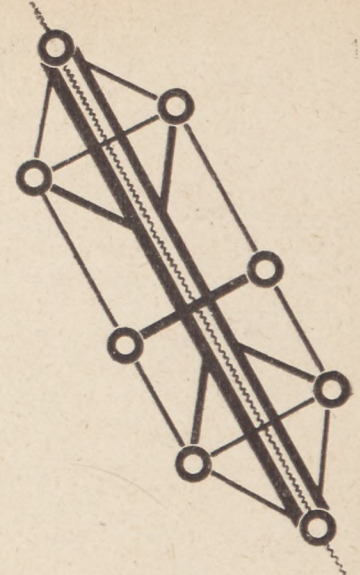
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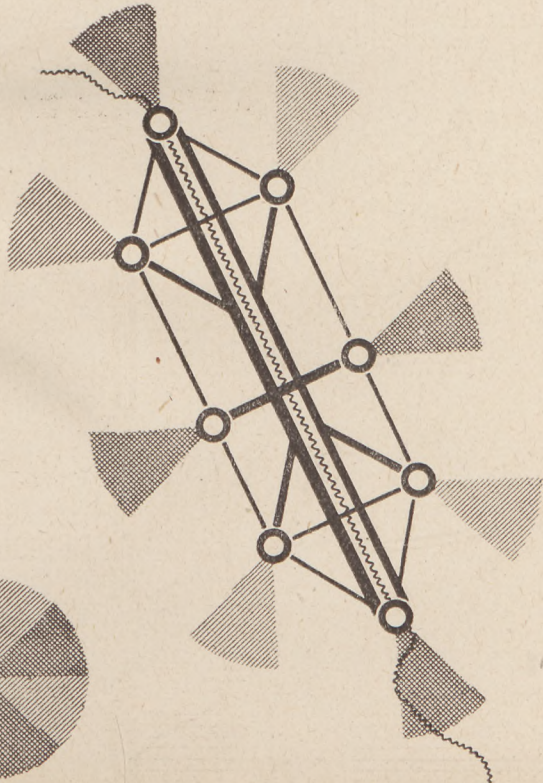
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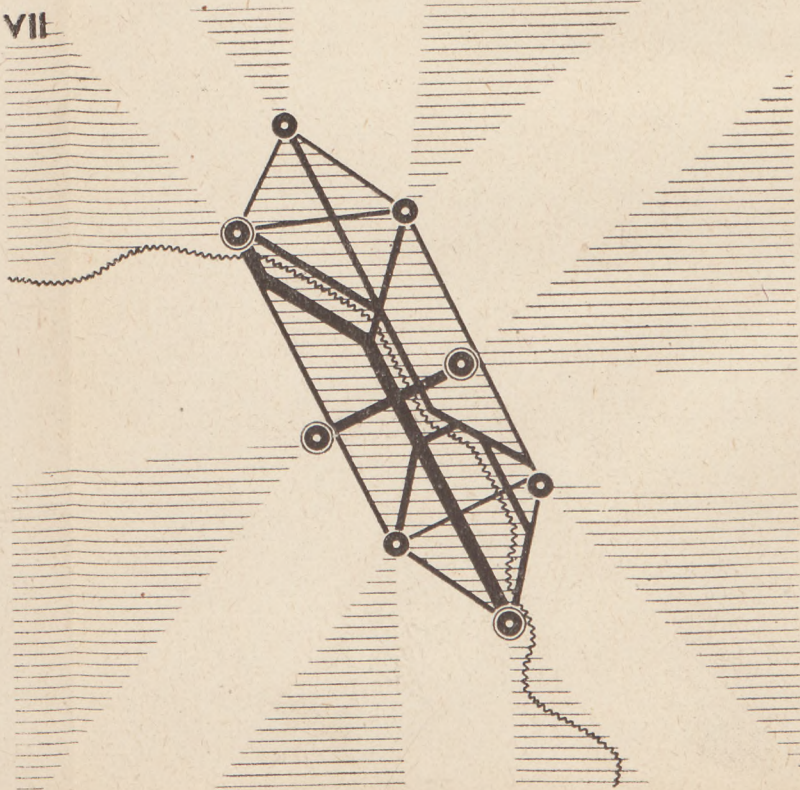
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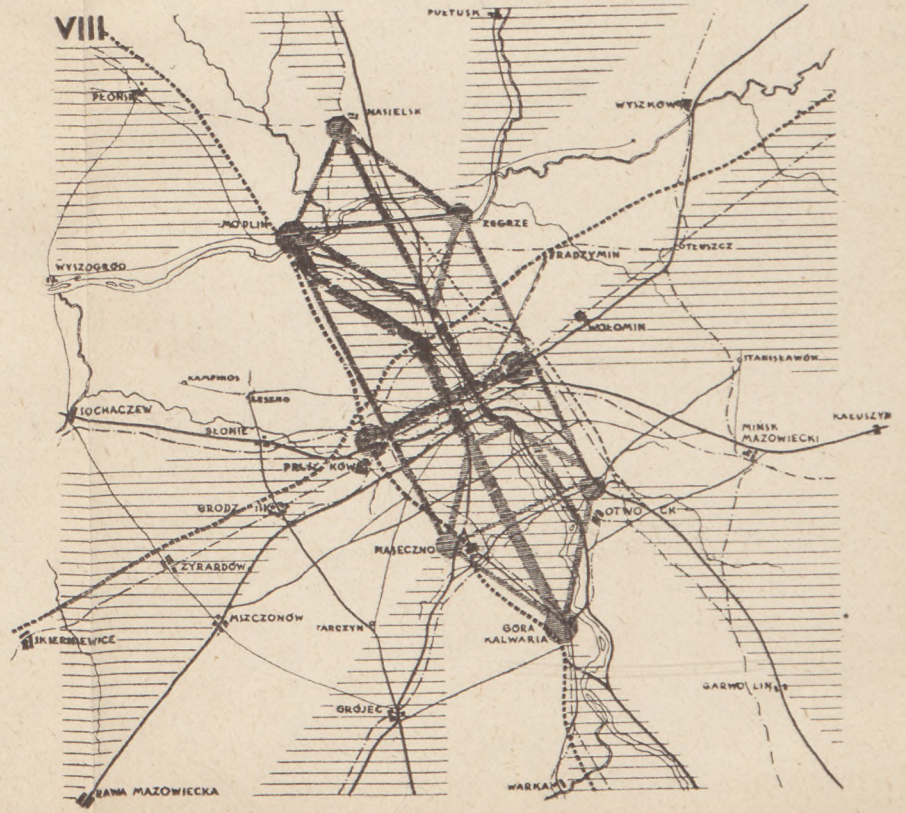
VI



VII



VIII



The working principle of the Warsaw Metropolitan Community.

The total area of the dispersed City will comprise two principal groups: 1) the areas of human concentration, provided for the functions of dwelling and work, and 2) the areas destined for the remaining functions, which will be arranged so as to render possible the proper organization of the space. The first group will cover about 25% of the total area; the second about 75%.

This proportion indicates the structure of the city: the **built-up areas** are no longer a continuous mass like in the old city, they are loose elements in the general plan of the city, interrelated with each other and intertwined with the open spaces.

The area of the second group contains other elements of the city, that is to say recreation grounds, nutrition areas, communications, and reserves for unknown requirements of the more or less distant future.

In the proposed structure of the Warsaw Metropolitan Community we discern according to their degree of technical equipment the following territorial zones (the definitions employed here are of a provisional character, suited to the working purposes of the moment):

1. **The areas of human concentration** for the purposes of a) dwelling, b) work and c) leisure. All the larger centres of the Warsaw Metropolitan Community will be placed in these areas, namely:

- a) the residential districts, communities and neighbourhoods (with the exception of agricultural communities);
- b) specialized places of work;
- c) summer and health resorts.

The proper functioning of these concentrations requires their intense technical equipment (such as communication and telecommunication facilities, power, water supply, sewerage etc.) **These areas will be characterized by a high amount of technical investment per territorial unit.**

II. In the second group are the agricultural areas, protected „green“ areas (whether suitable for use or not), woods, water and areas for surface communications.

The technical equipment of a territorial unit of this group is less intense than in the first group.

The separate treatment of these territorial groups as regards their **technical equipment** results from the accepted principle of **economic investment**.

The structure of both these groups is different, and so is the role they play in the Metropolitan Community. They have, however, a common backbone in the form of the land and water communication network of the Warsaw Metropolitan Community. Both the main network of communications and the localization of the individual elements of those territorial zones aim at the greatest possible reduction of superfluous goods and passenger traffic within the Warsaw Metropolitan Community.

The residential areas foreseen in the plan do not cater to the total population of the Warsaw Metropolitan Community. A large proportion of the population will be obliged to live in the areas of specialized work, leisure and community centres, as well as in the areas of intense gardening (the „nutrition areas“).

We see from the above how vast the possibilities are of adjusting the absorbing capacity of the Metropolitan Community to the various stages of realization of our plan.

From this point of view, too, the Metropolitan Community deserves to be defined as „elastic“ and endowed with great possibilities of adaptation.

Specialized areas.

A part of the area of the Warsaw Metropolitan Community is to be the place for all types of human work.

These areas play an essential rôle, in the Warsaw Metropolitan Community, and cannot be removed beyond its boundaries without upsetting the general equilibrium of the proposed structure.

The proposed working areas form a functionally differentiated pattern based on the rôle of Warsaw in the national, regional and local systems of **production, distribution** of goods (material and otherwise), and **services**.

The working areas may be divided into places of:

- 1) production,
 - 2) distribution,
 - 3) services,
- and 4) handicraft.

Within the Warsaw Metropolitan Community there are provided the following areas of specialized work:

A. Disposition centres.

They will form a harmonious pattern for disposition in its **economic, administrative, political and social** aspects and also of **scientific and artistic centres**.

B. Industrial areas.

- 1) within the residential areas for factories and workshops which require no special arrangements, and, being inoffensive to their surroundings, may contribute to the reduction of superfluous traffic by employing the population on the spot.
- 2) in the areas of provisionment for food manufacture which cooperates with the arrangements of the provisionment centre.

- 3) in special industrial areas for the manufacturing centres which for important reasons should not be placed within the proposed residential and other areas.

In establishing the number of industrial areas in the Warsaw Metropolitan Community we accept the principle of limitation — as far as social considerations will permit — of the industrial development of Warsaw because of:

- 1) the dominant rôle of disposition in the Warsaw Metropolitan Community, and,
- 2) the necessity of limitation of the city's population.

However, some branches of industry will have to be created or left in Warsaw because of local consideration.

After establishing the share of Warsaw in the country's industry, the industrial areas of the Warsaw Metropolitan Community were placed in three groups:

- 1) those centres of production which must be located separately on account of
 - a) their undesirable effect on their surroundings,
 - b) the necessity of placing them in the neighbourhood of heavy transport facilities on water and land, or of power works,
 - c) the limitation of the superfluous transport of raw materials and half-products by the creation of groups of cooperating industrial plants;
- 2) areas containing some of the food industries which should be concentrated within the specialized **provisionment areas**;
- 3) areas of all those factories and workshops which can be distributed within the residential areas.

The industrial group of the Warsaw Metropolitan Community will probably comprise medium, light and pre-

cision metal industries, chemical industry, drug factories, and perhaps a certain amount of **heavy industry** (high precision metallurgy and electrometallurgy).

C. Communications and transport.

The network of communications and transport is based on the rôle of Warsaw in the system of the main arteries of Central Europe.

The areas provided for communications implicate a specific corresponding pattern of work areas, creating in their turn conditions for the localization of a whole series of residential areas (the inhabitants working in the communication services).

D. The areas of provisionment.

The individual residential quarters of the Warsaw Metropolitan Community are based on their own provisionment facilities. All the elements of provisionment however, which require centralization and cooperation with certain industries, are foreseen as centres of specialized work.

They are the core of the provisionment system, which consists of the **delivery, storing, production and distribution** of consumption goods for the needs of the inhabitants of Warsaw and of some of the population of adjoining districts.

The proposed food industries should actually be component parts of industrial zones but, considering their particularly close relation with the consumer, it seemed to be right to connect them with the centres of exchange. Thereby an almost ideal relation of the productive and distributive machines may be obtained.

The areas of provisionment will thus be placed on the line separating areas of industrial production and those of exchange, remaining at the same time a distinct administrative whole.

The principle of the network of communication.

The pattern of communication of the Greater Region is dependent on the main routes of national communication, connected in turn with the great European routes.

The Little Region of Warsaw is situated at the intersection of the continental routes from West to East, and the shortest and most convenient connection between the interior seas of Central Europe (Baltic and Black Sea).

On this basis a minimum of indispensable main directions related to the national pattern, and to each other was established for the Warsaw Metropolitan Community.

The diagrams given below explain the consecutive stages of the formation of the **theoretical pattern of directions** which is a synthesis of the traffic problem in Warsaw and in the Little Region.

I. Within the Warsaw Region there exist two **principal** directions: one parallel and one vertical to the Vistula. The former is prevalent in the tendencies for the development of Warsaw. The pattern thus formed has the shape of a **cross**. It is rational and sufficient for serving the centre of the city.

II. In order to serve the outer areas of the Warsaw Metropolitan Community, two subsidiary directions have been added to the principal ones. They run diagonally to the arms of the cross.

III. As the two principal directions suffice for the adequate service of the centre of the Warsaw Metropolitan Community the subsidiary directions branch off from the main ones outside the area of the centre.

IV. There are two branches of the principal direction parallel to the Vistula: one running on the left, one on the right bank. The right-bank diagonal directions spring off

from the right branch, while the left-bank ones from the left branch.

V. All these directions lead to eight junctions, which are at the same time the nearest large concentration of population. The main through routes of the right and left banks, parallel to the dominant direction (parallel to the Vistula), also pass through these junctions.

VI. Through the junctions all possible communication routes find their way into the Warsaw Metropolitan Community. Each of the junctions collects all the directions of its proper section in space.

VII. The theoretical pattern is deformed by the westward deviation of the Vistula, and adjusts itself to the course of the river (the dominant direction).

VIII. The theoretical pattern of directions, when fitted into the map, becomes the basis for establishing the exact course of the different types of communications.

The established theoretical pattern of communication conforms to the functional pattern and division of land as foreseen in the proposed scheme of the Warsaw Metropolitan Community, the Little and the Greater Region. Those areas are so vast, that they will amply provide for the greatest expected growth of the Metropolitan Community during the period of many years. The number of proposed traffic routes should also be sufficient.

A few ways of communication will also be established for the proposed area of the Warsaw Metropolitan Community itself, with the purpose of connecting the **central parts of the city** with those lying on its outskirts.

The rôle of the junctions in the pattern of communications of the Warsaw Metropolitan Community is that of gates, through which the interior will find connection with the appropriate sections of the Little and the Greater Region.

„The equation of the City“ — The function of
community life (f's).

Among the few factors which we actually know, one of special interest is **the necessity to satisfy the social needs of a community**. If we watch the growth of cities for a sufficiently long time, we may observe how this factor operates, and how its force varies according to the different forms of growth of urban organisms.

Under the influence of human needs, ever growing in their volume and complexity, the area of a city, its structure and plastic expression undergoes considerable changes.

The spiritless cities of the end of the nineteenth, and the beginning of the twentieth century were the reflection of the general chaos resulting from the lack of social interest towards the formation of big city organisms.

The State Authorities, as exponents of an economy based on capitalism, gave almost unlimited freedom to the individual citizens of the city. The far-going protection of vested interests resulted in the gradual disappearance of the community life which thrived in the ancient, mediaeval and Renaissance periods. At the same time, the application of new technical inventions to the rapidly growing industry and to transport facilities (steam) caused **the concentration of the economic elements of big cities**.

These two factors, **the conquests of technique** and **the principles of an uncontrolled individualistic economy**, caused the chaotic crowding of buildings on extremely small areas, which gave on first sight an **appearance of uniformity** to the plastic picture of the city: a compactly developed area contrasted with the surrounding open country.

The quasi automatic economic processes, which led to the uncontrolled and chaotic growth of cities in that pe-

riod, caused also the rapid increase of their populations. Owing to the lack of **adequate social services and of units of community life**, the development of community relationships lagged far behind the territorial expansion. Indeed, it became gradually atrophied by the completely new and as yet uncontrolled conditions of life in large cities. That is why the modern science and art of Town Planning looks for such patterns which would in the most purposeful manner convert the potentialities of Man and Land to the benefit of organized communities.

It seems, however, that the conscious transformation of structure from **mechanical concentrations of population** into **organized communities of higher order** is only possible if **community relationships** are accepted as **one of the principal functions of the man who lives in a community**. And so, only by adding this function to the other three functions of the **individual man — work, home, and leisure** — we shall create the conditions necessary and sufficient for the proper functioning and evolution of big cities.

ADDENDA.

Basic principles for planning of Metropolitan Communities.

1. Definition of the position of the Metropolitan Community in relation to the trends of development in the surrounding areas.
2. Establishment of the proper area for its expansion.
3. Establishment of the interior tendencies of development.
4. Establishment of the principal axis of the Metropolitan Community for the main activities of community life.

5. Functional design for the concentration of population.
6. Defining the central area of the community and the centre of the city (the City proper).
7. Design of local „home-and-work“ patterns.
8. Defining the mutual relation of different functions between each other and between them and the background.
9. Design of the basic networks of services.
10. Defining the relation of the Metropolitan Community to historical places and routes.
11. Design of the basic plastic concept of the city (on the scale of the whole).

On the basis of the preserved
papers by **Jan Chmielewski**.

REPLANNING OF THE CENTRAL DISTRICTS OF WARSAW.

1. The Task of Reconstruction in Warsaw.

Of all the capitals of the countries which participated in the war, Warsaw is the most destroyed. It went through the bombing and siege of 1939; a whole part of it was levelled to the ground after the end of the „Ghetto“ Rising in 1943; finally, the city became the field of deadly fighting during the Insurrection of 1944. However, the greatest damage was done to Warsaw by the Germans after the failure of the Insurrection, when they evacuated the city completely of its population and proceeded to destroy one house after the other. They mined the most valuable buildings and set fire to the rest. When, in January 1945, the liberation of the City put an end to the destructive efforts of the Germans, the Capital of Poland was one vast field of ruins and cinders. About 20 million cubic metres (over 700 million cubic feet) of rubble covered the area of the city.

The task of reconstructing Warsaw is of an unusual character. Mindful of the long centuries of development of the city and of its invaluable cultural tradition, we wish to erect a new city which would express the spirit of our

time, our social, architectural and technical ambitions, a city efficient as the Capital of the country and as a future centre of international cooperation in Central Europe.

The town planner has not to deal here with a crystallized social formation; neither must he wrestle with the difficult problems of an over-grown agglomeration. There is no existing development to hamper his intentions. The capital of Poland is but recently re-born from its ruins. Its organism is a plastic, malleable mass. The population is now only one third of the pre-war figure and its excessive growth may be checked. Of the old development there is but little left.

The economic and social changes that have occurred in Poland after the war also open great possibilities before the town planner. The nationalization of a large part of the productive and distributive machines facilitates the control over the localization of industry and population. The communalization of land in Warsaw enables us to destine the land for appropriate purposes.

Thus, the task of the Town Planner is a very vast one. He must, above all, work out a programme which would define the functions of the city, as well as its desired population and social composition. Only then he will be able to embark upon the preparation of the plan which is to be the most appropriate physical reflection of the previously elaborated programme. His whole work is closely related to economic and physical planning in the regional and national scale.

2. Principles of the Town Planning programme of Warsaw.

Warsaw is to be a capital in the fullest sense of the word. The isolation of the national centre of disposition from the current of economic, social, cultural and scientific life seems highly undesirable. The close proximity of all

these sections of work would appear to have the best effect on it. Scientific institutes and institutions of higher learning will be of great help to the Government. Industrial plants with highly qualified technical and scientific staff will become a great experimental laboratory for the metropolitan centre of economic disposition.

Thus, the concentration of professionals in Warsaw will be taken advantage of in the most economical way. It will also be possible to avoid, in this manner, a one-sided social composition of the city which would result from the predominance of clerks and service personnel.

We feel that to exclude any social group from the composition of the city is equally as harmful as a social segregation inside the individual parts of the city or the creation of workmen's quarters separate from those inhabited by social groups having the highest standard of living. We aim at the full democratization of life. We wish to place the areas of different types of work in such a way, that the representatives of all professions will be able to live in all parts of the city within a short distance of their working-places. All parts are to be equally well provided for as regards community life and leisure.

The size of the Capital is a question not only of quantity but of quality. We do not propose to imitate the old type of overgrown metropolis. We wish Warsaw to expand according to the programme we are elaborating, and not as the result of a blind and chaotic play of forces. We wish it to be relieved of the ballast of superfluous population which causes the undesirable overgrowth of the city's organism. A smaller number of inhabitants will then be able to fulfil the tasks which, in different conditions, would require a much larger population.

In 1939 Warsaw, the capital of a country of 35 million inhabitants, possessed a population of about 1.300.000. As

the result of the extermination of a large part of the population by the Germans, and also of the changed frontiers, Poland counts at present only 24 million inhabitants. The urban population has suffered particularly great losses.

We realize that the economic and social changes which Poland has recently undergone will enhance the importance of Warsaw in the national scale; we hope, too, that it will play a larger part in international cooperation. However, after analysing the figures of the various professional groups in pre-war Warsaw and other European capitals, and after due correction of the former professional structure of the city, we have come to the conclusion that — assuming an efficient organization — Warsaw will be able to perform its functions with not more than 1.200.000 inhabitants (5% of the present population of the country). For the next 10 — 15 years it seems desirable to keep well below that level: 800.000 inhabitants appears the most appropriate figure.

These figures do not in reality represent the whole „crew“ of the metropolis. Some of the population, while living in settlements situated beyond Warsaw itself, but near it, will travel to the metropolis, thus forming a part of its „crew“. Another part will perform accessory metropolitan functions without leaving its place of residence. This supplementary „crew“ may, if necessary, be very considerable.

The basic principles concerning the future functions of Warsaw and the distribution of population throughout the country may, of course, undergo a change in the future. A large increase of population may become indispensable to the metropolis. The plan must therefore take into account the eventual increase of its „basic“ or „supplementary crew“.

3. Main principles of the plan.

The structure of the new plan of Warsaw results from the application of a few leading theoretical principles in the given territorial conditions.

The city is to possess a functional pattern. Practically speaking, this means a tendency to unite areas which have similar tasks to perform and the functions of which assist one another; also to separate the areas which have different tasks to perform, and the functions of which are in conflict with each other. This principle is applied both in general treatment as for instance in the division of the city's area into the main functional categories (residential, industrial, recreational areas, etc.), and in the details of the plan which belong rather to the sphere of architectural than of town planning problems.

The functional pattern, with its tendency to bring together areas of similar destination, implies centralization. Considering the interrelation of the activities of various metropolitan institutions (the directions of huge enterprises, governmental offices, leading cultural and social organizations, etc.) and also of many branches of production, centralization offers considerable advantages as regards the cooperation of those institutions. This is particularly evident as far as industry is concerned. Nevertheless, excessive centralization has its drawbacks. Owing to excessive pooling of specialized areas, the journey to work becomes long and strenuous; benefiting by the arrangements for community life is so tiring that it soon causes their neglect; and the access to open spaces and sports grounds requires considerable effort. Moreover, excessive centralization may cause serious difficulties in communication. All these are factors which hamper the course of individual and collective life. That is why centralization must be kept within reasonable bounds.

From this springs the second principle of the plan. It will consist of a tendency towards the **decentralization** of all those urban functions which do not require concentration. By combining the principle of the functional pattern with the postulate of decentralization, we shall achieve a proper measure in the pooling of areas of identical or similar destination.

The application of the principle of decentralization is closely bound with the next principle, which consists of regarding the city as a **hierarchical pattern of territorial units**, of which the smallest is a housing estate, and the largest the entire city. The purpose of such a pattern is twofold. We must adequately distribute various buildings and facilities, so as to make them serve the whole population in a regular, equal manner. But that is not all. We must also organize a community life based on common benefit from facilities within the given community, and on the community's protection of those facilities. The feeling of mutual relationship of a community is increased if its structure finds a definable physical expression.

Thus, we create territorial units, which are to be the comprehensible elements of the plan. They are, to a certain extent, self-sufficient, thanks to the decentralization of many functions of the city. The degree of decentralization varies according to the function; this is the reason why we must introduce territorial units of different sizes and make the smaller ones subordinate to the larger.

Accordingly, we foresee the following three basic territorial units: a housing estate (up to 2.000 people), a neighbourhood unit (about 10.000 people), and a district (about 50.000 people). The size of these units may vary according to topographical and social conditions. Moreover, several districts may — by reason of their specific situation

— be formed into a new unit: a set of districts of marked uniformity.

The fourth and last important principle is that of **elastic planning**. Both in the elaboration of the programme and in the preparation of the plan of physical development, we discern the essential elements which we wish to perpetuate, from those which we do not define too precisely, in order not to deprive the plan of the possibility of adaptation to the changing forms of life. Our purpose is to define as clearly as possible the guiding principles of the construction of our metropolis, to design the basic, lasting elements of future Warsaw. We do not want, however, to enter into excessive detail and to define too precisely what is of secondary importance and should not be prematurely established.

According to all these principles, we transform the area of the city into a set of districts, each of which has a definite task to perform. Each district is divided in turn into smaller territorial units. We thus break up the compact bulk of the city into loose parts and weave among them a vivifying net of open spaces.

General structure of the plan.

In the somewhat monotonous countryside surrounding Warsaw the valley of the Vistula forms a striking and valuable landscape feature. Its left bank takes the form of a beautiful, richly carved escarpment, the average height of which amounts to 20 metres. The right bank is flat — its rise measures at most a few metres and is hardly noticeable in the landscape. This is in marked contrast to the escarpment. Between the higher banks of the valley lies a low and damp land, cut through by the bed of the river.

On the escarpment, looking over the bridges, was the nucleus of the future Capital: the mediaeval Old Town. Here the banks of the valley are not widely separated and the city grows around the river from both sides. Farther South the valley becomes vast. The relations between the banks grow fainter, but the landscape value of the escarpment remains undiminished, although the bed of the river in this section has moved away far to the East. North of the Old Town the effect is intensified: the river flows almost at the foot of the escarpment.

Thanks to such a configuration, it is quite plain that the direction of natural expansion of the city runs along the Vistula. The proposed areas of the city lie in the form of wide strips on the right and left banks; they approach each other in the middle, and are as though linked together by the Old Town and the centre of the right-bank parts, which has formed itself on the East side of the bridges. The left strip, situated on the high bank, is of decisive importance in the development of the city and is the chief field of its expansion.

Various factors have emphasized or disturbed this line of expansion in the past. Since the XVI-th century the city has been growing along the left bank south of the mediaeval nucleus, broadening at the same time towards the West.

During the period of dismemberment of the country, the left-bank parts were enclosed by fortifications which hampered the dynamic growth of the city in several places, especially towards the beautiful riverside lands in the northern part of the city. When those limitations ceased to function, there was a burst of expansion, but then arose obstacle of neglected communications. The growth of left-bank Warsaw directed itself, therefore,

chiefly from the centre to the West and South-West, in which fact the great railway-line, connecting Warsaw with the other vital centres of the country, and much used by industry, played an important part.

On the right side of the river, the railway, with its elevations, intersections and forkings, has deformed the growth of the city. Only a primitive, chaotic form of development is characteristic of the new areas in the North and East, where damp and unhealthy lands constitute an additional obstacle. However, there has been some intense growth in the south-eastern direction, towards the lively settlements situated on land having a high value in respect of climate. This expansion was largely due to the railway line which runs off in that direction and has good connections with the centre of the city.

War devastations have thoroughly changed the picture of the city and the conditions of planning.

The greatest, indeed almost complete devastations are to be found in the Old Town which was desperately defended and mercilessly attacked and destroyed during the Insurrection, and, to the North-West of it in the thickly developed Muranów quarter, inhabited before the war mostly by Jews. The Old Town is to-day a mass of crumbling ruins, while the Jewish quarter, of which the Germans made an enclosed and then methodically annihilated Ghetto, is nothing but flat heaps of debris and dust.

In the central area of the city most of the buildings were destroyed by fire, but here also there is a high percentage of ruins. Not a building intact, and those which have remained in passable condition are few and scattered. The reconstruction of many burnt buildings appears economically unjustified because of their bad technical condition.

The western part of the city, which before the war held a large number of industrial plants, has been destroyed to such an extent, that after liberation not one large or medium factory could resume its work without thorough reconstruction. Many factories were completely annihilated.

The remaining parts of the city on the left bank possess here and there buildings or parts of buildings fit for temporary use. Two newer residential suburbs were luckier: one (Żoliborz) in the northern, the other (Mokotów) in the southern part of the city. They provided scanty premises indispensable to the immediate resumption of life on the left bank in extremely difficult conditions.

The part of the city situated on the right bank, Praga, was, in comparison with the others much less destroyed, as the Insurrection was unable to spread there, and the Germans were driven out of it comparatively soon by the attacking Soviet and Polish forces. All the bigger industrial plants here were also ruined, but a large proportion of housing was left. Thanks to this Praga played the part of a great residential area and population base in the first phase of reconstruction.

The devastations, while destroying a colossal amount of wealth, also removed many obstacles which lay in the way of the regular growth of the city. It becomes, therefore, the principal task of the plan to take full advantage of the recovered possibilities and to relate the trends of the city's growth with the physiographical conditions of the site.

A population of about a million people, considered as indispensable for the formation of the Capital of Poland, should, according to the plan, live and work on an area, within which the longest admissible distance from any neighbourhood to the centre must not exceed half-an-hour's

walk. This area comprises all the building areas of the old congested city together with the new areas of settlement in both directions along the Vistula. This is the so-called **Greater Warsaw**. Considering that it is inadvisable to exceed the maximum densities, its absorbing capacity is limited to 1.200.000 inhabitants. While Greater Warsaw is the main place of residence and work of the „metropolitan crew“, the adjacent areas, lying on its principal line of expansion, which together with Greater Warsaw bear the name of the **Warsaw Metropolitan Community**, are a supplement to the metropolis.

On these areas there are some largely self-sufficient settlements, which, however, maintain a lively relationship with the life of the metropolis. By means of their further development, or of the foundation of new satellites, it will be possible to ensure a sufficient reserve of land where a large number of people may, if necessary, settle down. Whether they travel to Warsaw to work, or perform assistant metropolitan functions on the spot, they will pronouncedly increase the metropolitan crew. Beside those settlements certain other areas also supplement the work of the metropolis or cater to some of its other needs (leisure, transport, etc.).

In the structure of the plan for Warsaw we may thus discern three organic elements of different sizes:

- 1) the Centre of the city, where the residential functions are reduced to an indispensable minimum in favour of the condensation of metropolitan functions. Its structure is comparatively compact. It is separated from the other areas by the Vistula and wide greenbelts.

- 2) Greater Warsaw, which is inhabited by the majority of the metropolitan crew and which performs all the main metropolitan functions. Its pattern is loosened by the division into three chains of districts, spreading in the

direction of the Vistula. The districts are separated from each other by open spaces. The middle chain is the dominant one.

3) The Warsaw Metropolitan Community which holds the full metropolitan crew together with the population of satellites working in or for the metropolis, and which is an area comprising the whole of metropolitan functions. The settlements of the Conglomeration which lie outside Greater Warsaw are scattered loosely throughout its area, and are separated from each other and from Greater Warsaw by vast tracts of agricultural lands and gardens.

The centre.

In spite of devastations, it seems most appropriate to place the centre of the city in the same area which performed the main metropolitan function before the catastrophe. A considerable economic, technical and cultural outlay may be rescued by reconstruction. The clearing of main streets and their local repair makes them fit for quite an animated traffic. The network of underground arrangements is quickly resuming its functions. The bridges may be rebuilt on their existing pillars. The importance of these and similar factors became evident the moment it has been decided that Warsaw shall resume its rôle of capital and that it should be made available to the returning population even in the initial stages of tidying up the city. The original centre is also advantageous on account of its situation in the organism of the city, of the nearness of the river and its high escarpment, and of its connection with old historical Warsaw. The continuity between the city of the past, the present, and the future will thus be ensured. At the same time the devastations permit a radical re-building of the revitalized arrangements and the making of new investments on a modern scale.

The oldest part of Warsaw spreads from the mediaeval Old Town southwards along the Vistula Escarpment and ends with the vast gardens and palaces founded in the end of the XVIII-th century. It is a strip of 5 km. length, but comparatively narrow, which has a rather distinct eastern boundary in the shape of the escarpment. The valuable historical architecture only occasionally abandons the high embankment for the flat low terrace lying beneath. The western boundary of the historical area is less clearly definable. On this side there have grown the nineteenth-century parts with all the defects characteristic of the building of that period. This nineteenth century mass is being pierced westwards by two valuable eighteenth-century features: the so-called „Saxon Axis“ and „Stanislaus Axis“. These compositions of palace-and-garden character have survived in spite of certain deformities and form two branches of the historical escarpment area, growing firmly into the pre-war centre of the city. In the new plan for Warsaw we recognize the Saxon Axis in the northern part of the centre, in the form of a park and adjoining squares ; whereas the Stanislaus Axis constitutes the basic element of the University Quarter in the South-Central part of the city.

Historical elements are also to be found in the area lying between the afore-mentioned features. They consist of streets, harmonious squares, and, occasionally, buildings.

The devastation is enormous, but even in ruins this part of the city has preserved its character. Solicitude for national culture and for its monuments induces us to rebuild even certain buildings which are destroyed to an extent that makes their reconstruction unjustifiable from a purely material point of view.

The social and cultural life of the metropolis concentrates itself upon the historical area. Here the social factor is of prime importance, as representing the structure of local government in the country. Initiative and ideas, born in all vital centres of Poland, find here a tribune for a versatile exchange of ideas and feelings, which is a high-quality form of community life. Such an area, where the full tension of community life manifests itself, may be compared to the Agora of the ancient city. But, considering the incomparably larger scale of the life of a modern metropolis, our centre will be a whole chain of functionally and architecturally interrelated physical features, and not merely the „main square“ of the city.

Old buildings may be more readily adapted to various social and cultural purposes than to any others.

As we move from the Old Town southwards, the size of historical buildings changes from the small Old-Town houses to the vast eighteenth-century palaces. The scale changes accordingly.

However, the revived historical architecture will not in itself provide for the full needs of the social and cultural institutions in the metropolis. Therefore new buildings must arise. They will be architectural complexes of large dimensions, as for instance the seat of Parliament and National Assembly, or the enlarged existing National Museum.

Towards the West, the prevalence of buildings serving social and cultural purposes gives places to a predominance of administrative buildings. Up to Marszałkowska Street, which is the main artery of the centre in the direction from North to South, there is an area of nineteenth-century development, largely destroyed, but containing a proportion of buildings fit for reconstruction.

We have here, at the same time, a varying pattern of streets and squares which creates favourable conditions for the siting of individual architectural features, especially large institutions which require separate buildings. The passage from historical to modern forms may take place in a harmonious manner. Here will be placed the more important government and municipal offices, together with some economic institutions closely related to administrative ones, as, for instance, Central Boards of different industries, financial institutions, etc. The proximity of social and cultural buildings facilitates the many functional relationships which arise in a democratic organization between the centres representing public opinion and the Executive.

As we move farther West, the tension of metropolitan functions extends beyond the Marszałkowska Street into the area of economic institutions. Here we shall place the managements of industrial undertakings, centres of exchange, cooperative societies, insurance companies and a variety of others. Smaller and medium institutions will be prevalent, requiring many offices, but not large enough to erect buildings of their own. They will find place in collective buildings, which will partly form a group of sky-scrapers. These areas represent at present the ruins of faulty nineteenth century development, mostly on a grid iron pattern. Apart from the proximity of administrative buildings, the proximity of the industrial areas, lying in the western part of the city, is also of some importance. The industry located here is related to the planned tasks of the centre. These will be largely factories of research character, which aim at the highest quality of products and the elaboration of new methods of production for the benefit of other factories in the country as well as their own.

A strict segregation of functions in the centre of the city is out of the question, not only because of the pro-

nounced structural difference of a modern metropolis but also because the existing development and use of buildings often forces us to solutions based on compromise. Numerous small institutions of various types, private offices, workshops and shops may be segregated only to a very limited extent. They will constitute, on the whole, a type of common background for buildings of more outstanding features. Nevertheless, apart from the three concentrated groups described above, there will be other, smaller centres, especially for those sections of central work which usually show a spontaneous tendency towards centralization (shops, theatres, pleasure-spots etc.). Their centralization will ensue near the much-frequented central communication routes which constitute an important attraction. The shops and stores will be located chiefly on the eastern side of Marszałkowska Street and on Jerozolimskie Avenue, which is the main thoroughfare of the centre in the East-West direction. A large number of cinemas, music-halls, night-clubs, cafes and restaurants will also be opened there in order to take advantage of the large flow of people. This part of the city will have a specific atmosphere of big-city.

The amount and variety of the centre's requirements, as regards land and buildings, causes the enlargement of its area. Excessive growth, however, threatens this most important part of the city with loss of its functional efficiency. The chief way to prevent this is to remove from the area all buildings which are not immediately connected with the work of the centre, and above all to limit the number of residential buildings. The object of this is also to ensure the most proper conditions both for the central and residential buildings.

We wish to reduce the amount of family housing in the centre of the city; these limitations, however, do not in-

clude the hotel and boarding-house type of housing. On the contrary, one must reckon with a large flow of travellers, whose business will bind them mainly to the centre. On the occasions of large meetings, festivals, congresses, exhibitions and sport events, the population of the Capital may rise to a hundred thousand over the normal level. Therefore one must provide in the centre of the city a large amount of hotel-type accommodations, and also foresee an appropriate increase of services, e. g. restaurants, cinemas, theatres, etc.

A separate part of the centre will be the University Quarter. Its concept is based on a programme survey, which intends to group all institutions of higher learning on the same area. This will enable the students to establish a closer contact and to attend lectures and courses not only of their own, but of other related faculties. Such a grouping will also undoubtedly favour the atmosphere of an intellectual centre. We do not intend to isolate this centre from metropolitan life, or to deprive the metropolis of direct contact with its scientific centre.

The University Quarter is the southern part of the Centre of the city. It comprises undeveloped areas of the former race-course and airport, which are intended for an internal park. The Quarter is advantageously situated because of its easy access from the Centre and from the residential areas, and because of the proximity of the beautiful parks of the Embankment, where the largest sports facilities are being planned.

On the land adjoining the old aerodrome, there existed a few institutions of higher learning, which have been partly spared in the war. The whole area offered even before the war great architectural possibilities. This area was at that time proposed for the centre.

I n d u s t r y.

The plan for Warsaw foresees the creation of three major industrial concentrations.

West of the Centre, and divided from it by a greenbelt some hundreds of metres wide, lies the Central Industrial District. It is limited from the North by an artery running from West to East, and from the South by a main railway line parallel to that artery. Relying on those important communication routes, different industries have grown up here in an unplanned manner and without consideration of the undesirable effect which some of them had on neighbouring areas. In spite of tremendous war devastations, this area is still of great value for certain branches of production, because of its nearness to the Centre, two great residential districts, and to already mentioned, communications lines which ensure convenient road and rail transport. Here will be localized an industry with a central power station, wholly inoffensive: chiefly provisionment and precision production.

The factories and workshops foreseen for the Central Industrial District are to be, on the whole, rather small. Accordingly, a large part of the area will be divided into typical blocks, which makes it possible to plan within the block either one larger factory, employing a few hundred workmen, or a number of smaller workshops.

Inside the district we plan a system of open spaces within where the main facilities for scientific and technical, social, political and professional life will be placed.

Within the blocks themselves, lesser social facilities will be located, such as nurseries, clubs, infirmaries and canteens. Similar arrangements will be found also in the other industrial centres of Warsaw.

Another industrial district is the Kamionek, which is situated in the eastern part of the right-bank town. Here

a certain number of pre-war factories are being re-established. This area, after further development, will become for Praga what the Central Industrial District is for the left bank, only on a somewhat smaller scale. It will be made to cooperate with the central Harbour, which, after its enlargement and improvement, will serve for unloading supplies (mostly agricultural) for the city.

The Central Industrial District, the Centre, and the Kamionek form together a large system of work-places, perpendicular to the main direction of expansion of the city along the Vistula. It constitutes in a sense the transverse axis of the city. It is possible for the inhabitants of all residential districts of Greater Warsaw to travel in half-an-hour to both central and industrial work-places. This in turn enables us to mix different social groups within the residential areas and thus avoid social segregation in neighbourhoods.

Żerań lies in the northern part of the right-bank area. It is an undeveloped area, although it had already begun to interest factory owners before the war. It was then that the construction of a river harbour and canal was embarked upon, which were to constitute an important waterway between the rivers Vistula and Bug. The Plan foresees a resumption of these works. The investments are to act as a stimulus for the development of a large industrial area around the harbour and along the canal. The plants arising here will receive some supplies through the planned road and rail systems, and some by water. Large power and gas works will be localized here together with some noxious industries (slaughter houses, tanneries, chemical factories), indispensable branches of heavy industry (foundries and metallurgy), other factories, and vast storing-grounds.

The prevalent direction of winds is favourable. They would blow smoke and fumes away to the open land on the eastern side of the city. The influx of workmen from Praga is ensured and, after the building of a bridge, from the northern left-bank areas. These areas are at the same time connected with other, central working-places; thus the concentration of industry in Żerań will be prevented from causing a too one-sided social composition of the neighbouring residential districts. What is more, North of Żerań lie areas which may well hold new residential neighbourhoods in the event of great industrial expansion. Large reserves of land for that expansion lie along the canal.

Apart from the afore mentioned three industrial districts, Warsaw will possess some decentralized production, which will form local centres within the residential districts or in their immediate neighbourhood. These will be mostly small work-shops serving local needs, but some larger factories, will also be admitted, provided — of course, that they be completely inoffensive.

Residential districts.

In choosing the most suitable type of lay-out for residential districts, the important object seems to be the provision of ample and easily accessible open spaces and community-life facilities for all inhabitants. This object may be attained both by the erection of low single-family houses on private plots and by the erection of many-storied buildings, the inhabitants of which are able to benefit the surrounding public open space and, in some cases, adjoining allotment gardens.

The plan must reckon with various tastes and needs of the population as regards housing. Large families with small children will generally prefer to live in family

houses, whereas small and childless families will often like blocks better. Accordingly the plan foresees both these types of layout. The areas proposed for family-house development lie largely on the outskirts of Greater Warsaw and are to hold not more than 25% of the population. In the settlements belonging to the Warsaw Metropolitan Community but situated outside Greater Warsaw, the proportion of the population living in single-family houses will be much larger. The block development consists of two types of buildings. Two- and three-story blocks will be predominant, but some people will live in buildings with 6 or more storeys, which will be provided with lifts. Buildings of 4 — 5 storeys without lifts are inconvenient, and with lifts — uneconomical; thus they will only be admitted in the case of adaptation of old development.

The two residential areas which lie nearest to the centre, will possess a specific character. The tendency — due to the proximity of the Centre — to concentrate population leads to the application of high development which allows a higher density. The people resident here will be those most closely bound with various types of central work.

The proximity of the Centre and its metropolitan facilities give the inhabitants of those parts a somewhat privileged position in comparison with the people living farther away from the Centre. On the other hand, the population of the more distant areas obtains an equivalent in the form of lower densities and more space for community life within the residential area. In view of the fact that for larger families these considerations are usually more important than the proximity of the Centre, the percentage of large and medium families in the two residential districts adjacent to the Centre will be limited to a number of small families not possessing children.

A residential district has 30.000 — 60.00 inhabitants, which is as much as a medium-sized country town. It is, however, not a town but a part of a city. The scale of all community facilities must therefore be smaller than in an independent city of the same size. The connection with the centre must however be kept in mind, the centre which binds all the districts together. The plan for Warsaw aims at a moderate provision of local facilities within the districts, and treats each of them individually according to its distance from the Centre.

The residential district in the plan for Warsaw constitutes a rather large centre of collective cultural life, administration, production and business. The buildings which express the scale of this centre are: a community hall (or hall for boys and girls), a church, a public library, a health centre, a sports centre with gymnasium, play-grounds and stands, buildings for State administration and. Local Authorities, a post office, groups of shops and repair work-shops, etc. The district is composed of several neighbourhood units, each of them having its own community centre. Among the more important elements of the neighbourhood unit are two or three public primary schools, one secondary school (shared by two units), and various other schools. It also possesses a shopping centre, and often some small production which is localized in collective buildings provided for that purpose.

The neighbourhood units, having about 10.000 inhabitants each, are too large to solve the problem of community relations entirely. That is why the plan for Warsaw divides them up into several smaller parts, or estates. The size of these estates varies according to the type of development and other local conditions. They contain not more than 2.000 inhabitants each, and are composed of groups of houses, or blocks forming a harmonic whole. They con-

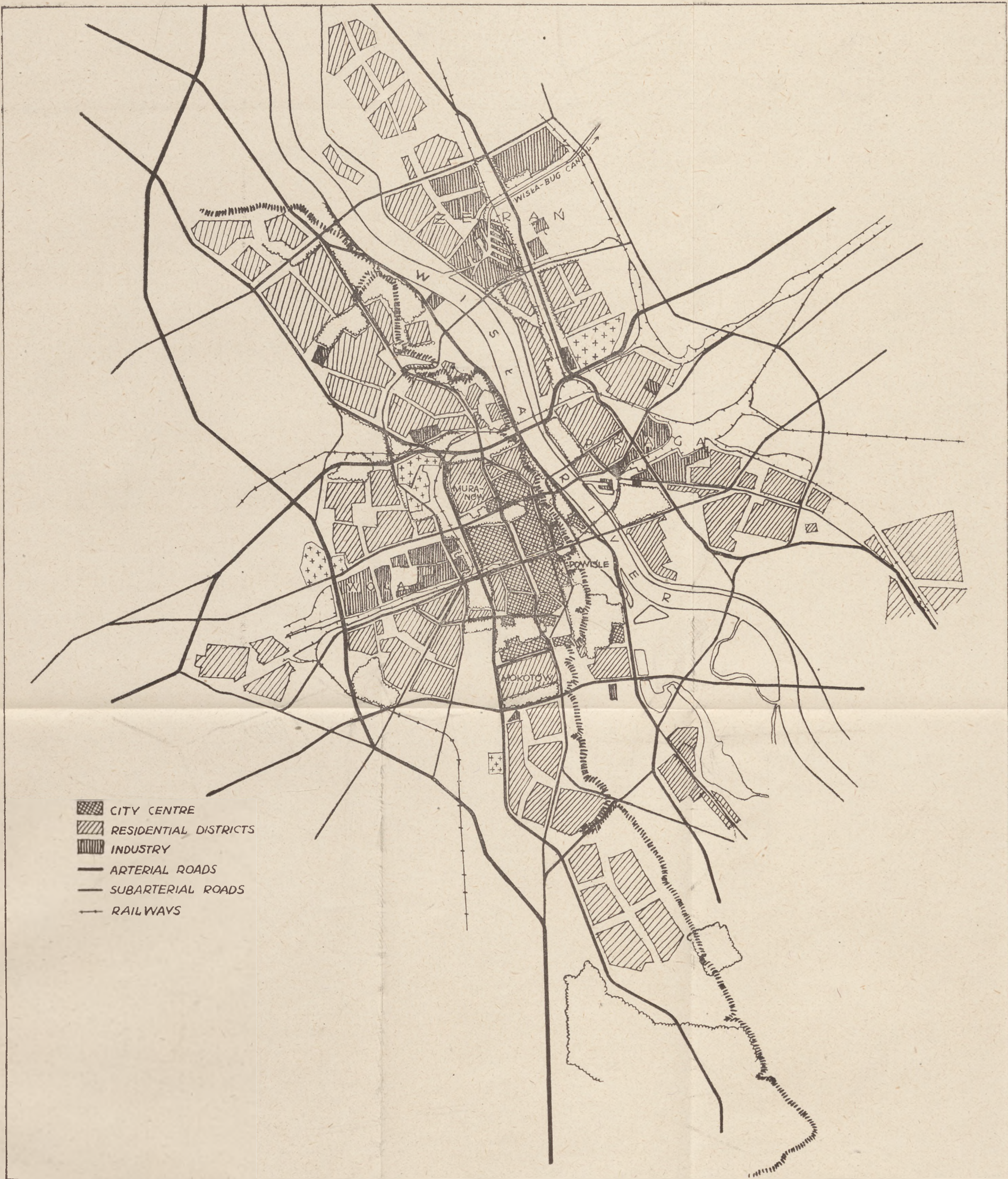


Fig. 9. Key - plan for the proposed reconstruction of Warsaw
Scale 1 : 100.000

tain many elements of neighbourhood life: provisions for children (crèches, nurseries and preparatory schools), for cultural, educational and recreational purposes (reading — rooms, clubs), and for business and trade (distributive stores of essential articles).

Evidently, even the best planning and construction of residential districts does not guarantee the realization of the community idea. Territorial units are only a frame, favourable to the desired development of community life, particularly on the neighbourhood grade. It is impossible, however, to attain this object without the full democratization of social conditions.

The circumstances in Warsaw seem to justify the hope that the social objectives of residential planning will, in fact, be realized. Land and financial aid for building will be bestowed by the City Corporation and the State on the condition that they be used in a way foreseen in the plan of development and comply with the principle of the plan, which is to adjust housing to the needs of all social groups. Considering the devastation of the country, our housing standards must be economical. Therefore, the scope of planned building is being widened and extends over a variety of social groups, instead of being limited to those which are economically weakest. Under these circumstances, and in the face of progressive democracy, we may not only realize the programme of construction of neighbourhood units, but also achieve a full flourish of community life deprived of all social prejudice.

Communications.

The road network.

The structure of the city, which is composed of two chains of districts along the Vistula and a transversal main zone of work-places undoubtedly indicates the basic ten-

dencies of communications. As residential areas stretch a long way in a N-S direction, they must have transversal connections not only along the zone of work-places, but in other places more distant from the Centre.

In the central districts the network of main roads resembles a chess-board plan. It ensures convenient and simple intersections, short connections in the most important traffic directions and the adaptation of many remaining elements of the pre-war street pattern. Outside the central area there are through roads and diagonal connections.

The network of communication routes conforms to the two basic highways of national importance which run through the Warsaw Metropolitan Community from N to S and from E to W. Within they split into two groups of roads, which differ according to their use and form a basic system of traffic in the city. This is of great advantage, because a large proportion of vehicles are directed towards the metropolis. Arteries of 1-st category find convenient connections with the networks of 2-nd and 3-d class roads. Special by-passes are foreseen for through traffic which has no object in coming to Warsaw.

The group running in the N - S direction is composed of three roads on the left bank of the Vistula. Of most vital importance is the artery which passes along the western border of the central zone. It is on this road that light and fast traffic will be directed. Commercial traffic will travel another way, which leads along the western border of the Central Industrial District and the adjoining residential areas. From its central section commercial traffic may easily penetrate eastwards into the industrial plant area. The third route runs close to the river, and in certain parts on its bank. It becomes attractive landscape feature, enhanced by the beauty of the escarpment rising to the West. This road will therefore largely serve touring purposes.

The Centre, lying between two skirting routes, has, in addition, several 2-nd class arteries running along its territory. Marszałkowska Street and its extension is the most important among them; in its course through the Centre it becomes the main axis. It is relieved in this sector by the roads which run along the historical zone near the embankment. The roads in the N - S direction are being completed with a number of 3-d class arteries.

The districts on the right bank are provided with two 1-st class routes. The western route partly encircles the districts, and partly runs through them, according to local conditions. Its rôle is similar to that of the artery for fast traffic which runs along the central area. The other artery, running farther East, will cater to heavy traffic. Close to the river there is a 2-nd class artery, similar in character to the riverside road on the left bank of the Vistula.

The right-bank routes are of less importance compared with those of the left bank, in the same way as Praga is inferior to the central districts.

In the E - W direction run two 1-st class and two 2-nd class arteries. Most of the traffic will pass along the route in the open zone between the western, central and northern group of districts. Two parallel, 2-nd class arteries running along the main zone of work-places form, in the middle sector of their course, the most important transverse elements of the central system of communications. The fourth road, running E - W in the southern part of the city, will cater mostly to traffic between the districts and between suburban settlements.

The same differentiation, which may be seen in the pattern of all afore-mentioned arteries, also exists in the pattern of minor elements of the roads network. It is the

consequence of segregation of traffic according to the type of vehicles, and of the treatment of through traffic.

Heavy lorries often impede the remaining traffic and make themselves objectionable to the adjacent areas; for this reason they are frequently subjected to special restrictions. Lighter motor lorries will be able to benefit by the roads in the same way as motor-cars, with the exception of certain routes reserved for passenger traffic only. A passenger car as a rule has access to the entrance of any building; the limitations concern only large vehicles of public transport.

The plan, aiming at a proper segregation of routes, does not hesitate to put certain intentional impediments in the way of traffic, in the shape of street profiles, intersections and cross-roads, which, while leaving sufficient freedom for local traffic on a given route, makes it inconvenient for eventual through traffic with no object in a particular territorial unit should not penetrate it at all. Accordingly, there should exist arteries of higher-class running between the units, and lower-class roads, which penetrate into the unit and by-pass the smaller parts of which it is composed.

In such a manner we obtain a number of ring routes. For example, there is a ring around the central districts, formed of 1-st class arteries which run along the central zone and border 1-st class arteries in the E - W direction. This ring is closed from the East by a 1-st class artery running through the districts of Praga. Thus a ring will be created which encircles the group of central districts on both banks.

The next ring will encircle the residential areas which surround the Centre.

Intersections of the few main urban arteries are planned as fly-overs, while intersections of the remaining roads of 1-st and 2-nd categories will be solved in one level,

with reserved space, however, for eventual future fly-overs.

Roads in the E - W direction require a number of bridges across the Vistula. Four 1-st class roads of regional or national importance require bridges of high load capacity. For the two supplementary arteries which relieve the main arteries of the zone of work-places, minor local bridges are being planned.

Rail Communications.

In the rail network of the Warsaw junction, a principle of division according to the types of traffic has been accepted. Seven long-distance passenger lines will meet at this junction; three from the left and four from the right bank of the Vistula. The connection between the left-bank and the right-bank lines is planned by means of two lines in the East-West direction. The main line runs in a hollow, South of the Central Industrial District, then into a tunnel across the Centre and finally on the bridge over the Vistula and the open areas of the right bank. It then runs farther East on the viaducts above the arteries of Praga. The second line forks off from the former in an open zone between the western districts and the Centre, then turns eastwards along an open zone which separates the central districts from the northern ones, and finally, turns South-East to join the main line.

Trains which begin or end their course in the metropolis require two stations: one on the right bank for the left-bank trains, and one on the left bank for the right-bank ones. It is intended to direct all passenger trains through both stations.

Four railway-stations are intended. On the main line, in the centre of the western group districts there will be the Western Station. Its correspondent will be the Eastern Station in Praga, located on the same line.

In addition to these, on the second E-W line, in the middle of the northern part of the city, there will be the Northern Station. The fourth, the Central Station, will be situated on the intersection of the main line with the 1-st class artery running through the central districts. It has been placed away from Marszałkowska Street, which is the axis of central communication; consequently, traffic to and from the station may be evenly distributed among the streets which relieve Marszałkowska.

Communication between the districts of Greater Warsaw and the settlements and other places lying beyond its boundaries, in the area of the Warsaw Metropolitan Community, will be provided with a fast urban railway. This railway will at the same time ensure convenient and ample communication within the city, particularly between places lying far from one another. It will run, as a rule on the surface or in a shallow hollow, and will be duly isolated from the adjoining territory. Tunnels are proposed where adequate isolation is not otherwise possible, particularly in the group of central districts.

The main route of fast urban trains in the N-S direction will run through the central districts. In the southern part of the Centre, two semi-circular routes branch off from it: one of them is directed towards the western districts, runs through them and joins the main route in the northern districts; the second supplements the main route in its central section.

On the Praga side the fast urban line in the N-S direction runs through the middle of the districts. The lines on both banks are crossed by a route in the E-W direction, identical with the main railway line.

Goods traffic has been eliminated from the districts with which it is not immediately related. Only one goods line runs across the city West and North of the western

districts, and passes farther along the open spaces which separate the northern from the central districts. It connects two shunting stations: one on the left bank West of the Central Industrial District, and one on the right bank East of the central districts of Praga. A number of unloading stations and a harbour station in Zeran are also being planned. Industrial districts are provided with railway sidings.

Airports.

Three great aerodromes are foreseen in the plan of Warsaw. Two aerodromes situated North-West and South-West of the city are comparatively near to the Centre and possess good communications with it by means of 1-st and 2-nd class arteries.

The third aerodrome, which is South of Praga will serve the needs of touring and sport. It forms part of the metropolitan sports centre which borders the southern section of the Vistula's course through Warsaw. Additional minor sport aerodromes are foreseen on the area of the Warsaw Metropolitan Community.

Pedestrian roads.

Pedestrian traffic is regarded in the plan for Warsaw as a problem of equal importance as other traffic problems. The plan aims at the creation of pedestrian routes which enable distances to be covered on shortest lines possible and in isolation from wheel traffic; intersections between the two systems will be specially designed. Within the small territorial units (residential colonies) intersections between footpaths and roadways are to be avoided. Various public open spaces will be used to provide pedestrian routes both within the districts and in the intermediate zones. The physical treatment of these routes is suited to the scale of pedestrian traffic as opposed to that of fast motor traffic on the main arteries.

Open Spaces.

Open spaces form a system organically bound with the building areas of Warsaw; they spread ever wider, starting with small strips and centres within the smallest territorial units, and ending with vast areas around the city and in its vicinity. The plan tends to introduce open spaces into the immediate neighbourhood of houses, work-places and community buildings. The scale of these areas varies between the garden of a residential block and the gardens surrounding the representative metropolitan buildings. Open spaces are also inseparable from the majority of communication routes: whether in the shape of narrow strips along the footpaths of a residential estate or of wide park or isolation zones along the animated arteries.

Moreover, areas exist where open spaces become the dominant element of planning. Each territorial unit must be provided with such open spaces according to its needs. Thus, the colony will have small gardens which will comprise among other things equally distributed grounds for sports and games. In these gardens the inhabitants will be able to rest in the short intervals between working-hours or after finishing a day's labour.

Within the neighbourhood unit, leisure grounds will form a small public park, while sport will be concentrated in a few large playing-fields. Allotment gardens will be created in the immediate vicinity of housing.

A district will contain a large park and a sports centre with a stadium, foot-race courses and other facilities, indispensable to a large human concentration.

Similar open spaces will be provided in the industrial districts, suited to the composition and number of the factory staffs and to the organization of work in the factories.

In the Centre, in addition to green squares, parkways and parks of different sizes, there will exist open spaces of general urban and metropolitan importance.

Where the escarpment moves away from the Vistula, South of the last central bridge, the plan foresees the largest sport facilities, which will also serve as forums for assemblies on the occasions of national holidays and other festivities. The area adjoining from the South is cut through in its riverside part by canals having a varied natural course. Here will be the metropolitan centre for water sports, where green areas are connected with the open spaces of the Centre by the beautiful historic park called Łazienki. The roads running through this centre are joined with the riverside arteries and form pleasant routes for walks and drives. North of the sports centre and of the central bridge, the terrace lying between the river and the escarpment is covered with ruins. This will be cleared except for small areas of undamaged and good new development, and the historical fragments farther North, adjacent to the oldest parts of the city. The remaining development is considered of no value and will be removed, giving place to parks, gardens, grounds for sport and play, museums, pavilions for exhibitions, small community buildings etc., which will attract the widest public interest and create an atmosphere of collective leisure.

In the southern part of the city the open area between the river and the escarpment passes gradually into a wide tract of agricultural land, while in the northern group of districts it joins the beautiful woods of Bielany. It is also connected with the open spaces, lying on the high bank, by zones separating the districts in the E - W direction and by a number of gardens on the escarpment. In the central section, the open spaces of the riverside terrace connect with the intermediate open zone on the western border of the Centre through parks and squares of the Saxon Axis, through the gardens of the Stanislaus Axis and the internal park of the University Quarter.

The individual districts of the city and their groups are separated from each other by wide tracts of undeveloped land. This land will be used, as necessary, for vegetable gardens, orchards, flower nurseries, shrubs and trees and similar agricultural purposes. In some cases, parks and sport facilities for the adjoining districts will be placed here: this occurs when difficult local conditions do not permit ample provision of facilities within the districts themselves. Zones which separate districts will help to complete the metropolitan park system, while preserving their intermediate character between the urban park and the agricultural and woodland areas around the city. Their productive use will keep them from becoming an excessive financial burden on the metropolis.

The intermediate open spaces together with the well-preserved and well-planned suburban landscape, enhanced by proposed afforestations, will be blended into the natural surrounding landscape.

In spite of the fact that the surrounding countryside does not abound in attractive landscape features (an exception being the Vistula valley), there are places on the area of Greater Warsaw and of the Warsaw Metropolitan Community, which are suitable for week-ends, summer holidays etc. The areas of the Otwock zone, lying in the south-eastern part of Greater Warsaw, being dry, healthy, afforested and not far from the Vistula, are excellent for the localization of resorts, where inhabitants of the metropolis spend their Sundays and vacations; some people may even commute daily to and from these areas. In the southern part of this zone health resorts and sanatoria will, for the most part, be concentrated.

Forests, scattered around the city on both banks, especially the Kabacki Forest in the South and the forest of Kampinos in the North, will become the object of mass

excursions, as a result of the fast urban railway. Roads will connect the metropolis with more distant attractive areas.

Practically all the area stretching along the Vistula is of remarkable landscape value. Vast, picturesque views are to be seen from both the riverside arteries, as well as from the high escarpment. In the southern part of the Centre, where the Vistula runs almost perpendicular to the city spreading along the escarpment, the landscape conditions are unique. Viewing the river from the bridge which is planned on a most important artery in the upper course of the Vistula, we shall see it resembling a long lake. Farther on we behold the green areas of the „Powiśle“ and the towering escarpment, emphasized by the monumental building of the National Assembly and — visible from afar — the group of sky-scrapers in the Centre.

The guiding principles described here, which aim at taking full advantage of the beauty and scale of the Vistula valley, are the expression of one of the main postulates of the plan for Warsaw as regards the treatment of the metropolitan landscape.

**Bureau for Reconstruction
of Warsaw
Town Planning Department**

Congress Report: Subject:
Replanning of the Centres of Cities:
Implementing the Plans.

LEGAL BASES AND PROBLEMS OF THE RECONSTRUCTION OF WARSAW.

The problem of the reconstruction of Warsaw differs greatly from that of the reconstruction of other European cities. This is due both to the extent of devastation and to the specific tasks connected with reconstruction.

The extent of devastation is enormous. All bridges on the Vistula have been blown up, all railway stations, electricity and gas works, and water supply stations either blown up or burnt down; Warsaw has been robbed of all that is indispensable to the life of a big city. Most hospitals, churches and historical buildings have been destroyed — the latter, in particular, were victims of a destructive and bestial German rage. Whole quarters have disappeared from the surface of the earth, e. g. the great Jewish „Ghetto“ of German making; the streets, submerged in rubble, assumed the appearance of mountain passes. In the Left-Bank Town, which may be considered as Warsaw proper, of 16.289 buildings 9.091 (or 63% of the total volume) were destroyed completely and are unfit for rebuilding, 2.973 (or 15% of the total volume) are burnt but still fit for re-

building. The remaining 4.225 buildings (22% of the total volume) have suffered lesser damages.

The reconstruction of a city always creates the possibility of improving its plan of development. In the case of Warsaw these improvements must go far. Thus we have accepted the principle that Warsaw shall be not only reconstructed, but also rebuilt. The new plan must correct and atone for the neglect and mistakes of a whole century. When considering the reconstruction of Warsaw, it should be remembered that this great city had no local government until 1918. During the last hundred years, a period of intense urbanization in all European countries, Warsaw, which grew from 64.829 inhabitants in 1797 to 936.713 inhabitants in 1921, was governed by the oppressor. His authorities were not in the least concerned with the proper development of the city. Therefore, in the growth of Warsaw during that period there is no trace of a sense of responsibility for the future of the city. The great Town Planning schemes of the last Polish kings were lost in the chaos of new quarters arising without a plan, with all the sad consequences of such growth. This has had a decisive effect on the scale and character of the task with which we are now faced; the legal problems involved present a special difficulty.

Legal bases of reconstruction in 1945.

At the moment when reconstruction was first made possible, the only legal basis for the work of reconstruction was the Decree of the President of the Republic (having full power of law), regarding the Building Law and the Development of Settlements, issued August 16-th, 1928. This Decree embraced the whole of the problems of Planning and the development of all types of settlements. Part I of the Decree contained regulations concerning the prepara-

tion of plan of development, the division of land (plotting), the pooling of building plots and the transformation of ill-developed plots. Part II embraced building by-laws.

The Building Law of 1928 was meant for the growth of our cities, under normal conditions. The legislator did not (as indeed no one could at the time) foresee the advent of a cataclysm after which towns would have to be built anew. Casuistically worded, it regulates in detail not only the relation of public and private interests, but also relations between owners of adjacent plots. This casuistic wording made application of the regulations in the changed conditions extremely difficult. We were faced with complicated legal problems which were impossible to solve on the basis of the existing legislation. Those problems are:

- 1) The disponibility of land.
- 2) Multiple demolitions and repairs of buildings destroyed or damaged during the war.
- 3) Relating the planning of towns to National and Regional Planning.

I. The disponibility of land.

This problem was particularly affected by the fact, that for so long a period Warsaw had lacked a local government which would and could take upon itself the responsibility for the future of the city. During the many decades of rapid expansion governors of the city had **no land policy whatever** which would have facilitated the future regular growth of the city. In the meantime, the cities of Western Europe, thanks to a farsighted and logically applied land policy, managed to place large areas into the hands of the City Corporations. Between the years 1918 and 1927, in the larger towns of Germany, four-fifths of the newly-developed land belonged to the corpo-

rations; the City of Vienna achieved the ownership of one third of the total area, while Stockholm, for instance, even purchased large suburban areas in order to secure for itself an influence over the development of its region.

Other Polish towns, under different administrative methods, also managed to gain considerable amounts of land, while Warsaw employed a mere 6.5% of the city area. The efforts of the Polish City Corporation in the years 1918 — 1939 could do nothing to relieve this state of affairs.

Now, however, the guiding principles of the new plan foster a very great demand for land for purposes of public utility. The amount of land at the Corporation's disposal was disproportionately small compared with the demand. Free-handed purchase of land, or expropriation on a general legal basis, would require an immense financial out-put for compensations which should be paid in cash. A financial operation involving such excessive costs was impracticable. Besides, the land required for purposes of public utility is by no means the only question. As has been said before, Warsaw must be entirely rebuilt, and, consequently, land utilization must be changed in many places. If all buildings were destroyed beyond repair, the question might be solved by preparing a new plan of development, which would define the use of each individual plot; investors would be required to conform to the plan. Such, however, is not the case; and blind Fate, while destroying valuable and cherished monuments, often spared buildings, which are situated contrary to the intentions of the new plan, and which, as a result, will have to be demolished. For this purpose these buildings would have to be purchased or expropriated against compensation in cash, together with the land they occupy.

Faced with the alternatives, either to reconstruct Warsaw and rebuild it simultaneously, or to reconstruct it on the old lines and thus to make doubtful the very purpose

of such an enterprise, the Polish legislator decided upon a radical solution: he transferred the ownership of all the land lying within the boundaries of the city to its Corporation. Thus the desired disponibility of land was achieved on the largest possible scale.

This unprecedented legal act (as, indeed, unprecedented are the tasks facing us) was decided upon as the result of long discussions held both in political and in strictly professional circles. The following considerations definitely influenced the solution:

1. The lack of any alternative scheme that would provide just as complete a solution of the problem, laying all city grounds permanently at the disposal of the City Corporation.

2. The argument advanced by the authors of the project, that, considering the enormity of devastation and the material and cultural losses suffered by the population of Warsaw, it would be unfair to protect the rights of the relatively few landowners who escaped with their lives from the catastrophe of Warsaw, if those rights impede a work of such importance as the reconstruction of the Capital. However, as will be seen, the landowners do not lose their rights completely.

On the strength of the Act of Oct. 10.1945, dealing with property and use of land in Warsaw, all grounds within the area of the city become the property of the City Corporation on the day on which the Act becomes operative. According to the Act, the property itself falls to the Corporation, the ownership however remains in the hands of the recent owners until the Corporation takes possession of the land. The recent owners also retain the property of buildings and other objects existing on the land.

The procedure for taking possession of the land by the City is more precisely defined by the Decree of the Mini-

ster of Reconstruction (April 7, 1946). The City Corporation takes possession of the land either on the Corporation's own initiative, or on that of the recent owner's. The initiative of the Corporation is prompted by the requirements of a gradual realization of the plan of development. The Corporation publishes in an official paper that it is about to take possession of the land, appointing, at the same time, a date for the inspection of the real estate, and inviting the owner and other persons concerned to assist at the inspection. A record is made of the inspection, describing in detail the legal and actual situation of the real estate, and containing all eventual reservations on the part of the recent owner and other persons concerned. The land will be considered as taken into possession by the Corporation on the day on which the preparation of the record of the inspection is made known to the public. The purpose of this procedure is to safeguard the rights of the former owners and other persons concerned, as in the case (frequent in Warsaw) when the recent owner, or his successors, is not present and his place of residence unknown, in addition to the proof of his rights to the real estate.

Within 6 months after the City Corporation has taken possession of the land, the recent owner, his legal successors or persons representing his rights can apply for a long-term tenure with symbolic rent, or for the right of building on symbolic payment. If the late owner's use of the land does not oppose the purpose for which it is destined according to the plan of development, the Corporation is obliged to agree to the late owner's proposal and confer to him the rights of long-term tenure or the right of building on that land. Alternatively, i. e. when the Corporation, acting, in conformity with the new plan of development, refuses to agree to the proposal, it must offer in exchange a long-term tenure of another piece of land of equal value and on the same terms (for symbolic rent), or the right of

building on a similar piece of land. When the Corporation does not dispose of any such land, it is obliged to pay compensation.

If a building stands on the land to which a late owner has obtained the right to build, that building remains his property; whereas, if this right is refused him, the building becomes the property of the Corporation, and the latter is then obliged to pay compensation.

Compensations for land and buildings may be paid in City bonds. The amount of compensations is established by the City Commission of Valuation. Compensation for land should equal the capitalized value of rent for a piece of land of the same use value, and for buildings — the value of the buildings.

This method of land utilization, based on the right of building, is a new departure in our country. Separation of building rights from ownership rights has always been possible, but, with the exception of lands of foundations, seldom put into practice. People built, as a rule, only on their own land. In order to inspire confidence in this new legal form of land use there has been issued, simultaneously with the Act on Property and Use of Land in Warsaw, another Act, dated October 26, 1945, on the Right of Building. According to this Act (valid not only for Warsaw but for the whole country), the State or the City Corporation which owns the land may confer the right to build on that land, that is to say the right to erect buildings on it on the terms and for the length of time stated in the contract. If a man has obtained the right of building from the owner, he has right to the ownership of the building and to the use of the land. The contract establishing the right of building should contain:

1. the obligation of the acquirer of the right of building to erect the building in proper time,

2. the definition of type and technical execution of the building with its upkeep,
3. in the event of the building being destroyed or torn down during the period for which the contract has been made — the terms and time of erection of a new building.

Disregard of these terms effects a dissolution of the contract.

The right of building may be conferred for a period not less than 30 and not more than 80 years. In the last 5 years prior to its expiration, the contract may be prolonged, on consent of both parties, for further periods, each not longer than 20 years.

When the contract expires, the building becomes the property of the owner of the land against payment, the amount of which will be determined in the contract.

The right of building may be sold, inherited and mortgaged, the mortgaged object being the building.

The institution of the right of building, as well as the monopolization of the land of Warsaw by the City Corporation, enables the Corporation to decide in which way the city is to be developed. Hence, not only the powers based on the building Law aimed at the protection of public welfare (building by-laws) are at the City Authorities disposal, but also the power to decide when the land is to be developed, what buildings are to be erected, and what are to be the technical conditions of the erection and upkeep of the buildings. These economic powers embrace the whole area of the city.

On the other hand, we perceive in this new legal situation a tendency to protect the rights of the recent owners, as far as the achievement of the main purpose will allow. It is a compromise between the necessi-

ties of reconstruction under our present conditions, and the sense of property deeply rooted in our nation.

This law, though formally valid, is not yet in practice. We still lack some executive regulations. At the time when this report is being written, the City Corporation has not yet taken possession of a single piece of land on the basis of this law.

II. Demolitions and repairs of buildings destroyed or damaged during the war.

Warsaw has been almost completely destroyed, and, to a large extent, its population extirpated during the war, partly exterminated by the Germans, partly deported to slave labour camps in Germany, or dispersed throughout the country. Of one-and-a-half million population in 1939, about half a million have poured back to Warsaw in the first period of reconstruction (1, 1/2 years), but only a part of those people inhabited Warsaw before the war.

Reference here to the fate of the population of Warsaw is to show how few real-estate owners appeared in Warsaw within the first months after the liberation. Meanwhile, it was necessary to begin at once the repairs of damaged buildings in order to provide an essential amount of premises for the returning offices, and of housing for the population. Those who undertook the task (at first almost exclusively the State and the City Corporation) were faced with the difficult problem of defining their attitude towards the owners of the real estate which it was necessary to repair or demolish. The owners either could not be found or refused or were unable to undertake the repairs. The undertaking of works without agreement of the owner was considered, at first, a war-time necessity. The question was settled by the Demolition and Repairs of Buildings Act, issued 26 th Oct, 1945. The Act is valid for all

towns and urban settlements throughout Poland, as many other towns share the same fate as Warsaw, although to a somewhat lesser extent.

The Act is an attempt to reconcile the right of owners with certain necessities arising from the task of reconstruction, the conditions and scale of which are, in our case, exceptional.

The Act discriminates between destroyed buildings and damaged ones. Destroyed buildings are those which, according to the Building Authorities, are fit for demolition only, whereas the damaged ones can still be made fit for use. The Act concerns only buildings destroyed and damaged as a result of war activities or of the destructive activity of the Occupation Forces.

The building Authorities, or other bodies entrusted with the reconstruction of the city, may summon the owner to the immediate demolition of a destroyed building and to execute the work within a fixed period. Material obtained through demolition should be removed from the spot, unless it is required for the erection of a new building. If the owner does not obey the order, demolition will be carried out by the Authority or other appropriate body; the material then becomes the property of the person or institution who executed the demolition. Apart from that, the Building Authority or other appropriate body is entitled to organize a collection of building material from destroyed and uncared-for buildings. Such material may only be used for purposes of reconstruction, and the owner has no right to claim any payment therefor.

The Building Authority can summon the owner of a damaged building to repair the building within a fixed period of time. Such a summons may take place at the moment of undertaking the realization of a valid plan of development for a district, or on the proposal of bodies concerned with the provision of housing for the population.

If the owner does not undertake the repairs, or executes them in a manner considered by the Building Authority as unsatisfactory, the building can be repaired at the owner's expense by the State, the City Corporation, a national or social institution or a Housing Cooperative Society, authorized by the Authorities or by an association of tenants. The later is a new form of social economic initiative, created specially by this Act for cases where a group of persons wish to make a building fit for use and subsequently settle accounts with the owner by deducting the cost of repairs from the rent. A ministerial Decree of March 29, 1946 has defined more precisely the legal form of such an association, which is to be a Building Cooperative Society.

A building repaired by the State, a national institution or the City Corporation comes under control of the State or Corporation for as long as it will take to cover with the rent the full cost of repairs plus an interest of 2% per annum. The costs of administration, rates, and instalments of mortgages and interests are to be deducted from the rents. If the repairs are executed by another institution, public, social or cooperative, the Building Authority will define cost for the settlement of accounts; interest from the invested capital will not be added, and the said institution may not manage the real estate for longer than 10 years. During its management by the State, the City Corporation, or another institution, the real estate should be maintained and returned to its owner in good condition.

In order to encourage private and social initiative to undertake the repairs of buildings, the Act sets all premises, which have been made fit for use by means of thorough repairs, free of all limitations foreseen in the regulations concerning the public economy of dwellings, and the rentals. Observing the extremely difficult housing situation in our destroyed towns, the Town Authorities have obtained right of control over the lease of premises, in order to en-

sure that the fullest possible advantage will be taken of them. Town Authorities may allot dwellings by quartering orders. At the same time rentals have been fixed with a sense of protection for tenants interests. The Act ensures the full disponibility of premises where thorough repairs have been executed, and creates a genuine basis for amortization of expenditure. The only regulations applied to renovated premises are those concerning the minimum of inhabitants per premises or per room. The Executive Order of the Minister of Reconstruction (Feb. 25, 1946) has defined precisely what is to be considered as „thorough repairs“, as well as the mode of procedure in such matters.

With regard to the facts accomplished in the period before the passing of the Act, to which reference has already been made, the Act contains a regulation extending the validity of the Act to include repairs or demolition executed before the Act became operative.

III. Relating the planning of towns to National and Regional Planning.

Until a short time ago the plans of development in our country were based on the afore-mentioned Building Law of 1928. This Law was supplemented, in 1936, by regulations dealing with the possibilities of preparation of regional plans by special committees of the Regional Plan, created for that purpose. This was of vital importance for Warsaw, which, like every big expanding city, is surrounded by an area (known as the Warsaw or Metropolitan Region), tied to the city by numerous bonds and being the field of present and future urban expansion. For many years it had been the opinion that this area should be embraced in a regional plan, wholly adjusted and subjected to the plan for Warsaw. A survey for the regional plan of Warsaw, and for several other regional plans, had already been made prior

to the war. Lacking, however, was connection with the general State policy. Here it must again be stated that this was of prime importance in the case of Warsaw, for the plan of Warsaw and its region, the most vulnerable spot in the country, was closely interwoven with the objects of National Planning. The Planned Physical Development of the Country Act of April 2, 1946, offers a solution of the problem as a whole. It is, so to speak, a constitution of Physical Planning in our country.

Reference is no longer made to the plans of development, but to „planned physical development“. For planned physical development is something more to us than simply a plan of development of a settlement. The concept embraces the entire problem of location of all spatial forms of life, and not merely those appearing within the boundaries of settlements. The Act points out at its inception, that „all public and private activities connected with the use of land and the location of population should comply with the resolutions of the plans for physical development“. According to the Act, the National Plan establishes the zoning of land for the various purposes of social economy, and even for the needs of culture, education, health and recreation; the location of population and the function of the chief urban centres; the basic design of communication, power and telecommunication services; and the division of the country into regions as basis for the administrative division of the State. Regional and Local Plans are a development of the principles of the National Plan, in the sense of their further localization. It is for this reason that the Act determines that local plans should be prepared on a basis of the regional plans.

We fully realize the tremendous amount of work which the preparation of such a national plan involves. We assume, therefore, from the start that in reality we shall act by preparing fragments of that plan (e. g. the plan of deve-

lopment for the Vistula Valley) and by establishing guiding principles for the regional plans. In regional planning we shall act likewise by preparing fragments of those plans and guiding principles for the local plans. The latter are of fundamental importance.

The main authority, as regards physical planning, is the Central Office of Physical Planning which forms part of the Ministry of Reconstruction but which acts independently where matters of physical planning are concerned. Subject to it are the Regional and Local Offices of Physical Planning.

The Regional Offices of Physical Planning are directly dependent on the Voivods, officials entrusted with the co-ordination of administration in the Voivodships (provinces). The object of this is to ensure that the Regional Offices of Physical Planning may exercise an influence on the realization of the plans which is, obviously, a matter for Administration. The Local Offices of Physical Planning are the executive agencies of County Councils („wydziały powiatowe”), and in the case of incorporated towns of the City Councils and Corporations.

The activities of each of these Authorities comprise, in addition to the preparation of plans, the exercise of control over investments and construction works as they conform with the plan; the suspension of works conducted in discordance with that plan; and the decision as to the necessity of restoration of the original state. From the day on which the preparation of a regional or local plan has begun, the Authorities may suspend the examination of applications for permission to change the utilization of land (for instance the plotting of agricultural land for building purposes) or for permission for investments, especially for building, if they are contrary to the proposed principles of the plan. The period of suspension may not be longer than 3 years. In a word, they are Authorities in the full meaning

of the term, endowed with the necessary sanctions, and not simply bodies entrusted with the preparation of plans. According to the hierarchy of plans, it follows that the Central Office of Physical Planning gives consent to regional plans, and the Regional Offices to local plans.

It is foreseen that advisory bodies to the Central and Regional Offices of Physical Planning will be created — namely, the National Planning Council and Regional Planning Councils. They are to be of mixed composition, but with due regard given to representatives of sciences and experts on various problems.

The Act settles in detail the procedure of preparation of the plans. The regulations have in view to ensure full maturity of judgement where such important decisions are concerned, and also to enable every citizen to pronounce his opinion on the plan itself and to defend his own interests. The Local or Regional Office of Physical Planning, when embarking on the preparation of a plan, publishes the fact and makes the proposed principles of the plan available to the persons concerned, who, in turn, can transmit their proposals within a given time. These proposals bear the character of postulates, considering the plan is not yet at hand; thus, public opinion is being drawn into co-operation. In local planning the persons concerned may once again give voice to their opinions. Local plans after, preparation, should be exhibited for public examination, and the persons concerned may voice their objections to the Regional Office of Physical Planning. The Regional Office, which must give its consent to the local plan, examines it together with the raised objections.

The national plan (or its fragments), qualified by the National Planning Council and enacted by the Council of Ministers, is submitted to Parliament for legislative vote. Regional plans, qualified by the Regional Planning Councils and approved by the Central Office of Physical Planning,

are voted by the Voivod (provincial) National Councils. Local plans, approved by the Regional Offices of Physical Planning, are voted by the County Councils, and in the case of incorporated towns by the City Councils.

The change of destination of lands and the undertaking of investments, especially building works, in discordance with the plan, is forbidden under penalties, described in the Act. The relation of the planning of a city's area to the planning of a region still requires explanation. The new plan for Warsaw is being prepared by the Bureau for Reconstruction of Warsaw, a special body called together to work on the reconstruction of the capital in cooperation with the Mayor. The Regional Office of Physical Planning in Warsaw is acting in the area of the Warsaw Voivodship. Both these planning bodies are in close cooperation. However, because the exceptional importance of Warsaw's interests in the preparation of the plan for the Warsaw Region, the need for the fusion of both these bodies into a single body, to plan for Warsaw and its Region is being discussed at the present time. And, as the value of any plan depends on its realization, it is proposed that a voivodship should be created of Warsaw and its Region (administrative Warsaw is, to-day, excluded from the Warsaw voivodship). Thus realization of the plan would lie in the hands of a single administrative authority, responsible both for the city and the region to which it is closely bound.

Wacław Brzeziński.

HOUSING CONDITIONS IN WARSAW BEFORE THE WAR AND TO-DAY

In October 1944, Warsaw (the bulk of the city, situated on the left bank of Vistula) had about 22.000 inhabitants left by the Germans in the suburbs after the deportation of the city's population. Further planned and systematic destruction of the town, already very much battered during the insurrection of August — September 1944, continued until 18-th January, 1945, the moment of Warsaw's liberation. The first of the returning inhabitants saw before them a deserted ghost-town, through which it was extremely difficult to force one's way. The streets were blocked with rubble and the remains of barricades, sometimes several storeys high, so that often it was easier to tread a foot-path on the place where houses had stood than along the old streets. Decomposing corpses were scattered everywhere and from beneath the piled-up rubble came the dreadful stench of decaying bodies. Almost the whole area of the town was mined. Even a slight inattention or slip could cause death.

In this sea of devastation to estimate losses was at first impossible. It seemed that not a single house or street

was left undamaged. And yet the mass repopulation of the city started from the very first days of the liberation. In March 1945, that is barely two months after its liberation, the population of Warsaw was already 132,494 in the part of the town situated on the left bank of the Vistula (the so-called Left Bank Town) and 180,814 in the Right Bank Town. This in total formed 24.4 p. c. of the pre-war population of Warsaw. These figures show how quickly the town was coming back to life. Two factors caused and influenced the imposing speed of the revival of life in the ruins. First — the stubborn will and amazing energy of the inhabitants of Warsaw; the same energy which made them survive the longest and most furious battles of the 1939 campaign, and which, through the 5 years of German occupation, maintained Warsaw as the true capital of the country, centre of political and cultural activities and representing the will and all tendencies of Poland, in spite of the repeated efforts of the Germans to reduce her rôle to that of a provincial town. This attitude of the population of Warsaw during the occupation caused the Germans to destroy Warsaw intentionally, believing that the end of Warsaw would be the end of Poland. It was this attitude too unbroken even by the defeat of the insurrection, that decided the inhabitants of Warsaw, without waiting for any help or encouragement, to start at once to clear the rubble and install themselves in the ruins.

The second factor, probably no less important, was the decision taken by the Government at the end of January 1945, to keep Warsaw as the capital of Poland and the seat of Government. This decision was called by the press a „heroic” one. Indeed it is difficult to imagine this first period of new life in Warsaw, in which 132,000 people lived and worked in the such appalling conditions. Most distressing was the lack of the basic utilities — water

and light. The first houses, on the left bank of Vistula, received electricity in April and water in May. After a tiring day's work one had often to walk quite a long distance, because wells were scarce, wait patiently in a queue for one's turn, and finally stumble back home, carefully picking the way through the rubble full of gaps and mounds and carrying, like a priceless treasure, a bucket full of water.

And yet life was going on intensely.

The inhabitants of Warsaw, led perhaps by a primitive instinct, wished first of all to secure a source of income, before they started to think how to meet other needs.

In the first period, trade proved to be the easiest means to make money. The city swarmed with all kinds of stalls, sheds and small shops, clumsily built of boards and sticks, extracted from the ruins. These substituted for restaurant, shops, hair-dressers, etc. And quite often they were also the temporary dwellings of their owners. The reconstruction of proper dwellings and apartments was started by the people of Warsaw much later, when the life of the city was already in full swing. Thus Warsaw unconsciously realized the formula of the Minister of Reconstruction M. Kaczorowski: „our aim is organic reconstruction, that is, first to create life and only then give it the architectural frame“.

Therefore, the trend of reconstruction of Warsaw in the first stage, in the year 1945/46, harmonised with the tendencies shown by the inhabitants of the destroyed city. The authorities tried to enable Warsaw to perform, as soon as possible, all the functions of a capital. They endeavoured, to supply rooms for various offices and institutions, necessary for their efficient work. They also urgently started to rebuild all utilities and the net of communication. The results obtained in this sphere are often imposing, if we take into consideration the conditions under which they were obtained. What apparently seemed

to be most logical — to fence the whole city and write on the gates: „entrance forbidden to all not employed on the building process“ — was not done. On the contrary, in this gigantic building place both the builders and the future tenants were admitted at the same time.

We have agreed that by the reconstruction of Warsaw we mean not the mechanical method of reproducing the pre-war state, very defective in many respects, but the rational and planned rebuilding of the destroyed city. The extent and location of the destruction automatically made certain changes in the post-war structure of the town necessary.

The population of Warsaw, which numbered before the war 1.295.000 inhabitants, after the deportations by the Germans in Autumn 1944 tried first of all to gather in the suburban areas, waiting for the imminent liberation of their city. They gathered in the boroughs and settlements situated on the left bank of the Vistula (the right bank was at that time already in the hands of the Soviet Army), within a radius of about 30 km. from the city. At the beginning of 1945, when not everyone had made up his mind or was able to come back to the ruined capital, or to leave for other parts of the country, the population of some of the suburban boroughs increased to about 150 p. c. of the pre-war figure e. g.:

	1931	1945
Grodzisk	15.700	22.300
Pruszków	23.700	37.300
Włochy	14.000	25.000

The census of February 1946, showed a great change in these proportions. From the people who gathered in the

suburban districts awaiting the end of the war, only those remained who could not or would not settle among the ruins of Warsaw, but nevertheless worked in the capital, which had again started functioning.

The population of the above mentioned boroughs was at this later period:

	1931	1945	1946
Grodzisk	15.700	22.300	14.600
Pruszków	23.700	37.300	25.100
Włochy	14.000	25.000	18.100

The total population of the boroughs and settlements of borough character in the Warsaw suburban district has increased about 50.000, or about 29 p. c. over the pre-war population. This increase in figures is perhaps not so great if we note that the pre-war figures relate to the year 1931 and in the period between 1931 — 1939 the population in some boroughs increased considerably. This, however, is not the most important aspect of the problem. The pre-war conditions were such that around a cramped and overcrowded big city existed a belt of localities of summer of health-resort character, not related directly to the functions of the capital. Before the war about 6.200 people commuted daily with Warsaw by suburban trains on season tickets (these were the people certainly connected with some work in the city). They formed 0.5 p. c. of the total population of the capital, and about 1.1 p. c. of people actually employed. In March 1946, these same suburban, trains conveyed daily about 12.000 passengers with season tickets, which is 2.5 p. c. of the total population of postwar Warsaw (according to the census of February 1946), and 7p. c. of the total people working or studying in the capital. It should also be added that before the war the great majority of those who lived in the suburbs and worked in Warsaw were manual workers. Since the war this

proportion is about 50 — 50 p. c., with even a slight preponderance of office workers. Assuming that part of the suburban population comes to Warsaw by other means of transportation, it can be estimated that about 10 p. c. of the working population of Warsaw lives in suburban districts. This is confirmed by the result on an enquiry by the Polish Association for Housing Reform, which showed that about 10 p. c. of the employees of the establishments under enquiry lived outside Warsaw.

These figures clearly illustrate one of the results of the destruction of the city, namely that the pre-war pattern of the city surrounded by a separate suburban area changed into a city logically bound and connected with suburban areas. This positive fact may become, if neglected, only a passing phenomenon. The existing transport difficulties, housing conditions which are not much better than in Warsaw itself (the enquiry of the Polish Association for Housing Reform showed that the density of population per room in some suburban localities equalled Warsaw) and lastly the tendency of the people to live within the boundaries of the town, may form the basis for a new tendency to return to the old condition. The proper policy should be to keep and develop the existing situation, which is incomparably better and gives more possibilities for the future than the pre-war one. This can be done by improving the transport, extending the rules of the housing policy now in force in Warsaw to the suburban districts, and the general improvement of housing conditions.

Before we start to analyse properly the housing problem and the changes which occurred in it as the result of war destruction, it seems useful to define some terms and ideas which we will use, because our definitions often greatly differ from what is generally understood in other European countries. This refers not only to post-war conditions. The pre-war housing system in Warsaw was not up

to standards. A typical dwelling house in pre-war Warsaw was an unmodernised block of flats of the so-called „barrack“ type, very outdated in Western Europe. The average number of flats in such a house was 18, but 32 p. c. of these houses had over 20 flats, and 9 p. c. were houses with over 50 flats. The average number of inhabitants of such a house was 70, while the average house in Belgium, the Netherlands or Great Britain contained 5 — 6 people, and even in Paris the average was 38 people. The houses usually had several floors with 2—4 flats on each floor with main entrances from the communal stair-case. In older houses, especially in the central districts, there usually was a second stair-case, the „back“ or „kitchen“ stair-case, so that every flat had two entrances. This formed conditions which favoured development of sub-leasing, a system so very harmful from the social point of view. Finally, it should be added that the degree of equipment of these flats was very low. In 1931 only 33 p. c. of flats in Warsaw had their own lavatory and 9 p. c. of all buildings were without any sanitation whatsoever. These specific and low conditions plus the general overcrowding form the background necessary to understand the problem of Warsaw, namely sub-leasing, probably nowhere else applied on such a large scale.

Sub-leasing means the surrender by the owner of a part of the flat for the use of other people. The reasons are various. The simplest, probably, is the fact that the person who rents the flat cannot afford to pay the whole rent, therefore transfers part of the burden to somebody else, giving him in exchange the right to use a certain part of the flat. Another kind of sub-leasing, different in character, is „disinterested“ sub-leasing, when a part of the flat is given for use by members of the family (e. g. by parents to the young couple), or to other relations or friends who are, at the moment, in financial

difficulties. The third and worst form of sub-leasing arises simply from the desire to profit. Profiting from the general lack of flats, the owner of a flat deprives himself of a part of his flat demanding for it, especially in the case of larger and better equipped flats, excessive prices. We have these explanations elaborated on because in post-war Warsaw the system of sub-leasing has grown to disastrous dimensions and made a special mark on the life of the people and on the character of the housing problem.

A few words should be added to explain the post-war and current meaning in Warsaw of the words „room“ and „flat“. If we look at the figures representing the present housing situation and if we want to obtain a true picture, we should remember the difference in quality between the existing and pre-war standards. Figures from the post-war censuses (May 1945 and February 1946), on which we will base our explanations comprised all apartments and living accommodations. The very fact that some accommodation was inhabited was sufficient to list it as „room“. These „rooms“, however, very often have little semblance to what we usually understand by this name. For instance, in some destroyed flat only the bath-room remained undamaged. The bath is thrown out, a bed and a stove put in and one of these „dwelling-rooms“ is ready. In a flat which was undamaged several families are living. Part of the corridor has been segregated by means of a wooden partition, and a family is living there. This is another „dwelling room“. A comparatively large number of basements survived. All former wash-rooms and boiler-houses are now converted into „dwelling rooms“.

Examples of this nature are multiple.

The censuses do not give data about the sanitation of these dwellings, but even a superficial look at the present Warsaw dwellings is sufficient to show that their sanitation is simply appalling. The number of bath-rooms and lavato-

ries in working order is extremely small. Only when we fully realize and understand the meaning of the terms used will we have the true back ground for analysing housing conditions in Warsaw.

We must differentiate between the Left and the Right Bank Warsaw, because Right Bank Warsaw was comparatively less destroyed and the housing conditions there more approach the pre-war level. On the other hand, the trend of change is easier to grasp in the more destroyed part of the town, that is, in Left Bank Warsaw. From the extent of damage done arises the different degree of density of dwelling houses, apartments and inhabitants in two parts of the town.

Table No. 1.
Density on one hectare.

	dwelling houses			apartments			inhabitant		
	1939	1945	1946	1939	1945	1946	1939	1945	1946
Left Bank Town	1.4	0.8	0.8	25.0	4.2	6.3	1 4.1	20.3	30.2
Right Bank Town	1.3	1.2	1.2	12.5	11.3	11.9	84.0	44 0	46 8

In comparison with other European towns pre-war Warsaw was extremely densely populated. For instance the number of inhabitants per 1 hectare in Berlin was 88 and in other German towns of over 200.000 inhabitants — 84. The density of Warsaw's population was not evenly distributed. In some districts, as for instance in the centre and in the Jewish quarter, it amounted to 1.500 inhabitants per 1 hectare.

To complete the picture we should add here that Warsaw had very few parks, gardens and, in general, open spaces. For instance in Berlin 43 m² of green were proposed for every inhabitant. In other German towns the average was 27 m², while in Warsaw it was only 5 m². The present density pattern is quite different (vide Table No 1.). This is one of the important changes in the structure of the city,

which should be made use of during the reconstruction. The loosening of density automatically changed the „bar-rack“ structure of the city. This can best be illustrated by the example of Left Bank Warsaw:

Table No. 2.

	1939	1945	1946
Number of apartments in a house	17	8	9
„ „ inhabitants „ „	70	34	36

The process of reconstruction will of course bring again a gradual increase of density. The table also takes into account partly destroyed houses, which will be later re-built. But generally speaking, these changes mark a healthy trend to break with the old type of building.

On closer examination of the housing structure it is worthwhile to compare the present figures of the number of inhabited houses, rooms and population with the pre-war figures:

Table No. 3.

Houses occupied			Apartments occupied			Rooms in occupied apartments			Population		
1939	1945	1946	1939	1945	1946	1939	1945	1946	1939	1945	1946
100%	63%	75%	100%	29%	38%	100%	26%	34%	100%	29%	37%

This table shows that the number of population corresponds almost exactly to the percentage of apartments in use, but is slightly higher than the percentage of the used rooms. This, of course, will find its expression in the average figures of density of population per 1 room.

The comparison of figures relating to the sizes of flats between Warsaw, other European and even Polish towns is very unfavourable to Warsaw:

Table No. 4.

Type of flat	Berlin 1927	London 1931	Brussels 1931	Polish towns 1931	Warsaw 1931
1 room	4.4	0.7	12.5	36.5	42.5
					66.9
2 "	29.0	3.3	23.1	32.2	24.4
3 "	35.4	7.4	21.7	16.9	16.2
					32.7
4 " and over	31.2	88.6	42.7	14.1	16.5

In this field post-war figures do not show any tendency of improvement in the situation.

Table No. 5.

Type of flat	Warsaw		Left Bank Town	
	1945	1946	1946	
1 room	42.7	44.9	46.5	76.1
2 "	33.4	31.1	24.1	76.1
3 "	15.0	14.6	15.5	31.4
4 " and over	8.9	9.4	15.9	31.4

In comparison with the pre-war situation it is striking to note the increase in flats consisting of 1 or 2 rooms, and the decrease in middlesized flats, while again the very large flats have increased.

Within the year 1945—46 the number of flats with 4 or more rooms increased 5 p. c., but at the same time the percentage of 1 room flats increased 2,2 p. c. As a result, the percentage of 1 and 2 room flats remained almost unchanged — 76,1 and 76 p. c., which is 9,1 p. c. higher than before the war. The structure of Left Bank Warsaw showed an alarming increase in the number of 1 room flats. In relation to the figures for the whole town the increase is still high, although at the same time the percentage of

large flats also increased. These changes can be explained by the fact that after the first period of resettlement, during which only undamaged or very slightly damaged flats were occupied, the time came when people were forced to start re-occupying more damaged flats, which required basic repairs involving great expense. Very few impoverished Warsaw families could afford the luxury of repairing large flats. Usually they repaired the absolute minimum, that is 1 room, or else entered into partnership with other families; in that case they chose the largest flats. Flats with 2 or 3 rooms were too expensive for one family, and too small for several families.

This problem bears relation to the problem of sub-leasing. Its solution will constitute a very great difficulty for many years to come and is a real menace to the post-war housing situation in Warsaw, the more so, because we deal, to a great extent, with the most harmful form of sub-leasing, the so-called „usurious“ sub-leasing. The result of the enquiry into housing conditions made by the Polish Association for Housing Reform showed that, among those who answered the enquiry, 70 p.c. do not have separate flats, and among the 3 room flats 88 p. c. are multi-family flats. Pre-war Warsaw had a large percentage of flats with sub-tenants — up to 30 p. c. of the total. But now the figures are reversed, so that if before the war we were concerned about the housing shortage of Warsaw, what term shall we use to describe the present conditions?

Viewing the housing situation from a demographical angle does not lead to any more optimistic conclusions.

The following table shows the percentage of population living in different types of flats:

Table No. 6.

Percentage of population living in different types of flats

Type of flat	1931	1945	1946	Left
				Bank
				1946
1 room	36.9	32.0	33.1	33.2
2 "	25.1	32.5	30.2	23.4
3 "	18.0	19.7	19.5	19.1
4 and more	19.5	15.8	17.2	24.3

From the figures of the average density of population per room can be drawn some more conclusions. Again the situation in pre-war Warsaw in comparison with other European cities was appalling.

Table No 7.

Average pre-war population per room

Type of flat	London 1931	Berlin 1927	Paris 1926	Prague 1930	Brussels 1930	Warsaw 1931
1 room	1.8	1.8	1.6	2.9	1.5	4.0
2 "	1.4	1.4	1.4	1.7	1.2	2.4
3 "	1.1	1.1	0.9	1.5	0.9	1.1
4 and more						

Table No 8.

Post-war situation.

Type of flat	Warsaw		Left Bank
	1945	1946	1946
1 room	3.2	3.2	3.4
2 "	2.1	2.1	2.2
3 "	1.9	1.9	1.9
4 and more	1.7	1.7	2.0

The most striking fact when comparing the pre- and post-war figures is the disappearance of the great difference in density between the overcrowded 1 room flats and the average for the largest flats of Western European standard. But this equalising shows only certain inside changes

in the situation and not a general improvement of the conditions as a whole.

In 1939 the average density per room was about 2 people, in 1945 it was 2,4 and although in 1946 it was lowered for the whole of the town to 2,2, it remained 2,4 in Left Bank Warsaw. Remembering the quality of these flats, we can assert, without a doubt, that the general situation is worse now than it was before the war. The greatest change for the worse is in large flats, or in the housing conditions of the pre-war more wealthy classes. In consequence, we now have more equal conditions but unfortunately all are bad. Nevertheless, for future reconstruction the present structure creates a better basis for **uniform and general** improvement than did the pre-war one.

This is the last of the conclusions drawn while studying the tendencies and new possibilities for improving the housing conditions of the city.

Before passing to somewhat different problems it may perhaps be worth while to point out again that the specific character of the reconstruction of Warsaw lies in the co-existence of 2 usually detached processes: the reconstruction proper and the process of populating it with inhabitants not actually occupied with the reconstruction, but who are trying to lead normal lives in spite of the existing conditions.

This fact caused certain changes in the city's structure from the beginning of its reconstruction. The trend of these changes forms an advantageous foundation for the future, planned reconstruction. Some of the changes have already been enumerated:

- 1) The loosening of the density in the city and resulting possibilities of a more rational future location of greens and open spaces, of increased area;
- 2) The considerable uniformity of housing conditions which may help the community towards uniform improve-

ments. The effect of this may be to obliterate the differences of living conditions between different classes.

To give a full picture of the structure and life of the reviving capital we should add a few words about the public utilities, indispensable to the normal life of the city, and the results of one year's reconstruction. When considering the given figures one must always bear in mind that the present population of Warsaw is 36 p. c. of the pre-war figure, and that at the time of liberation all these utilities were either destroyed or severely damaged.

The city's transport service consisted before the war of 38 tram-lines (with 710 cars) and 17 bus-lines (with 100 buses). Now there are 13 tram-lines (with 190 cars), 9 bus and 3 trolleybus lines. This does not meet the needs of the inhabitants and, consequently, all the means of transportation are always overcrowded. However, each month brings some improvements.

Electric works supply electricity to 7840 houses, i. e. 46 p. c. of the pre-war number, and 1 year's consumption per inhabitant is 333 kwh. i. e. almost twice the pre-war consumption (167).

Water supply and sanitation serve up to 40 p. c. of the pre-war number of houses and the daily consumption per head is $0,17 \text{ m}^3$, which is almost as much as before the war ($0,2 \text{ m}^3$).

The gas supply net is in the worst condition and it serves only about 16 p. c. of the pre-war customers, with an output of 14 p. c. of the pre-war one.

Hospitals and Medical Centres. If we considered the pre-war state as satisfactory, the present figures are sometimes even better. The number of medical centres has increased to 13 (10 pre-war), and the number of hospital beds is now 3290, approaching half the pre-war number 8050.

Public utilities are being rebuilt within the frames of the prewar structure of the city (transport, gas, water supply). Their adaptation to the new conditions proceeds at a slow rate. Therefore, it is still impossible to meet all the needs of the population. However, under extremely difficult conditions, we can say that the achievements of one year's work is considerable.

We have pointed out that in the first post-war period life often out-paced the reconstruction and that thus Warsaw realised the programme of „organic reconstruction“. This did not change in the later period, but when the most primitive needs were satisfied it took different forms. It is most obvious in the sphere of cultural life which is now much stronger than before the war. The average monthly attendance at a Warsaw cinema before the war was 14.500. Now it is about 50.000. This increase can be noted, too, in the theatre attendance. The pre-war monthly figure here was about 7500, now it is about 8300. These figures prove the existence of a very strong „thirst for entertainment“, which, by the way, is symptomatic of all post-war periods. But this need of entertainment does not infer that people want only its simplest kind, of a comparatively low standard, as would appear from the fantastic increase in the cinema attendance. The number of visitors to the museums also increased. For example, the monthly number of visitors to the biggest museum in Warsaw — The National Museum — was pre-war about 22.700, in May 1946, it increased to 31.000. Finally the attendance at public libraries now is almost as big as pre-war, e. g. the pre-war attendance at the Warsaw Public Library was 11.500, now it is 11.000. These figures, when calculated in proportion to 1 inhabitant, prove that the people of Warsaw, in spite of being poorer and in spite of transport difficulties, lead as rich a cultural life as they did before the war.

Here we come to the second phenomenon which characterises the cultural life of post-war Warsaw. The people not only feel a „thirst for entertainment“ but also have an intense „thirst for knowledge“. The proportion of school children and students to the total of population increased 1.6 p. c. At the same time, some characteristic changes appeared within the educational structure: the biggest increase in the number of pupils can be observed in technical schools, high schools, and thirdly, kindergartens. The number of primary and secondary school pupils remained on a pre-war level, while the numbers for adult education are a little lower.

Table No 9.

Types of school	Pre-war				February 1946			
	Number of:	Pupils		Number of:	Pupils			
	schools	pupils	child.	pop.	schools	pupils	child.	pop.
Kindergartens	144	9.216	4.1	0.7	65	5.130	5.7	1.1
Primary schools	190	133.073	59.2	12.5	102	47.038	52.3	9.9
Secondary „	100	29.650	13.2	2.2	25	11.157	12.4	2.3
Technical „	74	12.065	5.4	0.9	29	8.744	9.8	1.8
Schools for adults	31	19.000	8.8	1.5	22	6.000	6.6	1.3
High schools	10	20.805	9.3	1.6	10	12.000	13.3	2.5
		<u>224.000</u>				<u>90.000</u>		

These figures prove that the population of Warsaw, despite tremendous handicaps, shows a spontaneous mass tendency to increase the extent of education and cultural life, and that they effect this as far as is possible under the circumstances. Let us picture a child doing home-work in an overcrowded Warsaw room. And the situation at school

is hardly better. During lectures university students had often to stand and make notes, leaning their copy-books against backs of other students, so great was the lack of desks and chairs. Examples of this nature are innumerable.

Life out-paces reconstruction! The mass trend towards the most extensive use of cultural amenities shows a clear way for future reconstruction. In the first period the main aim should be to build as great a number of amenities as is necessary to appease the numerical needs of the population. High quality standards may be attained gradually and at a slower rate. For instance, it is more important for those who now learn standing in a crowd to build a certain number of class-rooms, where they can sit on chairs, than to build only one class-room beautifully equipped, but which could not accommodate them all. The conclusion is that, in the period when all needs cannot be fully met, the anxiety for the highest standard should be only of secondary importance. The most important thing is to fill the gap and build as many new amenities as is necessary and possible.

Summarising the changes and tendencies which can be seen in post-war Warsaw we can say:

1) a certain number of changes has been determined by the very fact of the destruction of the city. Among them are:

- a) the conversion of the pre-war pattern of Warsaw and the independent surrounding district into a joint Warsaw agglomeration;
- b) loosening of densities;
- c) severance of the „barrack“ type of housing;
- d) uniformity in density of population in all types of dwellings.

All this may have an advantageous influence on the future structure of Warsaw and on the improvement of the housing situation.

2) The general character of the rebuilding of Warsaw has been determined by the unusual energy and tenacity of her inhabitants, who have created new life in the ruins of the city. The reconstruction proper has had to adapt itself to harmonise with this system of life. Consequently this produced a phenomenon which probably never appeared on such a big scale, namely reconstruction and development of new life going on simultaneously.

This energy of the population of Warsaw, which in the first period appeared as a spontaneous effort to create conditions necessary for existence, and subsequently changed into a violent desire for full cultural life, proves that the surrounding and discouragingly difficult conditions are of secondary importance when the will and desire of the people is strong.

This is one more victory for the inhabitants of Warsaw.

**Polish Association
for Housing Reform.**

SOCIAL SERVICES IN NEIGHBOURHOOD UNITS.

1. Introduction.

When examining the line of development of a certain sector of architectural science, which only recently, under the name of „town planning“, became an independent branch of learning, we come to the conclusion that it arises from two different sources.

The first source was the necessity of preventing chaotic development of cities which had grown from independent building endeavours of individuals. As an example of this we have building by-laws, issued by feudal lords for cities or whole regions during the period when building initiative was being transferred from the hands of sovereigns to their subjects. Further relaxation of those bonds necessitated the conversion of the first building orders into supervisory regulations for all plans and new building erections. The ideas of regulation lines, of building outlines etc, incorporated in these laws, formed the core of the newly born science of town planning.

The second source is the age old dream of thinkers and philosophers of an ideal social and economic system. It is

not merely by accident that these utopian theories set the rules of the social system, and give it the most suitable outward frames, in the shape of ideal settlements and dwellings. Since the environment in which a man lives and grows has a decisive influence on his character, it is desirable that, if he is to be a member of an ideal society, he should mature in surroundings which corroborate the utopian system.

The use of the word „utopian“ may be misleading, but it is intended to stress the fact that, through the ages, humanity has been subconsciously permeated with the idea that architecture is closely interwoven with the workings of the social system.

The conscious formulation of this idea and its liberation from the nineteenth century geometrical methods of planning is the gain of the modern science of town planning. There is no doubt to-day that every building or group enforces upon its inhabitants certain forms of living and mutual relationships. In mechanically planned settlements, which envisage only geometrical composition, communal life develops purely by accident. We, to-day, are trying to create a type of settlement most suitable to the social needs which have previously been decided upon.

This is our understanding of the phrase „social settlement“. The aim of this article is to outline the conclusions to which we have come while planning a cooperative estate in Warsaw. Due to limited space we must, perforce, curtail information about the method applied and state only the most significant details. Further space has been allotted to observations on the accepted communal units and the social institutions planned for them. Tables and diagrams attached show the scale (considered to be the minimum) to which needs should be met when building new settlements.

2. Some remarks about the method.

When referring to man as an individual or as a member of a community we formulate our thoughts by means of two kinds of sentences. First we have the so-called „veritative“ sentences, which describe a certain state of affairs either past or present. Secondly we have the so-called „normative“ sentences, which command or prescribe certain actions in order to obtain definite aims.

The pure sciences use only „veritative“ sentences; the ideologies, programmes or plans of action — „normative“ ones. „Veritative“ premises alone can never produce a „normative“ conclusion. To arrive at a „normative“ conclusion we must base it on at least one „normative“ premise while the remainder may be „veritative“. Any ideology, or plan of action, based solely on „veritative“ sentences is a logical absurdity.

Passing over „veritative“ suppositions, we will enumerate here only the most important „normative“ rules.

Rule No 1. To endeavour to secure for man the maximum of freedom in private life within the limits prescribed by the equal rights to freedom of other men.

In order to understand more fully the importance of this rule let us compare two other theses:

- a) Liberal capitalism declares that citizens should be given freedom in private life within the brackets of their social income, however varied;
- b) The totalistic system includes a thesis that the public as well as private life of citizens should be directed and supervised by the bureaucracy according to its regulations.

Insofar as the foregoing theses have been applied in the practice of social life, they have imposed on the architect duties which conflict with the policy of rule No. 1.

Rule No. 2. To endeavour to obtain the maximum of essential goods and services with a maximum of balance between the produced goods and services and the costs of production.

It must be understood that if we based our work only on Rule No 1 (which may be called the rule of social liberalism), or only on rule No 2 (which may be called the rule of social economy) our task would be much easier than if based on two divergent rules, Acceptance of both rules sometimes compels us to search for reasonable solutions. The following example will elucidate this statement: for the personal freedom of a man it is necessary for him to have his own dwelling. On the other hand, however, it has been Rule No. 2, we should be forced to adopt the attitude that barracks than private dwellings or flats, for the same number of people. If we accepted only Rule No 1 and rejected Rule No. 2, we should be forced to adopt the attitude that we must build, exclusively, apartments with individual equipment as complete as possible. On the other hand if we accepted only Rule No. 2 and rejected the 1-st, then probably we should decide to build dwellings in the form of barracks; although we might have some doubts as to whether putting people in barracks would not, in the long run, reduce their efficiency, so that what would be saved in building would be lost through decrease in output.

In the housing sphere this apparent contradiction between Rules Nos 1 and 2 can be solved in the following way:

Rule No. 3. Only the most vital private dwellings should be built, and the shortcomings, caused by their small size, should be compensated for by creating extensive communal social centres and institutions.

Recreation halls, lending libraries and communal dining rooms may serve as example of such communal centres which compensate for the deficiencies in size of dwellings.

There follow a number of rules as to how the settlements with communal centres should be administered, the collective life made more attractive, and the possibilities of giving to individuals the maximum of privacy without, at the same time, creating an air of unsociability.

Finally, the settlement should be made adaptable to the existing communications, civic architecture, etc.

3. Community units.

We are endeavouring to meet the needs of the population as far as possible through community centres (compare Rules Nos 2 and 3). To reach this objective the following works should be carried out:

- a) Dissimilar communities should be singled out from the mass;
- b) their needs, which can be met through community centres should be listed;
- c) every community thus created should be provided with the most suitable community centres and facilities.

In connection with these preparatory works the question arises as to how large these communities should be.

To answer this question rationally the following circumstances in addition to rules should be taken into consideration:

- 1) In order to avoid the bureaucratic system of meeting needs through community centres all members of the community should know one another, and therefore their number should not be too large.
- 2) to facilitate rational planning a community should be sufficiently large (in meeting the needs the statistical regularity of mass phenomena should be apparent).

Membership of a community should be, according to Rule No. 1, adjusted to the number of different community services to be provided, such as school, bakery, central power station, public bath, etc. This shows how difficult it is to fix the membership of communities, because in every case we must employ rules and counter-rules.

After several experiments we consider the division of communities, as shown in Table 1, as the most satisfactory. In connection with this table it should be remembered that a definitely fixed and precise method of dividing communities is at the present time, still too difficult and perhaps premature. Therefore, both the pattern of the division and the figures given should be treated as only approximates. In practice the deviations from the given pattern and figures are considered admissible, and even desirable, if they are necessary and well founded. Besides, it is doubtful whether it is right to prescribe a rigid pattern and permanent standard figures. Even the terminology we use suggests some doubts, e. g. the terms „estate“, „settlement“, are as a rule used to denote quite different ideas. On the other hand the principle of listing the communities according to their size is indubitable.

4. Composition of Communities.

Communities which interest us do not have a homogenous population e. g. they consist of people of different age, sex, trade, etc. Consequently, none of them has homogenous needs: the physical and cultural needs of, for instance, a child, an adult and the aged are quite different. It also follows that the organisations for collective satisfying of needs within communities are not homogenous. For instance the problem of collective feeding differs in the case of single people, from that of childless couples or large families.

T A B L E I.
The optimal population of different community units.

Community unit	Number of lower community units	Population	Characteristics of community units
independent individual flats (apartments)	flats with greatest demand	up to 4	Numbers correspond to typical Polish families
	big flats	over 4	
Collective house for single people and childless couples	75—100 flats (apartments)	100—150	Population sufficiently small to enable the inhabitants to know each other personally but sufficient by large to allow free choice of company. For this number it is already advantageous to meet collectively some needs of the community (collective feeding, cleaning of rooms, etc.)
Housing estate	200—250 flats (apartments)	ca 800	Population sufficiently small to allow the manager and committee to know the problems and difficulties of inhabitants
Settlement	5—6 estates	ca 5 000	Number sufficiently large to establish on the basis of the statistical regularity of mass phenomena a) required types of individual apartments, b) needs in the sphere of cultural and social life c) in matters of health d) in the sphere of primary education and nurseries.
Pioner—settlement ¹⁾	10 estates	ca 8,000	Number greater than in normal settlement. Such settlement built in a district arranged on different principles must be provided with a greater number of services than the normal settlement, because: a) inhabitants do not profit from the services of their district, b) inhabitants of the un-organised surrounding make use of the services of the settlement.
Residential district	several settlements	25,000—40,000	Number sufficiently large to enable the rational functioning of major social services for all the most important needs (recreation halls, bakery, medical centre)

¹⁾ e. g. The settlement of the Warsaw Housing Co-operative Society at Zoliborz.

In view of the non-homogenic character of the communities under discussion we cannot be satisfied only with the knowledge of their general membership, but we must also know the structures of the communities or how they are divided according to age and civil status.

It is clear that population structure of a community changes with time, due to the natural movements of the population, migrations, etc. At present we are unable to foresee this. Therefore, we are compelled to treat the structure of population as permanent, which seems to be admissible in practice, because, with the exception of social or economical disasters structural changes are slow to appear.

The only facts on which to base the structural composition of a planned settlement should be statistical data from a large number of long-established settlements built according to identical principles.

It is obvious that at the present time we cannot obtain such statistical material. On the other hand, it is also clearly impossible to make the plan of investments of the settlement without some statistical data about its population. Plans, therefore, must be based on some assumptions of provisional character. The approximate data has been taken from an unpublished paper by K. L. Toeplitz. We were, however, forced to make some additional estimates. Approximate data on the structure of population are given in Tables 2, 3 and 4. In conclusion, it must be borne in mind that these tables were created at a time when it was impossible to foresee the disastrous effects of war on the structure of population, and therefore are not true indications of present Polish conditions.

Table 3.

Structure of adult population
according to age, civil status and sex.

Age group	Age	total of adults	single	married together	men	women
percentage of people in different age groups.						
V.	21 — 49 years	48.0	12.0	36.0	18.0	18.0
VI.	50 — 64 „	8.0	5.0	3.0	1.5	1.5
VII.	65 and over	4.0	3.0	1.0	0.5	0.5
Together		60.0	20.0	40.0	20.0	20.0
Number of people in different age groups in a settlement of 5.000 people.						
V.	21 — 49 years	2400	600	1800	900	900
VI.	50 — 64 „	400	250	150	75	75
VII.	65 and over	200	150	50	25	25
Together		3000	1000	2000	1000	1000
in a settlement of 8.000 people.						
V.	21 — 49 years	3840	960	2880	1440	1440
VI.	50 — 64 „	640	400	240	120	120
VII.	65 and over	320	240	80	40	40
Together		4800	1600	3200	1600	1600

Table 2.

Structure of population of a settlement according to age.

Age group.	Age	p. c. of population in different age groups	members of population in a settlement of:	
			5.000 people	8.000 people
I.	0 — 2 years	5,5	275	440
II.	3 — 6 „	8,5	425	680
III.	7 — 13 „	14,0	700	1120
IV.	14 — 20 „	12,0	600	960
V.	21 — 49 „	48,0	2400	3840
VI.	50 — 64 „	8,0	400	640
VII.	65 and over	4,0	200	320
Total		100,0	5000	8000

Table 4.

Percentage of single and married people in different age groups.

Age group	Age	percentage	
		single	married
V.	21 — 49 years	22.0	78.0
VI.	50 — 64 „	62.5	37.5
VII.	65 and over	75.0	25.0
Together		33.3	66.7

5. Needs to be met communally.

Before describing the realisation of Rule No. 3, some explanation is necessary. Individual and communal methods of satisfying needs should not be contrasted as two methods with nothing in common. Rather, methods of compromise

exist and at times are even more rational than extreme ones.

Amongst the most basic needs should be included the need of feeding. In the case of single persons or childless couples it seems inevitable, at least from an economic standpoint, that the satisfying of this need by the communal method is superior to that of the individual method, particularly with regard to large meals. On the other hand, the individual method would appear to be adviseable in the case of families with children and generally in large families. Therefore, without compelling cancellation of the individual home kitchen, we suggest its partial socialisation by transferring some of its most troublesome features from the individual to the communal sphere; e. g. instead of buying food-stuffs at the market place or in shops, we advocate buying them semi-prepared within the settlement.

It is proposed, therefore, to organise the following communal facilities:

- a) dining room in block of flats,
- b) " " of a settlement,
- c) centre of home supplies for a settlement.

With regard to the second basic need of dress, we suggest also a small degree of communalisation. We foresee the necessity of organising the following communal institutions:

- a) wash house within the estate for small washings of linen not needing boiling and especially hosiery;
- b) central mechanical laundry in the settlement (employing trained staff);
- c) repair workshops in the settlement (shoemakers, tailors etc.);
- d) distribution centres for footwear, ready made clothing and linen in the settlement or estate.

It is fully realised that even a small extent of socialisation of needs in the food and clothing sphere will result in

reducing domestic help. This is quite inevitable and to be expected, because every change of system or technique makes, in fact, some group of workmen partially or completely redundant. Under these circumstances it should not be surprising that women, employed as domestics, who have no other trade are vigorously protesting against their liberation from the bondage of pots and wash-tubs. As in cases of unemployment in other branches, it should be made possible and easy for them to transfer to some other type of employment, where they will cease to be a factor of backwardness.

It is important to stress here that although we are advocating socialisation of certain functions which, to date have been an integral part of family life, we are not opposing family bonds. On the contrary, we consider the family to be the basic element of society; we only want to centralise certain productive functions which have been scattered, performed in a non-economical way, often disturbing the peace at home and harmful to health.

When referring to communal meeting of needs it is worth while to mention one more need, which until recently was not appreciated: namely, the need for quiet.

Living conditions in big cities reveal needs which are not felt by the inhabitants of smaller towns. The necessity to organize the life of a big town in order to protect its inhabitants from an excess of noise is one of these specific needs. Thus, it is a characteristic of our time to endeavour to obtain a maximum of quiet in the living district.

To successfully secure this necessity the following should be considered:

- a) reduction of noise at its source, e. g. rubber wheels on carriages, suitable street surfaces, regulations governing noisome occupations and entertainments during certain hours;

- b) isolation of inevitable noises, e. g. dwelling houses as remote from the roads as possible and separated by rows of trees, also ensuring that flats are separated from each other by suitable acoustic insulations;
- c) creation of quiet reservations, e. g. a separate and secluded room in a flat, permitting one isolation from other occupants, quiet corners in communal accommodations, and particularly „quiet rooms“ and greens, situated so that they are beyond the reach of the inevitable court-yard hubbub.

Of the fore going, only the question of reducing noise at its source is outside the sphere of the architect's professional interests.

A full list of needs to be met communally and their corresponding community arrangements and accommodations is given in Table 5. In order to accentuate the fact that usually the need which is met by the individual methods is also partly met communally, we have included in this table the column „family dwellings“. Here are enumerated private and semiprivate amenities or services which may be met, in part, communally. This „private zone“ is marked with letter „A“. Below this we find „zone B“ comprising social amenities carried out by the local co-operative society. Lastly in „zone C“ we find social amenities belonging to the state, local authorities, the union of co-operative societies or others. The same amenities appear often in different community units, from the settlement upwards. In order to make Table 5 more clear, these repeating entries are omitted and only the amenities characteristic to the unit of a particular type are enumerated.

It may be seen from the same Table that private apartments are poorly equipped, while there is a comparative abundance of communal services. When planning this proportion we have drawn a practical conclusion from Ru-

le No. 3. It should be noted, as well, that the equipment of the community unit called „estate“ is also very poor. This is not accidental. The estate is not fit for greater endowment for two reasons. It is a middle link between the flat and the settlement. The flat is designed for few inhabitants, thus it is possible to treat every inhabitant individually. The settlement is a numerically large and strong unit, in which already appears the statistical regularity of social and economic mass phenomena. The estate, on the other hand, is too large a unit to allow its administration individual treatment of the inhabitants, and is too small for the organisation of meeting needs according to the laws governing mass phenomena. Therefore, all that remains to the estate is to meet a comparatively small number of elementary needs.

The basis for correct planning of amenities shown in Table 5 should be an estimate of how many people will use them. Following are three examples, chosen to either illustrate the method adopted, or the services, to date, not generally known and accepted.

All examples are taken from the pioneer-settlement:

a) Centre of house supplies.

The duties of the Centre of house supplies are:

- I) to buy various articles for the use of all inhabitants,
- II) to receive and store them in suitable places,
- III) to convert them into half-products,
- IV) to supply them to individual flats (dwellings) and communal kitchens.

These arrangements will mainly benefit women charged with individual house-keeping, especially those who are working outside the home.

In a settlement of 8.000 inhabitants the number of married women is approximately 1.600. If we presume that

about 40 p. c. of them work outside the house and add a small number of women not employed but profiting from the Centre of house supplies, then we may assume the total number of women profiting from the Centre as 700 (with 100 p. c. attendance).

b) Distribution Centre.

It is the task of the Distribution Centre (the shop of the co-operative society) to supply its customers with vital and generally used consumers goods.

The most common goods of this kind are:

- a) food,
- b) soap and chemists articles,
- c) fuel,
- d) stationery,
- e) kitchen and household articles,
- f) textile goods,
- g) ready-made clothing,
- h) foot-wear,
- i) technical and electro-technical equipment,
- j) books, etc.

N. B. luxury goods are entirely excluded from the above list.

Fully appreciating the importance of trained staffs and the necessity for a better organisation, the Polish co-operative movement has adopted the system of separate distribution points, specialising in goods of similar character. Wishing to simplify the organization, the „territorial“ system has been employed, which means that every district is served by only one co-operative society. Until now, however, each co-operative society, as a rule, has had branches in all districts.

When planning the organization of the distribution net, two kinds of distributing centres should be distinguished:

- I) closed centres, serving only the members of the particular co-operative society, and
- II) open centres, serving everyone who so desires.

The former centres have been most commonly established in Poland. At present, however, the prevailing opinion among promoters of the co-operative movement is, that in view of the sufficiently big development of the movement, it is now propitious to start organizing open centres while leaving to the members the maximum of freedom to choose, at any time, the place where they wish to obtain their supplies (vide Rule No. 1).

It seems right that the consumer should be allowed to profit not only from all branches in his district but also from all the co-operative stores in the town or even in the whole country. This may be easily introduced by concluding reciprocal agreements between the societies.

Opening Distribution Centres not only to the members of the same society, but also to members of other societies would have the following advantages:

- I) natural competition could develop between the different Centres and societies, which would have a good influence on the efficiency of the staff and general output (vide Rule No. 2).
- II) customers who found themselves, during the day, outside the district would not be compelled to buy in private shops.

In connection with the above we suggest three types of Distribution Centres:

- a) distribution centres for groceries, serving about 1.200 people,
- b) distribution centres for: 1) meat and fish, 2) soaps and cosmetics, 3) stationery, 4) fuel, serving about 4.000 people,

T A B L E 5.
F A C I L I T I E S O F C O M M U N I T Y U N I T S.

Community units	food and clothing	hygiene	education	cultural needs	social life	Sport and physical exercises	Recreation		Social work	Connections with outside world.
							contact with nature	quiet		
Family dwelling	kitchen, pantry wardrobes A	bath, toilet W. C. A	book cases, desks for home work A	pictures, wireless A	main table A	space for gymnastic equipment A	window, balcony	acoustic isolation, proper location of rooms A		staircase, gallery, corridor A
Community house	kitchen, communal dining-room B	bath-rooms B	reading room B	reading-room, wireless B	recreation hall B	gymnasium B	yard B	acoustic isolation, proper planning of building B	offices of manager and committee B	private lane, stalls for bicycles
Housing estate	food distribution point B	baths, wash-house, garbage disposal B	room for childrens home work B			gardening toolshed, small repair workshop B	yard B	proper planning of buildings B	offices of manager and committee B	private lane, parking space for prams B
Settlement	dining-room, centre of house supplies, distribution centres B	baths, medical centre, nursery chemist B	kindergartens primary schools B	library, lecture rooms, reading-rooms for daily papers, laboratories B	clubs, recreation halls B	sports ground with sport equipment, gymnasium open swimming-pool B	park, greens, open spaces D	proper planning of buildings, quiet rooms Isolated resting places B	offices of administration and committee, meeting-ground, hall for 800 people B	city's transport stop, garrages B
additional facilities for the pioneer Settlement										
	power centre, repair workshop, gardening centre B	medical advice and consulting centre B	secondary school B	cinema, arrangements for theatre and concerts B					meeting hall for ca. 1500 people	
Residential district	market, butchers, bakery, offices of various public utilities C	hospitals and out-patient departments C	higher school, technical schools C	public library, cinemas, theatre concert hall, exhibition hall C	tea-shop, clubs, dance, recreation fields C	stadium, swimming-pool, sport club, allotments C	alleys, parks, water school-play fields, spare open spaces in the suburbs C		administration of the district, houses of social, political and professional organisations, meeting hall for ca 15,000 people C	city highway, railway, C
Town	district of supplies C	hospitals, clinics special institutions C	higher schools, university colleges, special schools, experimental gardens C	public libraries, art gallery, museum, bigger theatres C	clubs, tea-shops, dance-halls, recreation fields C	sport grounds, physical education institute C	recreation gardens, suburban parks C		houses of social political and professional organisations, halls or grounds for mass meetings, houses of international organisations C	railway stations, airport, harbour C

- c) distribution centres for: books, ready made clothing, footwear and underwear, kitchen utensils, etc, serving from 10.000 people upwards.

With group a) it should be noted, that from these Centres will profit, primarily, people not registered in the Centres of house supplies. All inhabitants of the settlement, with the exception of children under 12, should be considered as possible customers of the Distribution Centres. Thus we have:

$$8.000 - 440 = 7.560$$

It must be taken into account that group a) deals with two kinds of customers: those registered in the Centres of house supplies, and their families who will buy less and those who are not registered but who will buy more.

c) Gardening Centre.

Aims of the Gardening Centre are:

- a) to establish and to maintain all the green of the settlement,
- b) to help and to advise amateur-gardeners, also to supply materials for decoration of windows and balconies,
- c) to produce fresh fruit, vegetables and flowers, especially those difficult to transport.

A Gardening Centre so conceived should have from 4 to 6 acres of arable land together with hot-houses, glass frames, etc, and one selling centre for the produce. It should serve an area of about 100 acres, which, taking the population per acre at about 200, would mean about 20.000 people. This is the whole population of a pioneer settlement plus the neighbouring population.

The size and, therefore, the tasks of a Gardening Centre can not be studied apart from local conditions. In some

less built-up districts the Gardening Centre could be expanded to the size of an extensive market garden, supplying the inhabitants with fresh flowers, fruit and vegetables. On the other hand, in a closely built-up district, where every free green area should be left as pleasure-ground the role of the Gardening Centre would be reduced to the organization and maintenance of courty yards and greens. In addition, the possibility of organizing a larger Gardening Centre apart from the settlement should not be excluded.

In Table 5 a certain lack of symmetry may be noticeable. We foresee communal facilities and institutions for children and young people but no special arrangements have been made for the aged. According to Table 3 we estimate the number of people over 65 years of age as 4 p. c. of the total population of a settlement, of whom $\frac{3}{4}$ are single or widowed. This means that in a settlement of 8,000 people there are about 320 people over 65, of whom about 240 are single or widowed.

Although the aged in a well-built community should be excluded by the trend of economic life from actual work, there is no necessity to eliminate them from the social life of a settlement. In fact, the aged and generally the veterans, should be enabled to take an active part in the social and cultural life of a settlement, according to their strength and wish and this not in special separate units but within the general arrangements, e. g. clubs, recreation rooms, etc. Their life experience is of positive value and can be used to advantage in the life of the settlement. They can be entrusted with work which does not require permanent or great effort, e. g. help in care of children, supervision of yards, greens and gardens. A number of small token-rewards, as for example reduced entrance fees to places of entertainment or reduction of prices in the local cafeteria, may serve as compensation for their expended energies.

Naturally, as their strength decreases the aged will gradually withdraw from the life of the settlement. In this period they should be entitled to some kind of organized care e. g. care by non-permanent nurses and house help. Those who in the period of infirmity do not have good family care should be enabled to profit from „homes for the aged“, arranged, perhaps, not by the settlement, but by a higher community unit (district or town). Finally, it does not always seem desirable to divide the social life of a settlement according to age, sex or professional groups. Undue segregation of children and young people from the life of the adults is just as much a mistake as segregation of the aged from the young.

The list of community organizations of the settlement and their programme of work will help to decide their location and dispersal in the area. Skilful dispersal is a problem of great importance, but will not be discussed here, because it must be examined by citing a definite example in a settlement.

6. The „axis“ of the community.

In every collective unit we have three special areas, which are characterized by an intensive flow of population, especially during certain hours of the day. These special areas are:

- 1) links with external main thoroughfares (net „K“),
- 2) area of frequented social amenities,
- 3) links with external walks and open spaces (net „Z“).

In order to avoid wastefulness (vide Rule No. 2) the human net „Z“ streams flowing through these areas should be merged.

Such streams are:

- a) daily flow of people, especially in the morning, through the junctions with the external net „K“ (the way to work);
- b) daily flow, lasting the whole day, through the mass-frequented social amenities;
- c) daily flow, especially in the afternoon through the junctions with net „Z“ (return from work and pleasure walks).

It is possible to direct these flows into one traffic zone by establishing for them a common route. This can be accomplished by connecting the junctions with the external nets „K“ and „Z“ by an internal road and placing on it all the main social amenities of the community, with the exception of those whose functions make it desirable that they should not be placed by the main thoroughfare.

Thus the „axis“ of the settlement is the main traffic line, connecting the following points:

- a) junctions with the external net „K“;
- b) mass frequented social amenities which should be placed by the main thoroughfare;
- c) junctions with the external net „Z“.

In our conception the „axis“ of a settlement is an open space wherein concentrates the whole life of that settlement. It is the way which leads to such places as recreation hall, clubs, reading room, etc.; it is also the road leading to the outside of the settlement and at the same time it is an easily accessible meeting place for the inhabitants. The „axis“ creates conditions enabling a certain separation of the interior life of the settlement from that of the whole district. This facilitates the establishment of closer neighbourly bonds between its inhabitants, and protects them against the malpractices of a large town.

T A B L E 6.
The "axis" of the community unit.

Community units	Elements of the "axis"		Characteristics of most dense traffic lines
	Links with external net "K"	frequented social amenities placed on main flow	
	Links with external net "Z"		
Family dwelling (flat)	door to staircase, corridor or gallery	main table	window, balcony
Collective house	exit to private road	apartment of manager committee distribution point	court-yard
Estate	private road	apartments of manager and committee, distribution centre	court-yard green
Settlement	tram or bus stop	recreation hall, clubs, centre of education, dining room, meeting hall manager's and committee's offices	park or open space of the settlement
Residential district	main thoroughfare of town	administration house of district houses of various social, trade and political organisations, meeting halls	parks, allotments.

Even in such a small group as the family different forms of life may be noted: 1) communal: meals, general conversation, reading aloud. 2) individual: home work, cooking, quiet reading, "axis" of the family dwelling should be so built as to enable: 1) communal life of family, 2) seclusion.

In the collective dwelling, where inhabitants are either single or two in family, almost all functions of the many families are transferred to organised community meals, main part of social life. Opportunities for seclusion are created by special rooms for this purpose.

The estate is a unit with only small number of social amenities, especially cultural, the "axis" therefore is adjusted to these limited tasks.

The "axis" of the settlement should be well developed. Correct structure is very important, because on it depends length of distances to be covered by inhabitants.

Although the "axis" of the district is comparatively less equipped with social amenities than the "axis" of a settlement, nevertheless its proper structure is very important because it involves much larger numbers of people and greater distances.

T A B L E 6 a.

Estimate of people profiting from the social amenities of a normal and pioneer settlement.

Additional important social amenities and services	Pioneer settlement (8,000 inh.)			Normal settlement (5,000 inh.)		
	maxim. of possible users	possible users in practice		maxim. of possible users	possible users in practice	
		number	p.c.		number	p.c.
Dining Room (Centre of House)	1600	480 a	33	1000	300 a	33
Supplies	700	280 a	40	440	176 a	40
Nursery	680	270	40	425	170	40
Public School	1200	1080	90	750	675	90
City Transport Stop	1600	1120 a	70	1000	700 b	70
Library (daily) ^e	8000	400	5	5000	250	5
" (Sunday)	6880	350	5	4360	218	5
Recreation hall	8000 d	1200	15	5000	750	5
Meeting hall	2200	1500	70	1400	980 e	70
Reading room	4800	140 a	3	3000	90	3

a) used several times during the day,

b) used many times during the day.

c) the library of a pioneer-settlement should have about 40,000 volumes, for a normal settlement — about 15,000 volumes.

d) it has been accepted that all inhabitants of the settlement, even babies, use the recreation hall. E.g. in France mothers unable to leave their babies unattended may take them to recreation halls.

e) This need is also met outside the settlement by district or city facilities.

The „axis“ is the core of the settlement. Having been formed as the expression of its needs, it is not connected with the „axis“ of the neighbouring settlements and therefore should not be treated as a town highway.

The idea of the „axis“ is not just a theoretical concept. In historical town planning many references may be found to what we term here „axis“, in a form more or less approaching our definition. For instance, the typical mediaeval town had a market place around which were concentrated mass-frequented social amenities and the city gates, corresponding to our junctions with nets „K“ and „Z“. Analysing the function of modern communal units other than the settlement we come to the conclusion that the „axis“ always arises spontaneously in every human community. It is more or less strongly marked, according to the organization.

The aim of this report has not been to impose solutions similar to the example given by architects planning new towns settlements. Neither is it maintained that the given figures and corresponding standards, as much as they may be helpful, should form a sufficient base for defining, in practice, the size of different amenities and services. Even assuming them to be correct they should be treated very cautiously, because human needs are not a permanent factor. They are the result of conditions of a social system and the standard of living, and vary according to cultural progress. In their development, different needs vary in different degrees: biological needs have a stabilising tendency after attaining a certain level, whereas psychological needs observe no such limit. In addition it should be noted that human needs depend on many factors such as individual predispositions, importance attached to a particular need in the general list of needs, degree to which the need has been already fulfilled, habits and customs, etc.

Thus, a precise and detailed definition of needs would appear to be impossible. On the other hand, it is possible and even necessary to find and formulate their general outline.

Preparing the social aspect of a housing problem on these lines is, at present, as important for the architect planning new communal dwellings as is the technical aspect. Apparent limitations set by different programmes do not deprive architects of freedom in their designing work. On the contrary, the more architects will adhere to reality, the easier it will be for them to reveal their own creative skill.

Polish Association for Housing Reform.

This report is based on an unpublished work of Mrs. **Barbara Brukalska.**

**Planned Physical Development of the Country Act issued
by decree on April 2nd, 1946**

On the strength of the Act of January 3rd, 1945, on the promulgation of decrees having the full power of law (Law Journal of the Republic of Poland, No. 1, pos. 1), the Council of Ministers resolves, and the presiding officers of the National Council ratify the following:

Part I.

General regulations.

Section 1.

All public and private activities connected with the use of land and the location of population should comply with the resolution of the plans for physical development.

Section 2.

The planned physical development is based on national, regional and local plans, devised in conformity with the guiding principles of the national economic policy.

Part II.

The plans of physical development.

Section 3.

1. The national plan establishes:
 - 1) the zoning of land for the needs of agriculture, forestry, mining, industry, water economy, culture, education, health, leisure and natural reserves.
 - 2) the location of population and the pattern of main urban centres with specification of their line of development and functions.
 - 3) the basic design of communication, power and telecommunication services,
 - 4) the division of the country into regions, as a basis for the uniform administrative division of the State.
2. The national plan may also be prepared for a part of the State.

Section 4.

1. Regional plans should be prepared on the basis of the National Plan.
2. The regional plans establish:
 - 1) the zoning of land for
 - a) towns and other settlements with specification of their line of development and their administrative, economic, health, educational, scientific and other functions, as well as the approximate number of their inhabitants;
 - b) natural reserves or ancient monuments, public parks and centres of leisure, touring, physical culture and sport;

- c) agriculture, forestry, and livestock breeding with specification of principal improvements;
 - d) mining and industrial purposes, with specification of types of mining and industry;
 - e) principal power works and reservoirs;
 - f) water works, reservoirs and catchment areas;
 - g) lines of transport on land, water and in the air, of national or regional importance, together with their supplementary facilities;
 - h) works of national defence.
- 2) the partition of the region, as basis for its administrative division into counties and parishes.
3. The regional plan may also be prepared for a part of the area of the region.

Section 5.

1. Local plans should be prepared on the basis of the regional plans. In cases when a regional plan is not yet valid, the local plan shall be worked out according to the guiding principles established by the Regional Office of Physical Planning, and shall also comprise solutions of problems reserved for the regional plan to an extent indispensable to the preparation of the local plan.
2. The local plans establish:
 - 1) the projected boundaries of a town or other settlement or towns or other settlements,
 - 2) the zoning of land for:
 - a) housing estates divided into residential sites with due consideration given to social building sites destined for public buildings and utilities, especially those provided for purposes of

- community life and cultural, educational, religious or military purposes; sites for inoffensive industrial establishments; and commercial, business, and other centres;
- b) places, squares, parks, gardens, playgrounds and other similar elements;
 - c) agriculture, forestry and livestock breeding;
 - d) mining and industrial purposes with specification of the type and of the technical conditions with which existing or proposed establishments on those areas should comply in order to reduce or to eliminate their undesirable effect on the surroundings;
 - e) roads and other communication lines together with supplementary elements.
- 3) the boundaries of areas of various destinations.
- 4) the development of building sites by indication of:
- a) building lines which the erected buildings cannot overstep or within which they should be erected;
 - b) the number of floors and the allowed ratio of built-up area or the allowed density of development, as expressed in the relation of the total floorspace of all floors to the total area of the plot;
 - c) profiles of buildings, their parts, and enclosures;
 - d) the principles of architectural design of buildings, their parts, and enclosures;
 - e) the types of building development (blocks of buildings, flats, terraces, semi-detached and detached houses, whether of fire-proof or other construction);

- f) the characteristics of design of the individual groups of buildings.
 - 5) the minimum area of building, gardening, agricultural and other plots formed by way of division or pooling of land for building purposes.
 - 6) horizontal and vertical cross sections of streets and other (surfaced) roads.
 - 7) the network of water supply and sewerage.
 - 8) the time and means of realization of the (local) plan.
3. Local plans are prepared for single towns or other settlements both existing and planned, or for parts of towns or other settlements, or for several towns or other settlements together.

Section 6.

The plans of physical development should be prepared in compliance with long-term economic and investment plans, laid down according to current regulations.

Section 7.

The Minister of Reconstruction promulgates by order the conditions with which the plans of physical development should comply, and lays down regulations as to the preparation of the plans.

Part III.

Authorities.

Section 8.

The proper authorities for the planned physical development of the country are: the Central Office of Physical Planning and its subordinates; the Regional Offices of Physical Planning and the Local Offices of Physical Planning.

Section 9.

At the head of the Central Office of Physical Planning is the chairman, appointed by the President of the National Council and proposed by the Council of Ministers.

Section 10.

The functions of the Central Office of Physical Planning are:

- 1) the preparation of the National Plan on the basis of its own studies and as the result of coordination of the initiatives of the appropriate Ministries;
- 2) approval of the regional plans;
- 3) the (exercising of) control (over) all investments and building enterprises with respect to their conformity with the National Plan; the suspension of all works which are in discordance with that plan; and decision as to the necessity of restoring the original state in cases of works executed in discordance with the National, Regional or Local Plans;
- 4) preparation of opinions on matters of physical planning;
- 5) promulgation of the terms within which local plans should be prepared.

Section 11.

1. The Regional Offices of Physical Planning are subjected to the respective Vojevods and form a part of the Vojevod (Regional Government) Offices as their departments.

2. At the head of the Regional Offices of Physical Planning are the Directors appointed by the Minister of Reconstruction after consultation with the appropriate Vojevod.

Section 12.

The functions of the Regional Offices of Physical Planning are:

- 1) the preparation of the regional plans (Section 28).
- 2) approval of the local plans.
- 3) control over investments with respect to their conformity with the regional plan; the suspension of all works, which are in discordance with that plan; or, in the case of works conducted in discordance with the plan by an Agency of the State, the notification of its superior authority who shall order the suspension.
- 4) to give information and opinions on matters regarding the regional plans.

Section 13.

The Local Offices of Physical Planning for the incorporated cities are their City Corporations, and for other towns or other settlements the appropriate County Departments.

Section 14.

The functions of the Local Offices of Physical Planning are:

- 1) the preparation of local plans,
- 2) control over investments with respect to their conformity with the local plan and the sus-

pension of all works which are in discordance with that plan; or, in the case of works conducted in discordance with the plan by an Agency of the State, the notification of its superior authority who shall order the suspension.

Section 15.

1. The Minister of Reconstruction may transfer:
 - 1) to the Central Office of Physical Planning the preparation of the regional or local plan.
 - 2) to the Regional Office of Physical Planning the preparation of the local plan.
2. In the case of Sub-section 1, § 1, the procedure shall be according to the rules provided for the national plan.
3. In the case of Sub-section 1, § 2, the procedure shall be according to the rules provided for the local plan, with changes as in Section 31.

Section 16.

1. The following agencies are entitled to give opinions on matters of planned physical development:
 - 1) the National Advisory Planning Council to the Central Office of Physical Planning;
 - 2) the Regional Advisory Planning Council to the Regional Offices of Physical Planning.
2. An order issued by the Minister Of Reconstruction in agreement with the proper Ministers, shall define the composition, detailed sphere of activities, duration and mode of appointment of the members of the National Advisory Planning Council and the Regional Advisory Planning Councils.

Part IV.

The procedure for the preparation of plans
of physical development.

Chapter I.

General principles.

Section 17.

1. The Central Office of Physical Planning and the Regional and Local Offices of Physical Planning should coordinate the plans they prepare and the instructions they give with the appropriate authorities and public agencies.
2. The Central Office of Economic Planning co-operates with the Central Office of Physical Planning in the preparation of the National Plan.
3. Detailed regulations for procedure, foreseen in Subsections 1 and 2, will be issued by the Council of Ministers.

Section 18.

The preparation of the plans of physical development should take place after examination of the proposals of persons, whose interests may be influenced by these plans.

Chapter II.

The National Plan.

Section 19.

The mode of preparation of the National Plan shall be defined by regulations issued in the form of an order by the Minister of Reconstruction.

Section 20.

After the National Planning Council has given its opinion on the national plan and the Council of Ministers has accepted it the plan will be submitted to the legislative vote.

Chapter III. Regional Plans.

Section 21.

When the preparation of the regional plan is to begin, notice shall be given in the appropriate journals of the Region.

Section 22.

1. This announcement shall define:
 - 1) the area for which the plan is to be prepared,
 - 2) the boundaries of the planning activities,
 - 3) the time and place in which persons concerned with the plan may acquaint themselves with its proposals,
 - 4) the time within which persons concerned (with the plan) should submit their own proposals.
2. The terms referred to in Sub-section 1, § 3 and 4 may not be less than two weeks.

Section 23.

After the Regional Planning Council has given its opinion on the prepared regional plan, and after the Central Office of Physical Planning, acting in agreement with the Central Office of Economic Planning, has given its approval, the plan shall be submitted to the vote of the proper Regional National Council.

Section 24.

1. The Regional National Council either accepts the plan or rejects it and returns it to the Regional Office of Physical Planning, stating the reasons for its rejection.
2. The regional plan, enacted by the Regional National Council becomes valid from the moment of its publication in the Regional journal.

Chapter IV.

Local plans.

Section 25.

1. When the preparation of a local plan is to begin, it shall be announced in the locally accepted manner and, furthermore, by the exhibition of a notice in a visible place in the offices of the local authorities for the period of at least a week.
2. As the date of announcement will be held either the day on which the announcement in the locally accepted manner has taken place, or the last day of the period in which the notice was exhibited, or the date of the issue of the paper in which the notice was for the last time printed depending on which of the above mentioned means of announcement was last used.
3. The regulation referred to in section 22, Sub-section 1, shall be applied accordingly.

Section 26.

1. Local plans, after their preparation, will be open for public examination for the period of one month; this must be announced in the manner prescribed in Section 25, Sub-section 1.

2. If the local plan embraces a town or other settlement or part of a town or other settlement destroyed as a result of an elemental catastrophe the period for submission of the plan for public examination shall be at least 7 days.

Section 27.

1. The persons concerned have the right to learn the contents of the plans during the time stated in the notices.
2. During the next two weeks after the close of the public examination, objections to the plans may be brought before the Regional Office of Physical Planning through the Local Office of Physical Planning.

Section 28.

1. After the term foreseen for the bringing of objections has elapsed, the Local Office of Physical Planning sends the prepared plan to the Regional Office of Physical Planning together with the objections and with its own proposals regarding those objections.
2. The Regional Office of Physical Planning either gives consent to the plan — with eventual modifications resulting from the accepted objections — or returns it together with its own directions to the Local Office of Physical Planning for the purpose of revision.

Section 29.

1. The Local plan approved by the Regional Office of Physical Planning is submitted to the vote of the proper Local National Council.

2. The local plans are enacted:
 - 1) in the case of incorporated cities by the City National Councils.
 - 2) in the case of non-incorporated towns—by the County National Council after the Town National Council has given its opinion,
 - 3) in the case of other settlements — by the County National Councils after the Parish National Council has given its opinion.
3. If the Town National Council (see Sub-section 2, § 2) or the Parish National Council (see Sub-section 2, § 3) does not express its opinion within a month after reception of the plan, this will be considered as assent to the plan.
4. In case of rejection of the plan, the respective National Council returns the plan stating the reasons for its refusal.

Section 30.

The local plan enacted by the appropriate National Council becomes valid on the day of its publication in the manner provided in section 25.

Section 31.

In the case of the local plan being prepared by the Regional Office of Physical Planning, the regulations in this chapter are applied with the following modifications:

- 1) The objections to the plan are to be submitted directly to the Regional Office of Physical Planning.
- 2) The functions of the Local Office of Physical Planning foreseen in Section 29 and Section 30, Sub-section 1, are performed by the Re-

gional Office of Physical Planning, and those of the Regional Office of Physical Planning— by the Central Office of Physical Planning.

- 3) The local plan is submitted to the vote of the appropriate Regional National Council after the City or Parish National Council has given its opinion.
- 4) The provisions of Section 29 shall not be applied.

Chapter V.

Costs. The safe-keeping of plans.

Section 32.

1. The cost of preparation of the national and regional plans is borne by the State.
2. The cost of preparation of the local plans is borne by the proper Local Authorities.

Section 33.

The plans of physical development are in custody of the proper Offices of Physical Planning, and the copies of local plans by the respective Local Authorities and Building Offices. The copies should be open for examination by interested persons unless some State consideration of higher order is against it.

Part V.

The suspension of the examination of applications during the period of preparation of the plans.

Section 34.

1. From the date of commencing the preparation of the regional or local plan, the Agency preparing the plan has the right to suspend the examination of

applications for permission to change the utilization of the land or for permission for investments, especially for erection, re-building, building over, enlarging or changing the destination of a building, if those are contrary to the proposed principles of the plan. The suspension may not be longer than 3 years, commencing with the day on which the application has been submitted.

2. The persons or institutions concerned may appeal against a decision made on the basis of the regulation referred to in Sub-section 1.

Section 35.

If, within the period indicated in Section 34, Sub-section 1, the local or regional plan does not acquire binding force, the application shall then be examined, and the contradiction between the intended action and the proposed principles of the plan cannot serve as basis for refusal.

Part VI.

The consequences of the valid plans of physical development.

Section 36.

From the date on which the plan of physical development has become valid, Sections 37—40 shall be applied on the area covered by the plan.

Section 37.

1. For the purposes of realization of the plan of physical development, the State and Local Authorities have the right to purchase compulsorily areas provided in the plan for purposes of public utility or social housing.

2. If, within a year from the beginning of the actual period of realization of the plan of physical development (Section 5, Sub-section 2, § 8), the utilization of the land has not been begun, nor the investments for the purposes indicated in the said plan undertaken, the State, Local Authorities, Trade Unions or Chambers of Commerce have the right to purchase compulsorily land for the above purposes.
3. As concerns the rights foreseen in Sub-sections 1 and 2, the State has priority over Local Authorities, and these Authorities over a Trade Union or Chamber of Commerce. In other cases, the priority is decided on by the respective Regional Office of Physical Planning.

Section 38.

It is forbidden to use land, undertake investments, erect, rebuild or build over, enlarge or change the destination of buildings or other constructions contrary to the plan of physical development.

Section 39.

1. Amendments to the plans of physical development can be made only in the manner provided in Sections 17—31.
2. The regulation of Sub-section 1 is also applicable to master plans and development schemes which have become valid before this Decree has become operative.

Section 40.

If, according to the local plan, there exist between private estate and the line separating public areas from private ones (Section 5, Sub-section 2, § 3) parts of public

land unsuitable for building, owners of this estate are obliged to acquire these parts before erection or enlargement of any building on this estate.

Part VII.

Penal regulations.

Section 41.

Whosoever changes the use of land, undertakes investments or erects, rebuilds, builds over, enlarges or changes the destination of buildings or other facilities contrary to the plan of physical development or contrary to dispositions given on the basis of this Decree will undergo the penalty of imprisonment up to one year and fine, or one of these penalties.

Part VIII.

Transitional regulations.

Section 42.

The master plans and development schemes which have become valid before this Decree has become operative may be changed within two years without any indemnity being paid to the persons concerned.

Section 43.

Pending the day on which the national, regional or local plan shall become valid, the authorities and public agencies are obliged to co-ordinate their intended actions in matters concerning those plans with the Offices of Physical Planning.

Section 44.

1. In rural settlements included in the agrarian reform, until the plans shall become valid, questions pertaining to local plans shall be solved with legal effects

provided in the Sections 37 — 41 by the Land Authorities in agreement with the Offices of Physical Planning.

2. Detailed regulations concerning the competence of authorities in cases referred to in Sub-section 1 will be promulgated by an Order of the Ministers of Agriculture and Agrarian Reforms, and of Reconstruction.

Section 45.

1. Pending the partition of the country into regions (vide Section 3, Sub-section 1, § 4), the temporary boundaries of the regions shall be determined by the Central Office of Physical Planning.
2. Pending the preparation of the national plan, the regional plans shall be prepared on the basis of guiding principles defined by the Central Office of Physical Planning.
3. If the temporary boundaries of a region, established according to Sub-section 1, embraces several Regions or their parts, the Regional Office of Physical Planning is subject to the Vojevod of its place of residence.

Part IX.

Final regulations.

Section 46.

The execution of this Decree is entrusted to the Minister of Reconstruction in co-operation with the appropriate Ministers.

Section 47.

This Decree becomes operative on the day of its publication. Simultaneously, all other regulations concerning matters settled in this Decree become invalid, particularly Sections 7 — 51 of the Decree of the President of the Republic, issued on February 16-th 1928, on the Town and Country Planning and Building By-laws (Law Journal of the Polish Republic 1939, r. 3, pos. 216), as amended by the Decree of the President of the Republic, issued on August 25-th 1939 (Law Journal of the Polish Republic Nr. 77, pos. 514).

President of The National Council

(—) **Bolesław Bierut**

Prime Minister

(—) **Edward Osóbka-Morawski**

Minister of Reconstruction

(—) **Michał Kaczorowski.**

PHYSICAL PLANNING IN POLAND 1945 and 1946.

I. The concept of Physical Planning.

In recent years Planning has become a factor of vital and fundamental importance in organizing the productive forces of Land and Man.

Taken broadly, the elements of Planning are: Time, Space and Man.

Planning depends upon the creation of programmes to obtain the best possible conditions for the state of things to which we aspire; it is, in a sense, „a vision of the future“, an answer to the question: „What do we want to achieve?“

Next, the answer to the question „When?“ gives us a picture, which, after studying it according to our possibilities, enables us to obtain a series of successive realizations of our „vision“ in definite periods of the parameter of Time.

This is where **Planning in Time** begins. Such is Economic Planning, which embraces the whole of the economic life on a given territory. The planned image of a desired

state is further developed by answering the question „Where?“. Thus we introduce into the vision the parameter of Space. The introduction of this **spatial character** to Planning in Time changes it into a new type, namely into **Physical Planning**.

Thus Physical Planning is in itself the art of fitting a programme into a given territory. Such planning localizes all the physical elements of a pre-established programme.

Planning in Time defines, therefore, **when** and **what** elements of the programme are to be realized, while **Physical Planning** establishes **where** a given element of the programme is to be located.

The **plan** obtained in this way becomes a test of our cultural attitude at a certain time. It remains, in itself, a matter permanently vital, ever undergoing the correctives of reality which, moulded in turn by the Plan, evolve with time towards perfection.

Physical Planning, as well as the planning of the economic structure, is very closely related to the problem of Man, his material and cultural achievements, his ability to produce goods of all kinds and to organize their distribution.

We now come to the third factor of indisputable importance in Planning; it is connected, primarily with the group of services whose spatial correspondent is the theoretical structure and pattern of settlements in the country.

It is obvious that in human conditions we can never go beyond space and time — neither can we imagine the very action of planning outside the scope of human existence. Thus we distinguish the above-mentioned types of planning solely on the ground of the prevalent action, and our division has a practical value, as it breaks up total actions into principal groups of studies, conducted by teams of highly qualified specialists.

The most important tasks of Planning seem, in the present, to be as follows:

- I. To obtain an approximate, comprehensive view of future relations in all aspects of human life to provide for the very broadly considered needs of an organized community or Society (programming).
- II. In accordance with the programme, to establish the policy of production, and to state what economic and other tasks are to be fulfilled (long and short-term plans).
- III. To create working principles, fixing the number of the „crew“ and of supplementary agents, required and sufficient to fulfill the tasks established by the plan for the given period of communal development.
- IV. To establish the principles of territorial distribution of the population throughout the country and the resultant permanent investments in all working fields of the State.
- V. To establish the most desirable number and size of centres of human concentration required to satisfy the needs of the whole country, as shown in the programme and period plans (planning the pattern of settlements).
- VI. To establish the principles of the physical structure of settlements connected with:
 1. agricultural production,
 2. all other production.
- VII. To establish the general principles of the territorial division of the country according to the types of use (development), and to design communication routes between these parts.

As can be seen from the above, the programming (described in § I) must be done by the directive powers in charge of the whole of the National planning problems, who issue general instructions in co-operation with the social and political leaders of the country.

The functions described in § II and partly in § III belong to the **Planning in Time**.

Further problems (up to § V) are subject to the Planning of Man-power while the rest is completely in the sphere of Physical Planning, based on the rapidly expanding art of Town and Country Planning.

The unusually large scale and scope of the subject of Physical Planning requires us to introduce some principles of systematization. Thus from the formal point of view we may discern the following three types of Planning:

- I. National Planning (PL₁),
- II. Regional Planning (PL₂),
- III. Local Planning (PL₃).

The standards for this division are:

1. The dimensions of the planned area,
2. The grade of complexity of the plan, measured by the number and importance of the problems with which it deals (the scope of problems on the given grade).
3. The scale in which the problems of Physical Planning are considered.

National Planning comprises the whole area of the State, within its political boundaries. It forms a general policy concerning principles of territorial division according to land utilization (forest, agricultural and industrial areas etc.), establishes the main traffic directions and the disposition and number of important highly urbanized tracts of land, the main pattern of settlements

and the „entrance gates“ through which foreign traffic finds its way into the country.

Areas of special importance to the National Plan may be shown and developed on a larger scale as details of the Plan.

Regional Planning embraces the organic component parts of the total area of the country, the division being formed on the basis of their performing certain definite functions due to their geo-physical peculiarities or to the influence of man; those functions being prevalent on the given territory. The Regional Plan furthers the policy of the National Plan, locates more precisely different elements of the static and dynamic patterns of the Region, and adjusts them to the land and to needs resulting from the physical characteristics of the Region itself.

Local Planning. The proper object for this type of planning is the design of the structure of individual centres of human agglomeration (of all sizes). These agglomerations comprise both „rural“ and „urban“ types of settlements, which, according to modern notions, are the outcome of an extremely complex sociological phenomena, but with a different grade of tension, and, hence, a different physical structure of system.

Local Planning furthers the guiding principles of the Region and enriches them with principles resulting from local requirements which create new possibilities for solutions, based on the functional interdependence of both systems.

Physical Planning may be divided into groups of activities which form part of each of the above-described types of planning, the sole difference lying in their scope: namely,

I. Theoretical works on the problems, subjects, and methods of planning, and on the organization of planning teams (planning centres).

II. Application of the results of those theoretical works with regard to:

- a) activities which comprise the survey of existing physiographic, demographic, economic, social, technical and legal conditions (scientific studies of the separate problems of the plan),
- b) activities connected with the process of planning itself, namely with the concept and composition of the plan, the creation of a comprehensive vision of the whole, evolving basic principles and details of the plan,
- c) activities connected with the efficient realization of the plans and the functioning of the executive machine.

II. Legal basis and organization.

The course of development of Physical Planning in Poland, both in its proper and legal aspect, led from small, and detailed, to broader solutions. It should be pointed out that such a reversal of logical development and of the very idea of planning for large areas was to be noticed in other European countries, in the Western Hemisphere and, to a lesser degree, in the Soviet Union.

One of the characteristics of Physical Planning is the necessity of passing gradually from the planning of the whole to fragmentary solutions. The logical outcome of that principle will be the subjection of all other types of Physical Planning to the National Plan. Thus we affirm the necessity for recognition of hierarchy of the problems which define relations between the different types of planning.

Let us consider briefly the more important achievements of Physical Planning in Poland from its proper, legal and organizatory aspects.

Physical Planning in Poland, after the recovery of independence between 1918 and 1930, has dealt originally only with the problems of settlements and some larger fragments of big cities, reaching the height of its possibilities in planning metropolitan areas within its administrative boundaries at that time.

It was not until 1930, when plan for Warsaw was to be ratified, that we realized the necessity of considering the problems of large urban centres not separately, but at least against the background of problems pertaining to a much larger area, regarded as that centre's sphere of influence.

The first bureau of Regional Planning in Poland was the „Office of the Regional Plan for Warsaw“ organized by the Ministry of Public Works.

The pioneer activity of that centre, its first works and experiences, the dissemination of the idea of Regional Planning, and the education of workers, have quickened the process of the creation of new centres for Regional Planning in Poland.

In the middle of the year 1935, there was an attempt to co-ordinate the work of the various planning bodies as a result of realizing that it was necessary to solve certain problems on a „superregional“ scale (such as communication, power, distribution of population, localization of industry). It was suggested that the creation of a national planning centre had become indispensable. In the following years there arose planning organizations of higher grade, of national character.

The creation of an Office of National Planning to the Bureau of the Vice-Premier took place in 1936; of a Planning Office to the Bureau of the Minister of War in 1937;

It must be noted that all those Offices had no formal or legal connection whatever with the Regional planning centres acting on the strength of the Building Act.

The degree of consciousness for the the needs of Physical Planning in Poland towards the end of 1939 may be characterized by the resolutions accepted by the Conference of Chairmen and Directors of Regional Planning Offices, demanding:

1. Distinct legal powers for regional and national planning,
2. Creation of a national planning centre whose directions would give guidance to Regional Planning.
3. To spread the activities of Regional Planning Offices over the whole country.
4. Provision that certain percentage of the Investment Funds be given for the purposes of Regional Planning, depending on the type of investments and on their importance and consequences for the development of a given region.

At the beginning of 1939, there came into being the „Committee of Four“, a permanent emanation of the above-mentioned conferences, for the co-ordination of activities of all centres of Physical Planning.

In the years 1939—44 work on the problems of Planning was continued by the offices of Physical Planning of the Government in Exile and by the underground bodies in the occupied territories.

The first planning office **on a national scale** has been formed as a Department of the „Bureau of Planning and Reconstruction“ in the Prime Minister's Office, called into being in the liberated territories by the Act of the P.K.W.N. (Polish Committee of National Liberation) on November 20, 1944.

This centre was transformed into the Central Office of Physical Planning by the Act of May 24-th, 1945, creating the Ministry of Reconstruction.

In extending the activity of that Office over the whole country there were created twelve Regional Offices of Physical Planning.

Such is the present organization of Physical Planning; the process of the crystallization of the organizatory forms of the Planning Offices is, of course, by no means at an end.

An important event in National Planning was the creation (by Act of the Economic Committee of the Council of Ministers, June 8, 1945) of the Central Office of Economic Planning, transformed later (by Decree of Nov. 10, 1945) into the Central Office of Planning.

We have now come to the last stretch of the road leading to the end: to the creation of one, central institution, preparing a National Plan in all its aspects.

As to legislation, the conditions in which Physical Planning has found itself were unfavorable.

The only Act passed in the period between 1918 and 1946, introducing the problem of planning into legislation, was the **Building Act**. This act gave to Physical Planning a very modest role in maintaining order in the development of towns and villages.

On the whole, legal difficulties during that period were a result of the narrowing down of legislative initiative and of deficiencies in the above-mentioned Act, which dealt with one aspect of planning only, and were only partly corrected.

And so the increasing volume of problems fostered a gradual broadening of form.

The Act of July 14, 1936, amending the Building Act and modified by the Decree of the President of

the Republic of August 25, 1939, introduced the concept of the Regional Plan, a plan prepared for a whole voivodship or its part, or even **several adjacent voivodships** (or their parts). The regional plans were prepared by special Commissions of Regional Plans of Development. (Those Commissions could also suggest to the Home Secretary, and other Ministers, new regulations and orders, **connected with the plans in preparation**. The Home Secretary could, furthermore, authorize the chairman of the Commission to give opinions on decisions regarding the plan of development and to oblige the proper Authorities to qualify those opinions). The composition of the Commissions of Regional Plans of Development was mixed. The Chairman and some of the members were appointed by the Home Secretary, the rest were representatives of Local and Economic Authorities. The Commission was an institution of Public Law and possessed legal personality. Its executive agency was the „Office of the Regional Plan of Development“ of a given district. In 1939, there were 11 Commissions and Offices of Regional Plans of Development. The area covered by their activities amounted to 52,3% of the area of the country.

Consciousness of the need for adjusting the legal standards of that time to the growing importance of Physical Planning will be best illustrated by a resolution worded by the workers of planning centres in following way: „The passing of a special Act on National, Regional and Local Planning should be the natural evolution of the legal aspect of Planning“. As a result of the popularization of this desire among professionals, in the years 1936—39 there appeared many projects of Acts on Planning, covering the whole area of the country.

During the war, underground workers carried on the elaboration of new legislation, which foresaw for the future administrative system the creation of a central Agency and a network of regional and local Agencies of Physical Planning, securing for them an adequate position among the State Authorities.

How strongly the need was felt for the regulation of the problem of Physical Planning, is best illustrated by the fact, that on November 20, 1944, in the midst of the struggle for liberation, the Bureau of Planning and Reconstruction to the Prime Minister's Office in Lublin, created by the Act of the P. K. W. N., began the preparation of an Act „on the Planned Physical Development of the Country“.

In the years 1945—46 the project of this Act was submitted to the judgement and criticism of professional and social agencies. However, the process of enactment was far from easy: it surpassed all previous solutions of administrative and economic problems in this field.

The problem of planning is for us still a new one, and minds accustomed to individual effort are reluctant to admit the necessity of team-work.

The proposed Act in its final version won at last the approval of the authorities and found its formal expression in the „Planned Physical Development of the Country Act“ (April 2nd 1946, published in the Law Journal of the Polish Republic, Nr. 16, May 21, 1946).

This Act contains virtually all that is necessary to make it a Constitution of Physical Planning, and

1. defines fully the National, Regional and Local Plans,
2. provides for the organization of Planning Authorities,
3. establishes the procedure for preparation of plans and of their acceptance by the legislative authorities.

The Act cannot, however, be considered as **the final stage in the development of the subject**. It does not secure for Physical Planning the rank it deserves among the functions of the State. Physical Planning, like all branches of national planning in general, is one of the leading functions of the Government; whereas the Act puts it on the same level with other Departments, which makes cooperation with the latter extremely difficult.

If the objects of National Planning are to be attained, positive means of solving those difficulties should be found soon.

III. Description of current works on the National Plan of Physical Development.

The whole of the work on the Plan of Physical Development of the Country is at present divided into three parts:

A. **The first part** comprises the preparation of inventories and research studies of scientific character which are to serve as basis and material for the plan of development. Work here may be divided into two further groups.

The first consists in the elaboration of basic principles concerning demography, national economy and social conditions. Pending fusion with the Economic Planning, men of this group are called upon to maintain immediate and close relations with the Central Office of Economic Planning.

a) **The elaboration of demographic, economic and social problems** comprises:

1. **Study of geopolitical problems** which defines the rôle and the economic and cultural possibilities of the country in Europe and the World.
2. **Study of economic problems** which defines the existing and the desired economic structure of

the country (problems of production, exchange and consumption).

3. **Study of demographic problems** which establishes structure of the population and defines the objectives, character and evolution of the natural and desired movements of population.
4. **Study of social principles** which establishes the structure and character of social changes in the country.

The second group of research work is concerned with the study of environment. It establishes guiding principles and standards for the distribution of permanent investments and forms of economic and cultural life in the land, or in other words — the phenomena of **location and localization**.

b) The elaboration of ecological (localising) problems comprises:

1. **Cartographic Study**, and archives of maps and plans. Its task is to prepare maps and plans for purposes of Physical Planning, especially for the National Plan.
2. **Physiographical Study**, whose task is a research into the physiographical character of the land.
3. **Study of open spaces** entrusted with a analysis of the problems of open spaces from the point of view of social requirements, namely community life and leisure, with full consideration given to the problems of landscape, both natural and cultural.
4. **Study of the conservation of national resources**, which is to define the possibilities and the means

of satisfying the needs for raw materials by the best use of the country's natural resources, for the benefit of both the present and future generations.

5. **Study of the location of industries**, which is to define the principles of distribution (location) and size of industry (industrial plants and workshops).
6. **Study of the transport and other networks**, entrusted with the elaboration of principles for the network of services of all types.
7. **Study of regional divisions**, which is to define the internal division (regional structure) of the country.
8. **Study of the problems of settlement**, which is to work out the types, sizes and distribution of towns and other settlements in Poland.
9. **Historical Study**, which is to collect historical material and to prepare reports necessary for the purposes of the National Plan.

B. The second part of the work on the National Plan consists in preparation of the actual Plan. It is a Study of Town and Country Planning, in the full sense of the term. Works are now being conducted for the preparation of a preliminary outline of that Plan. Such a plan, an outline for immediate use, is indispensable to-day, for in many fundamental questions, mainly arising out of the problems of war devastations, important decisions must be taken at once. In order to avoid making some unnecessary or altogether incorrect investments, an opinion must be given even when formed only on the basis of a provisional concept of the plan.

The preliminary hypothesis of the Plan.

At present the elaborated outline of the National Plan comprises:

- a) the hypothetical distribution of population,
- b) the distribution of the main urban centres and the division of the country into regions,
- c) the division of the total area of the State according to the prevalent types of production,
- d) the hypothetical pattern of dynamic tendencies, as expressed in the network of communication.

a) The hypothetical distribution of population.

The prime element of the physical pattern is **Man — the population of the country.**

A recent census has established the present population of the country as about 24 million people. The number of evacuated Germans will be practically covered by the repatriated Poles. It can be reckoned that the number of the inhabitants of Poland around 1965 will amount to 28—30 million, and about 1980 it will reach something between 30 and 35 million.

The gross population consists, at present, of about 60% in agriculture and forestry, about 22% in industry, and about 18% in the so-called service group. It can also be assumed with considerable certainty, that about 30% of the population live to-day in towns, and about 70% in the country. According to the preliminary hypothesis, we assume that after a certain period of planned policy, which may be called **the period of industrialization**, the professional structure will be as follows: **40% in agriculture, 30% in industry, and 30% in services**; in other words, towns will hold about 45% of the population, and the country about 55%. Towards the end of the second period, called **the period of urbanization**, about 25% of the popu-

lation should work in agriculture, 30% in industry, and 45% in services, e. g. 60% will live in towns and 40% in the country.

These figures might be considered very bold, if one forgets the basic assumption of the complete modernization of the national economy and civilization, and the full application and exploitation of modern techniques and inventions for the benefit of the people. However long the modernizing processes may last, the final result appears unquestionable. We are moving towards the stabilization of employment in agriculture and industry on a comparatively low level, yet sufficient to satisfy all the requirements and needs of the people.

The professional structure established in that way enables us in turn **to define the pattern of settlements**, that is, to distribute in space definite types of settlements with clearly outlined rôle and functions in the organism of the State. If we overlook the negligible quantity of agricultural population living within the administrative boundaries of towns, **our task will be confined to the hypothetical distribution of the industrial and service groups between town and country.** In the first period the industrial population of „towns“ (concentrated settlements) amounts to 35—45% of their inhabitants, while the rest is employed in the service group. Thus for the period in which 45 out of every 100 inhabitants of the country presumably belong to the town group it must be reckoned that 15—20 of these persons will belong to the town industrial group, while 25—30 will form part of the town service group. Consequently, the industrial group in the country (which also comprises factory and industrial villages) will amount to 10—15 persons per 100 inhabitants, while the group of services in the country should not rise above 5 persons per 100.

**b) The distribution of main disposition centres
and the division of the country into regions.**

The problem of distribution of the main disposition centres is, in reality, tantamount to the problem of the distribution of cities.

The latest studies of the Central Office of Physical Planning point to the fact that the existing administrative structure of the country (the division into voivodships) does not correspond exactly with that of large cities. There exist in particular two types of cities which may be named — the first, provincial capitals, the second regional centres. The capital of a province is much larger than the average voivod town, whereas the capital of a region is smaller. These divergences easily explain the great differences of size and character actually existing between the various voivod towns.

Theoretical considerations lead to the conclusion that Poland should have only eight well-organized and well functioning provincial capitals (in addition to Warsaw) namely Poznań, Cracow, Gdańsk (Danzig), Wrocław (Breslau), Szczecin (Stettin), Łódź, Katowice, Lublin, and Białystok; and about 20 regional centres.

Accordingly, one should reckon with an increase of the number of voivodships to 29 (1 + 8 + 20) within the next 30 years (till 1980). It remains open to question, whether at the same time the province will become an administrative unit of superior grade than that of the present voivodship (future regional unit): The role of the provincial capital does not necessarily depend on its administrative functions; it may have some other cultural or economic institutions or functions universities, scientific institutes and societies, Chambers of Commerce etc.).

c) **The division of the total area of the State according to the prevalent types of production.**

The next element of the plan after the distribution of population is the division of lands. In the scale of the National Plan such a division cannot have the character of a zoning plan which defines the exact use of each lot, but solely of a plan defining the regions dominated by one or another type of production. According to the present studies the following types of economic areas (zones) should be provided: **agricultural areas**, divided into corn, breeding, vegetable, fruit and other areas; forests (which should cover at least 30% of the total area of the country), among which natural reserves, national parks and community pleasure grounds are of special importance; **industrial areas**, that is to say mining and manufacturing areas; land destined for the purposes of **communication facilities** (ports, junctions, shunting stations etc); and **settlement areas (particularly urban areas)**.

d) **The hypothetical pattern of dynamic tendencies, as expressed in the network of communication.**

The third element of the preliminary hypothesis of the National Plan establishes **directions (tensions)** of development of community life, the service pattern, the network of communication.

Studies on this subject show the pattern of directions and the networks of water, surface roads and rail-roads. Plans are being constantly revised in cooperation with the interested authorities and organizations and worked out in detail after obtaining adequate material and the results of studies.

C. **The third part** of the work consists of the work and activities of Regional and Local Offices of Physical Planning.

Those Regional Offices form part of Voivod Offices conforming to Article 11 of the Planned Physical Development of the Country Act (Law Journal of the Polish Republic No. 16 pos. 109/46).

The country is now divided into 14 regions whose areas are identical with those of voivodships.

The Regional Offices of Physical Planning, newly organized in April 1945, prepare plans of development for regions (regional plans) and exercise control over the activities of offices preparing local plans (plans for towns and villages). The Regional Offices reside in the following voivod towns: Białystok, Bydgoszcz, Gdańsk, Katowice, Kielce, Cracow, Lublin, Łódź, Olsztyn, Poznań, Rzeszów, Szczecin, Warsaw and Wrocław.

Work on the regional plans comprises basic analytical studies from the point of view of morphology, physiography, geology, demography, localization of industry, distribution of urban and rural centres, inventories of war devastations, monuments of old architecture, open spaces, communications, power, etc.

For some regions proposals have been prepared on the basis of those studies, concerning primary problems such as: communication networks, and the division of land for agricultural, forestry and industrial purposes; the future economic, social and cultural functions of larger urban centres have also been defined.

The cost of preparation of the national and regional plans is covered by the State.

Work on the preparation of local plans is organized either in special bureaux (Local Offices of Physical Planning) or in private studios on commission of the Regional Offices. The latter form is used where local conditions (lack of specialists) do not permit the creation of Local Offices. Plans of development are now being prepared for 96 small towns and for a great number of rural parishes or

individual villages. The execution of these plans has reached a stage which can already serve as basis for public works and investments. Independent of the plans now in preparation a number of towns possess valid plans of development, dating from the pre-war period. A revision of those plans in relation to the changed social and political conditions will take place in the near future.

Local Planning Offices have been organized in the following larger centres: Warsaw, Łódź, Wrocław, Poznań, Gdańsk, Szczecin, Cracow, Bydgoszcz, Białystok, Lublin, and Toruń. Only a very few of those centres have managed to save from destruction their pre-war archives of plans and surveys.

The largest and most destroyed city, Warsaw, has placed the problems of planning and reconstruction on a common platform. In less than a year the Bureau for Reconstruction of Warsaw has accomplished a plan of development, which in Spring 1946 has been displayed for public examination.

According to the Act, the costs of preparation of local plans are covered, as a rule, by the Municipal Government. Owing, however, to the difficult economic situation of towns, particularly those much destroyed during the war, the State subsidizes the work on these plans.

In addition to the above-mentioned bodies entrusted with the preparation of regional and local plans, there exist bureaus dealing with special problems, as for instance for the ports and cities on the delta of the Vistula, or for the mountain area of Zakopane. These bureaus prepare partial regional plans.

During the preparation of local plans, special commissions of experts are called together to give an opinion as to the principles and value of the plans and to give advice and guidance on all problems connected with the plans and their realization.

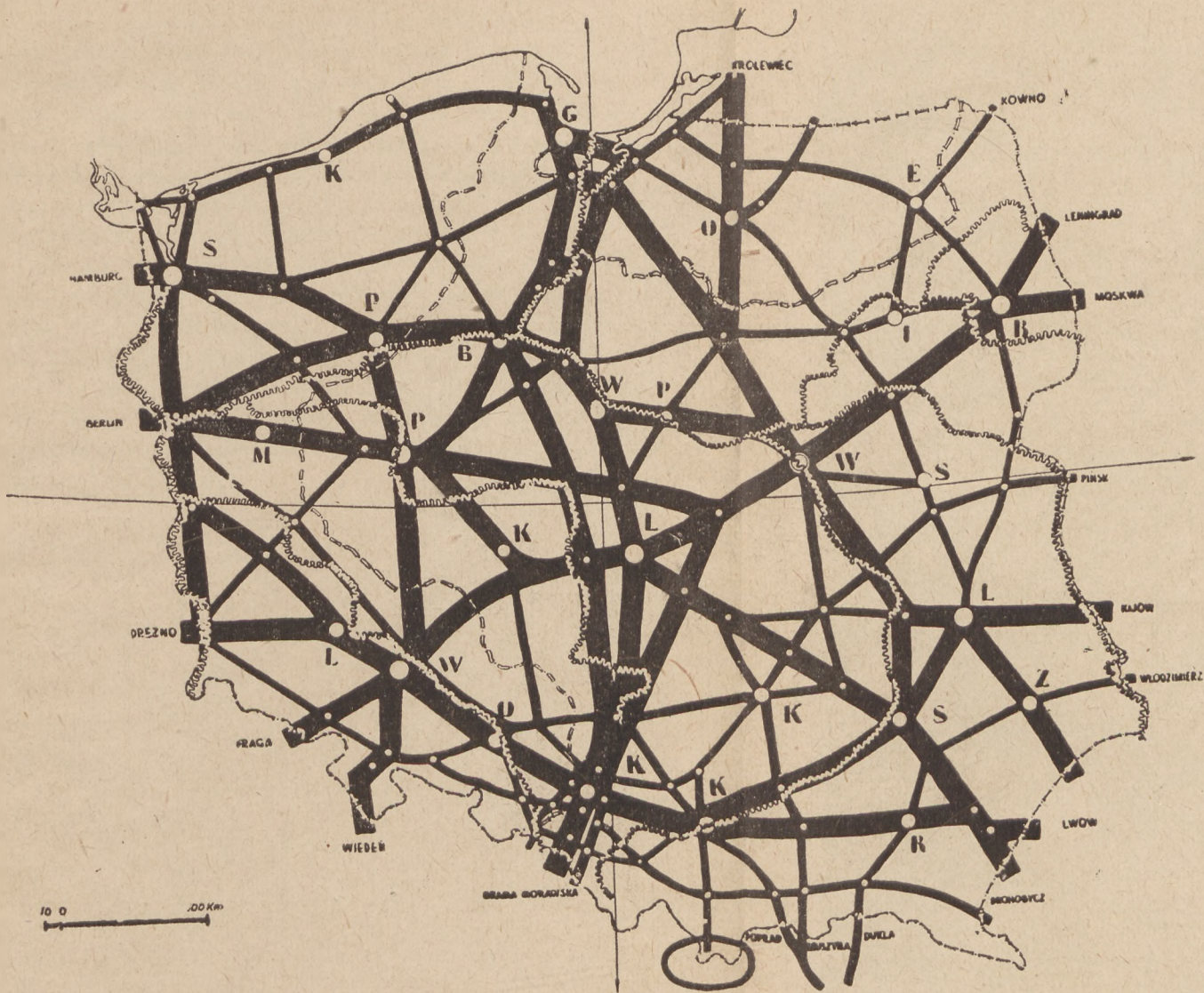


Fig. 10. Tendencies of transport (A study for the National Plan)

Special attention is given to the forming of plans for agricultural settlements. Land Reform, consisting of the division of large estates and redivision of the property of small-holders, demands, in many cases, replanning of all the existing hamlets and villages and creation of new ones. Planning in certain areas which were battlefields for a long time during the winter 1944 — 45 and suffered practically complete devastation, is also subject for special thought.

As may be seen from the above, a great deal has been achieved during the eighteen months which have elapsed since the close of the war. These achievements allow us to base State investments as well as private initiatives are being constantly intensified and new problems solved. The work extends now to the smallest units of human concentration and evolves in accordance with the requirements of modern life.

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